Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	CLG/STEL (ppm)	Vol. (liter) TWA	CLG/STEL	Rate (ml/min) TWA	CLG/STEL	Time TWA (hrs)	CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
					Sample Time or Air Volume		Flow/Sampling Rate					
Abietic acid	OSHA CSI				200		2000		1.6		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106 225-32 106
Absidia species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Absidia species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Acenaphthene (polynuclear aromatic hydrocarbons by GC-MS)	ASTM D 6209				350 m^3 (max)		225 L/min		1-24		GC-MS	PUF 226-131 45 FLT 225-1821 116
Acenaphthene (polynuclear aromatic hydrocarbons by GC)	NIOSH 5515				480		2000		4		GC-FID	F/CST 225-1713 94 ST 226-30-04 38 C/HLD 225-1 106
Acenaphthene (polynuclear aromatic hydrocarbons by HPLC)	NIOSH 5506				480		2000		4		HPLC-UV	F/CST 225-1713 94 ST 226-30-04 38 C/HLD 225-1 106
Acenaphthylene (polynuclear aromatic hydrocarbons by GC-MS)	ASTM D 6209				350 m^3 (max)		225 L/min		1-24		GC-MS	PUF 226-131 45 FLT 225-1821 116
Acenaphthylene (polynuclear aromatic hydrocarbons by GC)	NIOSH 5515				480		2000		4		GC-FID	F/CST 225-1713 94 ST 226-30-04 38 C/HLD 225-1 106
Acenaphthylene (polynuclear aromatic hydrocarbons by HPLC)	NIOSH 5506				480		2000		4		HPLC-UV	F/CST 225-1713 94 ST 226-30-04 38 C/HLD 225-1 106
Acetaldehyde	ASTM D 5197				varies		500-1200		5 min-24 hrs		HPLC-UV	ST 226-120[O] or ST 226-119 40
Acetaldehyde	NIOSH 2538		LFC		10		20		8		GC-FID	ST 226-27 38
Acetaldehyde	NIOSH 3507		LFC		60		125		8		HPLC	IMP 225-36-2 65 IT 225-22 65
Acetaldehyde	OSHA 68	1007	200		3	0.75	50	50	1	15	GC-NPD	ST 226-27 38
Acetaldehyde (aldehydes, screening)	NIOSH 2539		LFC		5		10		8		GC-FID & GC-MS	ST 226-118 40
Acetamide	OSHA PV2084				10		20(50)		8(3.3)		GC-NPD	ST 226-10 38
Acetates (screening)	NIOSH 2549				5		20		4		GC-MS	ST 226-330 42
Acetic acid	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49** **CPC 224-26CPC-10 49**
Acetic acid	NIOSH 1603		10	15	24		50		8		GC-FID	ST 226-01 38
Acetic acid	OSHA ID 186SG		10		48		200		4		IC or GC-FID	ST 226-01 38
Acetic acid	OSHA PV2119				48		200		4		IC or GC-FID	ST 226-01 38
Acetic anhydride	NIOSH 3506			5	90		1000		1.5		VAS	IMP 225-36-2 65 IT 225-22 65
Acetic anhydride	OSHA 102	1392	5		7.5	7.5	50	500	2.5	15	GC-NPD	CF/CST 225-9010†† 63 C/HLD 225-1 106
Acetic anhydride	OSHA 82	1391	5		0.75		50		15 min		GC-NPD	CF/CST 225-9009 63 C/HLD 225-1 106
Acetoin	NIOSH 2558				1-10		10-200		varies		GC-FID	ST NA SKC
Acetoin (Acetyl methyl carbinol)	OSHA 1012		0.05		9	3	50	200	3	15	GC-FID	ST 226-183 41
Acetoin (Acetyl methyl carbinol)	OSHA 1013		0.05		9	3	50	200	3	15	GC-FID	ST 226-183 41
Acetone	ASTM D 5197				varies		500-1200		5 min-24 hrs		HPLC-UV	ST 226-120[O] or ST 226-119 40
Acetone	OSHA 69		1000		3		50		1		GC-FID	ST NA SKC
Acetone (ketones I)	NIOSH 1300		250		2	0.75	20	50	100 min	15	GC-FID	ST 226-01 38
Acetone (ketones I)	NIOSH 2555				0.5 - 3		10-200		varies		GC-FID	ST NA SKC
Acetonitrile	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49** **CPC 224-26CPC-10 49**
Acetonitrile	NIOSH 1606		20		10		20(50)		8(3.3)		GC-FID	ST 226-09 38
Acetophenone	OSHA PV2003				12		100		2		GC-FID	ST 226-35 38
Acetyl methyl carbinol (acetoin)	NIOSH 2558				1-10		10-200		varies		GC-FID	ST NA SKC
2-Acetylaminofluorene	OSHA CSI				240		1000		4		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Acetylene	OSHA CSI										DET TB	DT 810-171
Acetylene tetrabromide	OSHA CSI		1		96		200		8		GC-FID	ST 226-10 38
Acetylene tetrabromide (1,1,2,2-tetrabromoethane)	NIOSH 2003				96		200		8		GC-FID	ST 226-10 38
Acetylsalicylic acid	OSHA CSI				120		1000		2		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Acid black 128	OSHA CSI				200		1000		3.3		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Acid blue 9	OSHA CSI				100		1000		100 min		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Acid orange 74	OSHA CSI				200		1000		3.3		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Acid red 114	OSHA CSI				120		1000		2		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Acid yellow 34	OSHA CSI				100		1000		100 min		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Acid yellow 42	OSHA CSI				100		1000		100 min		HPLC-FD	F/CST 225-706 98 C/HLD 225-1 106
Acids, inorganic *(see specific compounds)*	NIOSH 7903	1016			48		200		4		IC	ST 226-10-03 38
Acremonium species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Acremonium species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Acridine	OSHA 58	1077	0.2 mg/m^3		960		2000		8		GR & HPLC-FD, or GR & HPLC-UV	FLT 225-7 98 CST 225-2LF 99 C/HLD 225-1 106
Acrolein	NIOSH 2501		0.1	0.3	24	3	50	200	8	15	GC-NPD	ST 226-118 40
Acrolein	OSHA 52		0.1		48	3	100	200	8	15	GC-NPD	ST 226-117 40
Acrolein (aldehydes, screening)	NIOSH 2539		0.1	0.3	5		10		8		GC-FID & GC-MS	ST 226-118 40
Acrylamide	OSHA 21		0.3 mg/m^3		120		1000		2		GC-NPD	ST 226-10 38 FLT 225-16 98 CST 225-32 106
Acrylamide	OSHA PV2004		0.3 mg/m^3		120		1000		2		HPLC-UV	ST 226-57 39
Acrylic acid	NON 10				48		100		8		GC	ST 226-70A 39
Acrylic acid	OSHA 28				24		100		4		HPLC-UV	ST 226-30-08 38
Acrylonitrile	NIOSH 1604	1266	1	10 (15 min)	10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

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Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	Vol. (liter) CLG/STEL	Rate (ml/min) TWA Flow/Sampling Rate	Rate (ml/min) CLG/STEL	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Acrylonitrile	OSHA 37	1265	2	10	20	6	200	400	100 min	15	GC-NPD	ST 226-01 38
Acrylonitrile	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49; CPC 224-26CPC-10 49**
Actinomycetes, thermophilic	NIOSH 0800				varies		28,300		varies		varies	BI 225-9611 126
Adipic acid	OSHA CSI				96		200		8		GC-FID	ST 226-30-16 38
Adiponitrile	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Aerobic bacteria (by GC-FAME)	NIOSH 0801				50-300		28,300		varies		GC-FID	BI 225-9611 126
Alcohols (screening)	NIOSH 2549				5		20		4		GC-MS	ST 226-330 42
Alcohols combined	NIOSH 1405		varies	varies	varies	varies	10-200	10-200	varies	varies	GC-FID	ST 226-01 38
Alcohols I *(see specific compounds)*	NIOSH 1400		varies		varies		varies		varies		GC-FID	ST 226-01 38
Alcohols II *(see specific compounds)*	NIOSH 1401		varies		varies		varies		8		GC-FID	ST 226-01 38
Alcohols III *(see specific compounds)*	NIOSH 1402		varies		varies		varies		8		GC-FID	ST 226-01 38
Alcohols IV (*see* specific alcohol)	NIOSH 1403		varies		varies		varies		varies		GC-FID	ST 226-01 38
Aldehydes	**EPA TO-5**	**1671**			**< 80**		**100-1000**				**HPLC-UV**	**IMP 225-36-1 65 IT 225-22 65**
Aldehydes (screening)	NIOSH 2539		varies		5		20		4		GC-FID & GC-MS	ST 226-118 40
Aldehydes (screening)	NIOSH 2549				5		20		4		GC-MS	ST 226-330 42
Aldicarb (organonitrogen pesticides)	NIOSH 5601				240		1000		4		HPLC-UV	ST 226-58 or ST 226-30-16 38
Aldicarb (Temik)	OSHA 74	1399			480		1000		8		GC-NPD	ST 226-30-16 38
Aldrin	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
Aldrin	NIOSH 5502		0.25 mg/m³		240		500		8		GC-ECN	F/CST 225-709 98 IMP 225-36-2 65; IT 225-22 65 C/HLD 225-1 106
Aldrin	OSHA CSI		0.25 mg/m³		240		1000		4		GC-ECN	F/CST 225-709 98 IMP 225-36-2 65; IT 225-22 65 C/HLD 225-1 106
Aliphatic hydrocarbons (screening)	NIOSH 2549				5		20		4		GC-MS	ST 226-330 42
Alkaline dusts	NIOSH 7401				30		2000		15		TITRA	F/CST 225-1715 94 C/HLD 225-1 106
Allethrin	ASTM D 4861				240-7200		1000-5000		4-24		HPLC-UV	PUF 226-92 44
Allyl alcohol	OSHA CSI		2		10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
Allyl alcohol	OSHA PV2140		2 (skin)		10		50		200 min		GC-FID	ST 226-01 38
Allyl alcohol (alcohols combined)	NIOSH 1405		2	4 (skin)	1-10	1-10	10-200	10-200	varies	varies	GC-FID	ST 226-01 38
Allyl alcohol (alcohols III)	NIOSH 1402		2	4	10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
Allyl chloride	NIOSH 1000		1	2		15		1000		15	GC-FID	ST 226-01 38
Allyl chloride	OSHA 07	1126	1		10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
Allyl glycidyl ether	NIOSH 2545		5	10	6	3	50	200	2	15	GC-FID	ST 226-35-03 39
Allyl propyl disulfide	OSHA PV2086		2		10		20(50)		8(3.3)		GC-FPD	ST 226-110 40
Alternaria species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Alternaria species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Alumina (aluminum & compounds [total dust as Al])	NIOSH 7013		10 mg/m³		360		1000		6		AA-F	F/CST 225-3-01 89 C/HLD 225-1 106
Alumina (particulates, respirable)	NIOSH 0600	1038			375		2500		2.5		GR	CYC 225-01-02 115 C/HLD 225-1 106; F/CST 225-803 93
Alumina (particulates, total)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106; CST 225-2LF 99
alpha-Alumina (respirable fraction)	OSHA CSI		5 mg/m³		varies		varies		varies		GR	CYC 225-105 105 F/CST 225-803 93; C/HLD 225-1 106
alpha-Alumina (total dust)	OSHA CSI		15 mg/m³		960		2000		8		GR	FLT 225-5-37-P 93 C/HLD 225-1 106; CST 225-2LF 99
Aluminum (elements by ICP Aqua Regia ashing)	NIOSH 7301		10 mg/m³ (total dust)		5-100		1000-4000		varies		ICP-AES	F/CST 225-3-01 or F/CST 225-803 93; C/HLD 225-1 106
Aluminum (elements by ICP HNO_3 digestion)	NIOSH 7303		10 mg/m³ (total dust) 5 mg/m³ (respirable fume)		2-10,000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Aluminum (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1455	10 mg/m³ (total dust) 5 mg/m³ (respirable fume)		5-100		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Aluminum (respirable fraction)	OSHA CSI		5 mg/m³		varies		varies		varies		GR	F/CST 225-803 93 CYC 225-105 105; C/HLD 225-1 106
Aluminum (total dust)	OSHA CSI		15 mg/m³		960		2000		8		GR	FLT 225-5-37-P 93 C/HLD 225-1 106; CST 225-2LF 99
Aluminum & compounds (total dust as Al)	NIOSH 7013		10 mg/m³		360		1000		6		AA-F	F/CST 225-3-01 89 C/HLD 225-1 106
Aluminum soluble salts	OSHA ID 121				960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Aluminum welding fumes	OSHA CSI				960		2000		8		GR	FLT 225-5-37-P 93 C/HLD 225-1 106; CST 225-2LF 99
Aluminum, pyro powders	OSHA CSI				960		2000		8		GR	FLT 225-5-37-P 93 C/HLD 225-1 106; CST 225-2LF 99
Alupent	OSHA CSI				720		2000		6		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Amiben	OSHA CSI				240		1000		4		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Amines	NIOSH 2002		varies		20		40		8		GC-FID or GC-NSD	ST 226-10 38
Amines, aliphatic	NIOSH 2010		varies		24		50		8		GC-FID	ST 226-10 38
2-Amino-2-methy-1-propanol	OSHA CSI				9		100		90 min		GC-NPD	ST 226-10 38
2-Amino-2-methy-1-propanol	OSHA PV2145				10		100		100 min		HPLC-UV	ST 226-30-16 38
4-Aminobiphenyl	OSHA 93	1233			100		1000		100 min		GC-ECD	CF/CST 225-9004 63 C/HLD 225-1 106
2-Aminoethanol	NIOSH 2007		3	6	10		20		8		GC-FID	ST 226-10-04 38

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	CLG/STEL	Rate (ml/min) TWA Flow/Sampling Rate	CLG/STEL	Time TWA (hrs)	CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
2-Aminoethanol	NIOSH 3509		3	6	240		1000		4		IC	IMP 225-36-1 65 IT 225-22 65
2-Aminoethanol	OSHA PV2111		3		10	1.5	100	100	100 min	15	HPLC-UV	ST 226-30-18 38
Aminoethanol compounds I *(see specific compounds)*	NIOSH 2007		varies		varies		varies		8		GC-FID	ST 226-10-04 38
Aminoethanol compounds II *(see specific compounds)*	NIOSH 3509		varies		240		1000		4		IC	IMP 225-36-1 65 IT 225-22 65
Aminoethylethanolamine	OSHA PV2116				10		100				HPLC-UV	ST 226-30-18 38
N-Aminoethylpiperazine	OSHA CSI				9		100		90 min		GC-NPD	ST 226-98 40
p-Aminophenylarsonic acid (arsenic, organo-)	NIOSH 5022				960		2000		8		IC-AA	FLT 225-17-01 94 CST 225-3LF 99 C/HLD 225-1 106
2-Aminopyridine	OSHA CSI		0.5		12		200		1		GC-FID	ST 226-35-02 38
2-Aminopyridine	OSHA PV2143		0.5		240		1000		4		GC-NPD	CF/CST 225-9004 63 C/HLD 225-1 106
3-Aminopyridine	OSHA PV2143				240		1000		4		GC-NPD	CF/CST 225-9004 63 C/HLD 225-1 106
4-Aminopyridine	OSHA PV2143				240		1000		4		GC-NPD	CF/CST 225-9004 63 C/HLD 225-1 106
Amitrole	OSHA PV2006				60		1000		1		HPLC-UV	IMP 225-36-1 65 IT 225-22 65
Ammonia	NIOSH 6015		25	35	72	3	150	200	8	15	VAS	ST 226-10-06 38 F/CST 225-3-01** 89
Ammonia	NON 41				18	5	75	500	4	10	CLR	ST 226-61 39
Ammonia	OSHA ID 188	1008	50		24	7.5	100	500	4	15	IC-CD	ST 226-29 38
Ammonia (by IC)	NIOSH 6016		25	35	48	3	100	200	8	15	IC	ST 226-10-06 38 F/CST 225-3-01** 89
Ammonium chloride (fume)	OSHA ID 188				960	30	2000	2000	8	15	IC-CD	F/CST 225-3-01 89 C/HLD 225-1 106
Ammonium hydroxide *(see ammonia)*												
Ammonium metavanadate *(see vanadium oxides)*	NIOSH 7504											
Ammonium nitrate	OSHA CSI				960		2000		8		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Ammonium sulfamate (respirable dust)	OSHA CSI		5 mg/m³		varies		varies		varies		GR	CYC 225-105 105 C/HLD 225-1 106 F/CST 225-803 93
Ammonium sulfamate (total dust)	OSHA CSI		15 mg/m³		960		2000		8		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Ammonium sulfamate (total dust)	OSHA ID 188		15 mg/m³		960		2000		8		GR & IC-ECN	F/CST 225-3-01 89 C/HLD 225-1 106
n-Amyl acetate	OSHA 07		100		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
sec-Amyl acetate (2-pentyl acetate)	OSHA 07		125		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
n-Amyl acetate (esters I)	NIOSH 1450		100		1-10		10-200		varies		GC-FID	ST 226-01 38
Amyl nitrite	OSHA CSI				8		50		2.5		HPLC-UV	ST 226-01 38
Aniline	NIOSH 2017		LFC		24		200		2		GC-FID	CF/CST 225-9004 63 ST 226-15 38
Aniline	OSHA PV2079		5		24		50		8		GC-FID	ST 226-98 40
Aniline (amines, aromatic)	NIOSH 2002	1058	LFC		24		50		8		GC-FID or GC-NSD	ST 226-10 38
o-Anisaldehyde	OSHA CSI				96		200		8		HPLC-UV	ST 226-30 38
Anisidine	NIOSH 2514		0.5 mg/m³		240		1000		4		HPLC-UV	ST 226-30-05 38
Anisidine (o- & p-isomers)	OSHA CSI		0.5 mg/m³		240		1000		4		HPLC-UV	ST 226-30-05 38
Anthophyllite fibers *(see asbestos fibers)*	NIOSH 7400											
Anthracene	OSHA 58	1075	0.2 mg/m³		960		2000		8		GR & HPLC-FD, or GR & HPLC-UV	FLT 225-7 98 CST 225-2LF 99 C/HLD 225-1 106
Anthracene (polynuclear aromatic hydrocarbons by GC-MS)	ASTM D 6209				350 m³ (max)		225 L/min		1-24		GC-MS	PUF 226-131 45 FLT 225-1821 116
Anthracene (polynuclear aromatic hydrocarbons by GC)	NIOSH 5515				480		2000		4		GC-FID	F/CST 225-1713 94 ST 226-30-04 38 C/HLD 225-1 106
Anthracene (polynuclear aromatic hydrocarbons by HPLC)	NIOSH 5506				480		2000		4		HPLC-UV	F/CST 225-1713 94 ST 226-30-04 38 C/HLD 225-1 106
Antimony (elements by ICP Aqua Regia ashing)	NIOSH 7301		0.5 mg/m³		50-2000		1000-4000		varies		ICP-AES	F/CST 225-3-01 or F/CST 225-803* 93 C/HLD 225-1 106
Antimony (elements by ICP HNO_3 digestion)	NIOSH 7303		0.5 mg/m³		3-100,000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Antimony (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1455	0.5 mg/m³		50-2000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Antimony (ICP analysis of metal/metalloid particulates from solder operations)	OSHA ID 206		0.5 mg/m³		480		2000		4		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Antimony & compounds (as Sb)	OSHA ID 121		0.5 mg/m³		960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Antimony & compounds (as Sb)	OSHA ID 125G ¶		0.5 mg/m³		480		2000		4		ICP-AES	F/CST 225-3-01 or F/CST 225-3100 or F/CST 225-803 or F/CST 225-8215 93 C/HLD 225-1 106
ANTU (alphanaphthyl thiourea)	OSHA CSI		0.3 mg/m³		480		2000		4		HPLC-UV	FLT 225-17-01 94 CST 225-2LF 99 C/HLD 225-1 106
Apron	OSHA PV2102				60		1000		1		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Aqua fortis (acids, inorganic)	NIOSH 7903	1016	2	4	48		200		4		IC	ST 226-10-03 38
Aroclor	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
Aroclor	NIOSH 5602				480		1000		8		GC-ECD	ST 226-58 39
Aroclor 1242	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
Aroclor 1242 (42% Cl) *(see polychlorobiphenyls)*	NIOSH 5503											
Aroclor 1254	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
Aroclor 1254 (54% Cl) *(see polychlorobiphenyls)*	NIOSH 5503											
Aroclor 1260	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
Aromatic hydrocarbons (screening)	NIOSH 2549				5		20		4		GC-MS	ST 226-330 42

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

A

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	Vol. (liter) CLG/STEL Sample Time or Air Volume	Rate (ml/min) TWA Flow/Sampling Rate	Rate (ml/min) CLG/STEL Flow/Sampling Rate	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Arsenic (elements by ICP Aqua Regia ashing)	NIOSH 7301		0.002 mg/m³			5-2000		1000-4000		varies	ICP-AES	F/CST 225-3-01 or F/CST 225-803¥ 93; C/HLD 225-1 106
Arsenic (elements by ICP HNO_3 digestion)	NIOSH 7303		0.002 mg/m³		8-5,000,000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Arsenic (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1040	0.002 mg/m³ (C)			5-2000		1000-4000	varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Arsenic (elements on wipes)	NIOSH 9102				wipe						ICP-AES	W 225-2414 147 TMP 225-2403 or TMP 225-2415 147
Arsenic (inorganic compounds as As)	OSHA ID 105		0.01 mg/m³		960		2000		8		AAS-HGA	F/CST 225-3-01 89 C/HLD 225-1 106
Arsenic & compounds (as As)	NIOSH 7900		2 µg/m³ (15 min)			30		2000		15	AA-F	F/CST 225-3-01 89 C/HLD 225-1 106
Arsenic trioxide as AS	NIOSH 7901		2 mg/m³ (15 min)			30		2000		15	AAS-GF	FLT 225-5‡ 88 CST 225-2LF 99 C/HLD 225-1 106
Arsenic, inorganic (volatile compounds as As)	OSHA ID 105		0.01 mg/m³		960		2000		8		AAS-HGA	CF/CST 225-9001 63 C/HLD 225-1 106
Arsenic, organo-	NIOSH 5022				960		2000		8		IC-AA	FLT 225-17-01 94 CST 225-2LF 99 C/HLD 225-1 106
Arsine	NIOSH 6001	1278	2 µg/m³ (15 min)		10	3	20	200	8	15	AAS-GF	ST 226-01 38
Arylam *(see carbaryl)*												
Asbestos	OSHA ID 160	1301	0.1 fbr/cc	1 fbr/cc EL	25-1200	25-1200	500-2500	500-2500	varies	varies	PCM	FLT/CL 225-321 or FLT/CL 225-326 or
Asbestos ((bulk) by PLM)	NIOSH 9002		1% (bulk)		bulk						PLM	FLT/CL 225-321A or FLT/CL 225-327 89
Asbestos (by TEM)	NIOSH 7402		0.1 fbr/cc/400L		960		2000		8		TEM	FLT/CL 225-327 89
Asbestos (chrysotile)	NIOSH 9000				bulk						XRD	
Asbestos (mass concentrations)	ASTM D 5756	1440			varies		2000		2 min (minimum)		TEM	MVC 225-322 149
Asbestos (structure number concentrations)	ASTM D 5755	1440			varies		2000		2 min (minimum)		TEM	MVC 225-322 149
Asbestos fibers	NIOSH 7400	1033	0.1 fbr/cc/400L		varies		varies		varies		PCM	FLT/CL 225-321 or FLT/CL 225-326 or FLT/CL 225-321A or FLT/CL 225-327 89
Aspartame	NIOSH 5031				480		1000		8		HPLC-UV	FLT 225-17-01 94 CST 225-2LF 99 C/HLD 225-1 106
Aspergillus flavipes species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Aspergillus flavipes species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Aspergillus flavus species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Aspergillus flavus species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Aspergillus fumigatus species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Aspergillus fumigatus species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Aspergillus glaucus species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Aspergillus glaucus species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Aspergillus nidulans species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Aspergillus nidulans species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Aspergillus niger species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Aspergillus niger species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Aspergillus ochraceus (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Aspergillus ochraceus (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Aspergillus versicolor (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Aspergillus versicolor (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Asphalt fume (benzene-soluble & total particulate)	NIOSH 5042		5 mg/m³ (15 min) (C)		360	60	1000	4000	6	15	GR	FLT 225-27-07 94 SP 225-27 107 CST 225-2LF 99
Asphalt fume particulate	ASTM D 6494				960		2000		8		GR	F/CST 225-1713 94 C/HLD 225-1 106
Asphalt fumes (petroleum)	OSHA 58	1078			960		2000		8		GR & HPLC-FD, or GR & HPLC-UV	FLT 225-7 98 CST 225-2LF 99 C/HLD 225-1 106
Atrazine	ASTM D 4861				240-7200		1000-5000		4-24		GC-NPD	PUF 226-92 44
Atrazine	NIOSH 5602		5		480		1000		8		GC-ECD	ST 226-58 39
Atrazine	OSHA CSI				240		1000		4		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Auramine	OSHA CSI				100		1000		100 min		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Aureobasidium pullulans (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Aureobasidium pullulans (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Aureobasidium species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Aureobasidium species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Azelaic acid	NIOSH 5019				960		2000		8		GC-FID	F/CST 225-803 93 C/HLD 225-1 106
Azinphos-ethyl	OSHA CSI				480		1000		8		GC-FPD	ST 226-30-16 38
Azinphos-methyl	OSHA PV2087		0.2 mg/m³		480		1000		8		GC-FPD	ST 226-30-16 38
Azinphos-methyl (organophosphorus pesticides)	NIOSH 5600		0.2 mg/m³		240		1000		4		GC-FPD	ST 226-58 39
1,1'-Azobisformamide	OSHA CSI				90		1000		1.5		HPLC-UV	ST 226-30-16 38
Bacteria	NIOSH 0800				varies		28,300		varies		varies	BI 225-9611 126
Bacteria (by GC-FAME)	NIOSH 0801				50-300		28,300		varies		GC-FID	BI 225-9611 126
Bacteria (in air)	NON 48				62.5-375		12500 +		5-30		varies	BS 225-9595 128 VT 225-9598A◊ 128
Barium (elements by ICP Aqua Regia ashing)	NIOSH 7301		0.5 mg/m³		50-2000		1000-4000		varies		ICP-AES	F/CST 225-3-01 or F/CST 225-803¥ 93 C/HLD 225-1 106
Barium (elements by ICP HNO_3 digestion)	NIOSH 7303				1-100,000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Barium (elements on wipes)	NIOSH 9102				wipe						ICP-AES	W 225-2414 147 TMP 225-2403 or TMP 225-2415 147
Barium (insoluble compounds)	OSHA ID 121				960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Barium (soluble compounds)	NIOSH 7056		0.5 mg/m³		960		2000		8		AA	F/CST 225-3-01 89 C/HLD 225-1 106

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	CLG/STEL	Rate (ml/min) TWA Flow/Sampling Rate	CLG/STEL	Time TWA (hrs)	CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Barium (soluble compounds)	OSHA ID 121		0.5 mg/m³		960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Barium chloride (barium, soluble compounds)	NIOSH 7056		0.5 mg/m³		960		2000		8		AA	F/CST 225-3-01 89 C/HLD 225-1 106
Barium sulfate (respirable fraction)	OSHA ID 204	1216	5 mg/m³		varies		varies		varies		GR & XRF	CYC 225-105 105 C/HLD 225-1 106 F/CST 225-3-01 89
Barium sulfate (total dust)	OSHA ID 121	1217	15 mg/m³		960		2000		8		AA or AES	F/CST 225-802 93 C/HLD 225-1 106
Baygon (propoxur)	ASTM D 4861				240-7200		1000-5000		4-24		HPLC-UV	PUF 226-92 44
Baygon (propoxur)	OSHA PV2007				48		100		8		HPLC-UV	ST 226-30-16 38
Bendiocarb	ASTM D 4861				240-7200		1000-5000		4-24		HPLC-UV	PUF 226-92 44
Bendiocarb (Ficam)	OSHA PV2008				240		1000		4		HPLC-UV	ST 226-30-16 38
Benomyl (organonitrogen pesticides)	NIOSH 5601				240		1000		4		HPLC-UV	ST 226-58 or ST 226-30-16 38
Benomyl (respirable dust)	OSHA CSI		5 mg/m³		varies		varies		varies		HPLC-UV	ST 226-30-16 38 CYC 225-105 105
Benomyl (total dust)	OSHA PV2107		15 mg/m³		60		1000		1		HPLC-UV	ST 226-30-16 38
Bentonite *(see dust, total and respirable nuisance)*												
Benz(a)anthracene	OSHA CSI				960		2000		8		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Benz(a)anthracene (polynuclear aromatic hydrocarbons by GC-MS)	ASTM D 6209				350 m³ (max)		225 L/min		1-24		GC-MS	PUF 226-131 45 FLT 225-1821 116
Benz(a)anthracene (polynuclear aromatic hydrocarbons by GC)	NIOSH 5515				480		2000		4		GC-FID	F/CST 225-1713 94 C/HLD 225-1 106 ST 226-30-04 38
Benz(a)anthracene (polynuclear aromatic hydrocarbons by HPLC)	NIOSH 5506				480		2000		4		HPLC-FD	F/CST 225-1713 94 C/HLD 225-1 106 ST 226-30-04 38
Benzaldehyde	ASTM D 5197				varies		500-1200		5 min-24 hrs		HPLC-UV	ST 226-120 ᴼ or ST 226-119 40
Benzene	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
Benzene	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
Benzene	OSHA 1005	1749	1	5	12	0.75	50	50	4	15	GC-FID	ST 226-01 38
Benzene	OSHA 1005	1749	1	5					8	15	GC-FID	PS 575-002 69
Benzene	OSHA 12	1009	1	5	10	3	200	200	50 min	15	GC-FID	ST 226-01 38
Benzene (by portable GC)	NIOSH 3700	1029	0.1	1 (15 min)	varies		20-5000		varies		P GC-PID	SB 232 Series 53
Benzene (hydrocarbons, aromatic)	NIOSH 1501		0.1	1	5-30	5-30	10-200	10-200	varies	varies	GC-FID	ST 226-01 38
alpha-Benzene hexachloride	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
beta-Benzene hexachloride	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
gamma-Benzene hexachloride	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
Benzene-soluble & total particulate (asphalt fume)	NIOSH 5042		5 mg/m³ (15 min) (C)		360	60	1000	4000	6	15	GR	FLT 225-27-07 94 CST 225-2LF 99 SP 225-27 107
Benzene-soluble particulate matter	ASTM D 4600	1416			960		2000		8		GR	FLT 225-7 98 CST 225-2LF 99 SP 225-27 107 C/HLD 225-1 106
1,2-Benzenedicarboxylic acid	OSHA CSI				240		1000		4		GC-FID	ST 226-56 39
Benzidine	NIOSH 5509		LFC		96		200		8		HPLC-UV	FLT 225-16 98 CST 225-32 106
Benzidine	OSHA 65	1239			100		1000		100 min		GC-ECD	CF/CST 225-9004 63 C/HLD 225-1 106
Benzidine dyes (dyes, benzidine)	NIOSH 5013		LFC		480		1000		8		HPLC	FLT 225-17A 94 C/HLD 225-1 106 CST 225-3LF 99
Benzidine-based dyes	OSHA CSI				480		1000		8		HPLC-UV	FLT 225-17-04 94 C/HLD 225-1 106 CST 225-3LF 99
Benzo(a)pyrene (polynuclear aromatic hydrocarbons by GC-MS)	ASTM D 6209				350 m³ (max)		225 L/min		1-24		GC-MS	PUF 226-131 45 FLT 225-1821 116 PEM 761-200B 120 FLT 225-1709 94
Benzo(a)pyrene (polynuclear aromatic hydrocarbons by GC)	NIOSH 5515		0.1 mg/m³		480		2000		4		GC-FID	F/CST 225-1713 94 C/HLD 225-1 106 ST 226-30-04 38
Benzo(a)pyrene (polynuclear aromatic hydrocarbons by HPLC)	NIOSH 5506				480		2000		4		HPLC-FD	F/CST 225-1713 94 C/HLD 225-1 106 ST 226-30-04 38
Benzo(b)fluoranthene (polynuclear aromatic hydrocarbons by GC-MS)	ASTM D 6209				350 m³ (max)		225 L/min		1-24		GC-MS	PUF 226-131 45 FLT 225-1821 116 PEM 761-203B 120 FLT 225-1709 94
Benzo(b)fluoranthene (polynuclear aromatic hydrocarbons by GC)	NIOSH 5515				480		2000		4		GC-FID	F/CST 225-1713 94 C/HLD 225-1 106 ST 226-30-04 38
Benzo(b)fluoranthene (polynuclear aromatic hydrocarbons by HPLC)	NIOSH 5506				480		2000		4		HPLC-FD	F/CST 225-1713 94 C/HLD 225-1 106 ST 226-30-04 38
Benzo(e)pyrene	OSHA CSI				960		2000		8		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Benzo(e)pyrene (polynuclear aromatic hydrocarbons by GC-MS)	ASTM D 6209				350 m³ (max)		225 L/min		1-24		GC-MS	PUF 226-131 45 FLT 225-1821 116
Benzo(e)pyrene (polynuclear aromatic hydrocarbons by GC)	NIOSH 5515				480		2000		4		GC-FID	F/CST 225-1713 94 C/HLD 225-1 106 ST 226-30-04 38
Benzo(e)pyrene (polynuclear aromatic hydrocarbons by HPLC)	NIOSH 5506				480		2000		4		HPLC-FD	F/CST 225-1713 94 C/HLD 225-1 106 ST 226-30-04 38
Benzo(g,h,i)perylene (polynuclear aromatic hydrocarbons by GC-MS)	ASTM D 6209				350 m³ (max)		225 L/min		1-24		GC-MS	PUF 226-131 45 FLT 225-1821 116
Benzo(g,h,i)perylene (polynuclear aromatic hydrocarbons by GC)	NIOSH 5515				480		2000		4		GC-FID	F/CST 225-1713 94 C/HLD 225-1 106 ST 226-30-04 38
Benzo(g,h,i)perylene (polynuclear aromatic hydrocarbons by HPLC)	NIOSH 5506				480		2000		4		HPLC-FD	F/CST 225-1713 94 C/HLD 225-1 106 ST 226-30-04 38
Benzo(k)fluoranthene (polynuclear aromatic hydrocarbons by GC)	NIOSH 5515				480		2000		4		GC-FID	F/CST 225-1713 94 C/HLD 225-1 106 ST 226-30-04 38
Benzo(k)fluoranthene (polynuclear aromatic hydrocarbons by HPLC)	NIOSH 5506				480		2000		4		HPLC-FD	F/CST 225-1713 94 C/HLD 225-1 106 ST 226-30-04 38

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

B

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	Vol. (liter) CLG/STEL Sample Time or Air Volume	Rate (ml/min) TWA Flow/Sampling Rate	Rate (ml/min) CLG/STEL Flow/Sampling Rate	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Benzoalphapyrene	OSHA 58		0.2 mg/m³		960		2000		8		GR & HPLC-FD, or GR & HPLC-UV	FLT 225-7 98 CST 225-2LF 99 C/HLD 225-1 106
2,3-Benzofuran	OSHA CSI				96		200		8		HPLC-UV	ST 226-30 38
Benzoic acid	OSHA CSI				24		100		4		GC-FID	ST 226-115 40
Benzophenone	NON 39				480		1000		8		GC-FID	ST 226-56 39
Benzophenone	OSHA PV2130		0.5 mg/m³		48		200		4		GC-FID	ST 226-110 40
Benzophenonetetracarboxylic acid dianhydride	OSHA CSI				100		1000		100 min		HPLC	FLT 225-17-04 94 CST 225-2LF 99 C/HLD 225-1 106
Benzothiazole in asphalt fume	NIOSH 2550				480		1000		8		GC-SCD	F/CST 225-1713 94 ST 226-30-04 38 C/HLD 225-1 106
2-Benzothiazolethiol	OSHA CSI				240		2000		2		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Benzotrichloride	OSHA ID216SG				12		200		1		GC-FID	ST 226-35-03 39
Benzoyl chloride	OSHA CSI				90		1000		1.5		GC-ECD	IMP 225-36-1 65 IT 225-22 65
Benzoyl peroxide	NIOSH 5009		5 mg/m³		90		1500		1		HPLC-UV	F/CST 225-3-01 89 C/HLD 225-1 106
Benzyl acetate	OSHA PV2124				10		100		100 min		GC-FID	ST 226-73 39
Benzyl alcohol	OSHA PV2009				24		100		4		GC-FID	ST 226-95 40
Benzyl bromide	OSHA CSI										DET TB	DT 810-136L
Benzyl chloride	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
Benzyl chloride	OSHA 07	1187	1		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Benzyl chloride (hydrocarbons, halogenated)	NIOSH 1003		1		10		10-200		varies		GC-FID	ST 226-01 38
Beryllium (elements by ICP Aqua Regia ashing)	NIOSH 7301		0.0005 mg/m³		1250-2000		1000-4000		varies		ICP-AES	F/CST 225-3-01 or F/CST 225-803 ¥ 93 C/HLD 225-1 106
Beryllium (elements by ICP HNO_3 digestion)	NIOSH 7303				35-25,000,000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Beryllium (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1455	0.0005 mg/m³		1250-2000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Beryllium (elements on wipes)	NIOSH 9102				wipe						ICP-AES	W 225-2414 147 TMP 225-2403 or TMP 225-2415 147
Beryllium (ICP analysis of metal/metalloid particulates from solder operations)	OSHA ID 206		2 mg/m³	5 mg/m³ (C)	480	10	2000	2000	4	5	ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Beryllium (in air by portable fluorometry)	NIOSH 7704		2 mg/m³	5 mg/m³ (C)	240-2000		1000-4000				P FLUOR UV/VIS	F/CST 225-3-01 or F/CST 225-3100 89 C/HLD 225-1 106
Beryllium & compounds	OSHA ID 125G ¶		2 µg/m³	5 µg/m³	480	60	2000	2000	4	15	ICP-AES	F/CST 225-3-01 or F/CST 225-3100 or F/CST 225-803 or F/CST 225-8215 93 C/HLD 225-1 106
Beryllium & compounds (as Be)	NIOSH 7102			0. 5 µg/m³	960		2000		8		AA-GF	F/CST 225-3-01 89 C/HLD 225-1 106
Betasan	OSHA CSI				480		1000		8		GC-FPD	ST 226-30-16 38
BHC (alpha-, beta-, gamma-)	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
Bioaerosol sampling	NIOSH 0800				varies		28,300		varies		varies	BI 225-9611 126
Bioaerosols					15-150		15000		1-10 min		varies	STC 225-9820 103
Bioaerosols	NON 48				62.5-375		12500 +		5-30		varies	BS 225-9595 128 VT 225-9598A◊ 128
Biphenyl (diphenyl)	NIOSH 2530		0.2		10		20(50)		8(3.3)		GC-FID	ST 226-35-01 38
Bipolaris species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Bipolaris species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
4,4'-Bipyridine (vapor & aerosol)	NON 26				96	2	200	200	8	10	HPLC	ST 226-30-05 38 F/CST 225-706 98 C/HLD 225-1 106
Bis (tributyltin) oxide (tin, organic compounds [as Sn])	OSHA CSI				960		2000		8		AA-GF	F/CST 225-709 98 C/HLD 225-1 106
Bismuth	OSHA CSI				960		2000		8		AA	F/CST 225-3-01 89 C/HLD 225-1 106
Bismuth (elements by ICP HNO_3 digestion)	NIOSH 7303				1-10,000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Bismuth telluride, Se-doped	OSHA ID 121		5 mg/m³		960		2000		8		AA or AES	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Bismuth telluride, undoped (respirable dust)	OSHA ID 121		5 mg/m³		varies		varies		varies		GR & AA or GR & AES	CYC 225-105 105 C/HLD 225-1 106 F/CST 225-803 93
Bismuth telluride, undoped (total dust)	OSHA CSI		15 mg/m³		960		2000		8		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Bisphenol A	OSHA 1018				240		1000		240 (min)		HPLC-UV/PDA	F/CST 225-709 98 C/HLD 225-1 106
Bladex	OSHA CSI				100		1000		100 min		HPLC-UV	IMP 225-36-1 65 IT 225-22 65
Borates tetrasodium salts (anhydrous, decahydrate & pentahydrate)	OSHA ID 125G ¶				480		2000		4		ICP-AES	F/CST 225-3-01 or F/CST 225-3100 or F/CST 225-803 or F/CST 225-8215 93 C/HLD 225-1 106
Boric acid (total dust)	OSHA CSI				960		2000		8		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Boron (elements by ICP HNO_3 digestion)	NIOSH 7303				1-3300		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Boron (total dust)	OSHA CSI				960		2000		8		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Boron carbide	NIOSH 7506				600		2500		4		XRD	F/CST 225-803 93 C/HLD 225-1 106 CYC 225-01-02 115
Boron oxide (particulates, respirable)	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Boron oxide (particulates, total)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Boron oxide (total dust)	OSHA CSI		15 mg/m³		480		2000		4		ICP-AES	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	Vol. (liter) CLG/STEL Sample Time or Air Volume	Rate (ml/min) TWA Flow/Sampling Rate	Rate (ml/min) CLG/STEL Flow/Sampling Rate	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Boron tribromide	OSHA CSI				5		1000		5		IC	IMP 225-36-2 65 IT 225-22 65
Boron trifluoride	OSHA CSI			1 (C)	15		1000		15		ISE	IMP 225-36-2 65 IT 225-22 65
Botran	OSHA CSI				400		1000		6.7		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Bromacil	OSHA CSI				50		1000		50 min		HPLC-UV	IMP 225-36-1 65 IT 225-22 65
Bromine	NIOSH 6011	1329	0.1	0.3	240	15	1000	1000	4	15	IC	CF/CST 225-9006 63 C/HLD 225-1 106
Bromine	OSHA ID 108		0.1		120	7.5	500	500	4	15	IC	IMP 225-36-2 65 IT 225-22 65
Bromine pentafluoride	OSHA CSI				48		200		4		IC	ST 226-10-03 38
Bromoethane (ethyl bromide)	NIOSH 1011				4		20(50)		3.3(1.3)		GC-FID	ST 226-01 38
Bromoform	OSHA 07	1127	0.5		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Bromoform (hydrocarbons, halogenated)	NIOSH 1003		0.5 (skin)		10		10-200		varies		GC-FID	ST 226-01 38
1-Bromopropane	NIOSH 1025				0.1-12		10-200		varies		GC-FID	ST 226-01 38
1-Bromopropane	OSHA 1017				12		50		240 (min)		GC-FID	ST 226-01 38
1-Bromopropane	OSHA PV2061				12		100		2		GC-FID	ST 226-01 38
2-Bromopropane	NIOSH 1025				0.1-12		10-200		varies		GC-FID	ST 226-01 38
2-Bromopropane	OSHA 1017				12		50		240 (min)		GC-FID	ST 226-01 38
2-Bromopropane	OSHA PV2062				12		100		2		GC-FID	ST 226-01 38
Bromotrifluoromethane (trifluorobromomethane)	NIOSH 1017		1000		0.3		20		15 min		GC-FID	ST 226-09 38 ST 226-01 38
Bromoxynil	NIOSH 5010				240		1000		4		HPLC-UV	F/CST 225-1713 94 C/HLD 225-1 106
Bromoxynil octanoate	NIOSH 5010				240		1000		4		HPLC-UV	F/CST 225-1713 94 C/HLD 225-1 106
Bronkosol	OSHA CSI				480		1000		8		HPLC	F/CST 225-706 98 C/HLD 225-1 106
Brucine	OSHA CSI				180		1000		3		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
BTEX (Hydrocarbons, aromatic. *See benzene, toluene, ethylbenzene, and xylene*)	NIOSH 1501		varies		varies		varies		varies		GC-FID	ST 226-01 38
1,3-Butadiene	NIOSH 1024	1010	LFC		10		20		8		GC-FID	ST 226-37 39
1,3-Butadiene	OSHA 56	1011	1	5	3		50		1		GC-FID	ST 226-73 39
Butane	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-01 38
1,3-Butanediol	OSHA CSI				60		2000		30 min		GC-FID	ST 226-57 39
1-Butanethiol (butyl mercaptan)	NIOSH 2525			0.5	1		50		15		GC-FPD	ST 226-109 40
n-Butanol (alcohols combined)	NIOSH 1405		50 (skin)		2-10		10-200		varies		GC-FID	ST 226-01 38
2-Butanone	EPA TO-17	1689			1 & 4		16.7 & 66.7				TD, GC	ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49
2-Butanone	OSHA 1004		200		12		50		4		GC-FID	ST NA SKC
2-Butanone (ketones I)	NIOSH 2555				1-10		10-200		varies		GC-FID	ST NA SKC
2-Butanone (methyl ethyl ketone)	NIOSH 2500	1012	200	300	10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-81A 39
2-Butanone (methyl ethyl ketone)	OSHA 1004		200				16.88		8		GC-FID	PS 575-002 69
2-Butanone (methyl ethyl ketone)	OSHA 16	1282	200		3	1.5	100	100	30 min	15	GC-FID	ST 226-10 38
2-Butanone (methyl ethyl ketone)	OSHA 84		200		3	0.75	50	50	1	15	GC-FID	ST NA SKC
Butene	OSHA CSI				1		20		50 min		GC-FID	ST 226-01 38
2-Butoxyethanol acetate	EPA TO-17	1689			1 & 4		16.7 & 66.7				TD, GC	ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49
2-Butoxyethanol (alcohols IV)	NIOSH 1403	1275	5 (skin)		2-10		10-50		varies		GC-FID	ST 226-01 38
2-Butoxyethanol (butyl CELLOSOLVE solvent)	OSHA 83		50		48		100		8		GC-FID	ST 226-01 38
2-Butoxyethanol acetate (butyl CELLOSOLVE acetate)	OSHA 83				48		100		8		GC-FID	ST 226-01 38
n-Butyl acetate	EPA TO-17	1689			1 & 4		16.7 & 66.7				TD, GC	ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49
n-Butyl acetate	OSHA 07		150		10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
n-Butyl acetate	OSHA 1009	1750	150		12	0.75	50	50	4	15	GC-FID	ST 226-01 38
n-Butyl acetate	OSHA 1009	1750	150				13.07	13.07	8	15	GC-FID	PS 575-002 69
sec-Butyl acetate	OSHA 07		200		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
sec-Butyl acetate	OSHA 1009	1750	200		12	0.75	50	50	4	15	GC-FID	ST 226-01 38
sec-Butyl acetate	OSHA 1009	1750	200				12.74	12.74	8	15	GC-FID	PS 575-002 69
t-Butyl acetate	EPA TO-17	1689			1 & 4		16.7 & 66.7				TD, GC	ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49
t-Butyl acetate	OSHA 07		200		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
t-Butyl acetate	OSHA 1009	1750	200		12	0.75	50	50	4	15	GC-FID	ST 226-01 38
t-Butyl acetate	OSHA 1009	1750	200				13.09	13.09	8	15	GC-FID	PS 575-002 69
n-Butyl acetate (esters I)	NIOSH 1450	1272	150	200	1-10	1-10	10-200	10-200	varies	varies	GC-FID	ST 226-01 38
sec-Butyl acetate (esters I)	NIOSH 1450		200		1-10		10-200		varies		GC-FID	ST 226-01 38
t-Butyl acetate (esters I)	NIOSH 1450		200		1-10		10-200		varies		GC-FID	ST 226-01 38
Butyl acrylate	OSHA PV2011				12		50		4		GC-FID	ST 226-73 39
n-Butyl acrylate	NON 54		5	15	10	3	20	200	8	15	GC-FID	ST 226-81A 39
n-Butyl alcohol	OSHA 07		100		10	1	20	200	8	5	GC-FID	ST 226-01 38
sec-Butyl alcohol	OSHA 07		150		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
t-Butyl alcohol	OSHA 07		100		10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
n-Butyl alcohol (alcohols combined)	NIOSH 1405		50 (skin)		2-10		10-200		varies		GC-FID	ST 226-01 38
sec-Butyl alcohol (alcohols combined)	NIOSH 1405		100	150	2-10	2-10	10-200	10-200	varies	varies	GC-FID	ST 226-01 38
t-Butyl alcohol (alcohols I)	NIOSH 1400		100	150	10		20(50)		8(3.3)		GC-FID	ST 226-01 38
n-Butyl alcohol	EPA TO-17	1689			1 & 4		16.7 & 66.7				TD, GC	ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

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Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA	Vol. (liter) CLG/STEL	Rate (ml/min) TWA	Rate (ml/min) CLG/STEL	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
					Sample Time or Air Volume		Flow/Sampling Rate					
n-Butyl alcohol (alcohols II)	NIOSH 1401			50	10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
sec-Butyl alcohol (alcohols II)	NIOSH 1401		100	150	10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
Butyl benzyl phthalate	OSHA CSI				180		1000		3		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Butyl butyrate	OSHA PV2090				10		200		50 min		GC-FID	ST 226-01 38
Butyl carbitol (diethylene glycol monobutyl ether)	OSHA PV2095				10		200		50 min		GC-FID	ST 226-01 38
Butyl carbitol acetate	OSHA PV2095				10		200		50 min		GC-FID	ST 226-01 38
Butyl CELLOSOLVE acetate *(see 2-butoxyethanol acetate)*	OSHA 83											
Butyl CELLOSOLVE solvent *(see 2-butoxyethanol)*	OSHA 83											
t-Butyl chromate (as CrO_3)	OSHA ID 215 (V2)	1439	0.005 mg/m³		960		2000			15	IC-UV	F/CST 225-802 93 C/HLD 225-1 106
n-Butyl glycidyl ether	NIOSH 1616		5.6 (15 min)			3		200		15	GC-FID	ST 226-01 38
n-Butyl glycidyl ether	OSHA 07	1125	50		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
t-Butyl glycidyl ether	OSHA CSI				10		200		50 min		GC-FID	ST 226-01 38
Butyl isocyanate	OSHA CSI				15		50		5		HPLC-UV	ST NA SKC
n-Butyl lactate	OSHA PV2080				10		200		50 min		GC-FID	ST 226-01 38
n-Butyl mercaptan	NIOSH 2525			0.5		1		50		15	GC-FPD	ST 226-109 40
Butyl mercaptan (butanethiol)	OSHA CSI		10		1.5		25		1		GC-FPD	ST 226-109 40
n-Butyl mercaptan (mercaptans)	NIOSH 2542	1330		0.5 (15 min)	48	12	100	200	8	60	GC-FPD	CF/CST 225-9007 63 C/HLD 225-1 106
t-Butyl methyl ether (MTBE)	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
t-Butyl methyl ether	OSHA CSI				96		200		8		GC-FID	ST 226-37 39
Butyl ziram	OSHA PV2065				180		1000		3		HPLC-UV	ST 226-30-16 38
N-t-Butyl-2-benzothiazolesulfenamide	OSHA CSI				120		1000		2		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Butylamine	OSHA CSI			5 (C)		5		1000		5	GC-FID	ST 226-53 39
n-Butylamine	NIOSH 2012			5		15		1000		15	GC-FID	ST 226-53 39
Butylated hydroxytoluene	OSHA PV2108				100		1000		100 min		GC-FID	ST 226-57 39
sec-Butylbenzene	OSHA CSI				6		100		1		GC-FID	ST 226-01 38
1,3-Butylene glycol (glycols)	NIOSH 5523	1404			60		1000		1		GC-FID	ST 226-57 39
o-sec-Butylphenol	OSHA PV 2128				20		200		1.6		HPLC-UV	ST 226-95 40
p-tert-Butylphenol	OSHA PV2085				20		200		100 min		GC-FID	ST 226-95 40
Butyltin trichloride	OSHA ID 217SG				240		1000		4		AA-GF	ST 226-30-16 38
p-tert-Butyltoluene	OSHA 07	1129	10		10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
p-tert-Butyltoluene (hydrocarbons, aromatic)	NIOSH 1501		10	20	1-29	1-29	10-200	10-200	varies	varies	GC-FID	ST 226-01 38
Butyraldehyde	ASTM D 5197				varies		500-1200		5 min-24 hrs		HPLC-UV	ST 226-120 ᴼ or ST 226-119 40
Butyraldehyde (aldehydes, screening)	NIOSH 2539				5		20		4		GC-FID & GC-MS	ST 226-118 40
Butyric acid	OSHA CSI				18		100		3		GC-FID	ST 226-15 38
beta-Butyrolactone	OSHA CSI				9.6		20		8		GC-FID	ST 226-01 38
gamma-Butyrolactone	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Cadmium	OSHA ID 189	1456	5 µg/m³		960		2000		8		AA	F/CST 225-3-01 89 C/HLD 225-1 106
Cadmium (elements by ICP Aqua Regia ashing)	NIOSH 7301		LFC		13-2000		1000-4000		varies		ICP-AES	F/CST 225-3-01 or C/HLD 225-1 106
Cadmium (elements by ICP HNO_3 digestion)	NIOSH 7303				3-500,000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Cadmium (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1280	LFC		13-2000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Cadmium (elements on wipes)	NIOSH 9102				wipe						ICP-AES	W 225-2414 147 TMP 225-2403 or TMP 225-2415 147
Cadmium & compounds (as Cd)	NIOSH 7048	1467	LFC		480	30	1000	2000	8	15	AA-F	F/CST 225-3-01 89 C/HLD 225-1 106
Cadmium dust (as Cd)	OSHA ID 121		0.2 mg/m³	0.5 mg/m³	960	30	2000	2000	8	15	AA	F/CST 225-3-01 89 C/HLD 225-1 106
Cadmium dust (as Cd)	OSHA ID 206		0.2 mg/m³	0.5 mg/m³	960	30	2000	2000	8	15	ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Cadmium fume (ICP analysis of metal/metalloid particulates from solder operations)	OSHA ID 206		0.1 mg/m³	0.3 mg/m³ (C)	480		2000		4		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Calcium (elements by ICP Aqua Regia ashing)	NIOSH 7301		varies		5-200		1000-4000		varies		ICP-AES	F/CST 225-3-01 or C/HLD 225-1 106 F/CST 225-803 ¥ 93
Calcium (elements by ICP HNO_3 digestion)	NIOSH 7303				2-10,000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Calcium (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1455	varies		5-200		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Calcium *(see specific compounds)*	NIOSH 7020		varies		varies		varies		varies		AA-F	F/CST 225-3-01 89 C/HLD 225-1 106
Calcium & compounds (as Ca)	NIOSH 7020		varies		240		1000		4		AA-F	F/CST 225-3-01 89 C/HLD 225-1 106
Calcium arsenate (as As)	OSHA CSI				600		2000		5		AA-GF	F/CST 225-3-01 89 C/HLD 225-1 106
Calcium bromide *(see dust, total & respirable nuisance)*	OSHA CSI											
Calcium carbonate	OSHA ID 121		15 mg/m³		960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Calcium carbonate (calcium)	NIOSH 7020		2 mg/m³		240		1000		4		AA-F	F/CST 225-3-01 89 C/HLD 225-1 106
Calcium carbonate (particulates, respirable)	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Calcium carbonate (particulates, total)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Calcium carbonate *(see dust, total & respirable nuisance)*												
Calcium cyanamide	OSHA ID 121				960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Calcium hydroxide	OSHA ID 121		5 mg/m³		960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Calcium hydroxide (calcium)	NIOSH 7020		2 mg/m³		240		1000		4		AA-F	F/CST 225-3-01 89 C/HLD 225-1 106

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References and abbreviations are found on pages 212-213.

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	CLG/STEL	Rate (ml/min) TWA Flow/Sampling Rate	CLG/STEL	Time TWA (hrs)	CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Calcium hydroxide *(see dust, total & respirable nuisance)*												
Calcium oxide	OSHA ID 121		5 mg/m³		960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Calcium oxide (calcium)	NIOSH 7020		2 mg/m³		240		1000		4		AA-F	F/CST 225-3-01 89 C/HLD 225-1 106
Calcium oxide (elements by ICP HNO_3 digestion)	NIOSH 7303		2 mg/m³		3-10,000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Calcium silicate (particulates, respirable)	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Calcium silicate (particulates, total)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Calcium sulfate *(see dust, total & respirable nuisance)*												
Camphor	OSHA 07	1130	2 mg/m³		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Camphor (ketones II)	NIOSH 2553		2		1-25		10-200		varies		GC-FID	ST NA SKC
Camphor (ketones II)	NIOSH 1301		2		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Caprolactam	OSHA PV2012				100		1000		100 min		HPLC-UV	ST 226-57 39
Capsaicin	NIOSH 5041				480	15	1000	1000	8	15	HPLC-FD	FLT 225-16 98 CST 225-32 106
Captafol (difolatan)	OSHA CSI				240		1000		4		GC-ECD	ST 226-30-16 38
Captan	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
Captan	OSHA PV2093				60		1000		1		HPLC-UV	ST 226-30-16 38
Captan (organonitrogen pesticides)	NIOSH 5601		5 mg/m³		240		1000		4		HPLC-UV	ST 226-58 or ST 226-30-16 38
Carbadox	OSHA CSI				120		1000		2		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Carbaryl	ASTM D 4861				240-7200		1000-5000		4-24		HPLC-UV	PUF 226-92 44
Carbaryl (organonitrogen pesticides)	NIOSH 5601		5 mg/m³		240		1000		4		HPLC-UV	ST 226-58 or ST 226-30-16 38
Carbaryl (Sevin®)	NIOSH 5006		5 mg/m³		240		1000		4		VAS	F/CST 225-706 98 C/HLD 225-1 106
Carbaryl (Sevin)	OSHA 63		5 mg/m³		60		1000		1		HPLC-UV	ST 226-30-16 38
Carbazol	OSHA CSI				120		1000		2		GC-FID	ST 226-56 39
Carbendazim (organonitrogen pesticides)	NIOSH 5601				240		1000		4		HPLC-UV	ST 226-58 or ST 226-30-16 38
Carbitol	OSHA PV2013				10		200		50 min		GC-FID	ST 226-01 38
Carbitol acetate	OSHA PV2013				10		200		50 min		GC-FID	ST 226-01 38
Carbofuran	ASTM D 4861				240-7200		1000-5000		4-24		HPLC-UV	PUF 226-92 44
Carbofuran (organonitrogen pesticides)	NIOSH 5601		0.1 mg/m³		240		1000		4		HPLC-UV	ST 226-58 or ST 226-30-16 38
Carbon black	NIOSH 5000		3.5 mg/m³		360		1500		4		GR	FLT 225-5-37-P 93 CST 225-3LF 99 SCN 225-26 107 C/HLD 225-1 106
Carbon black	OSHA ID 196		3.5 mg/m³		960		2000		8		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Carbon dioxide	OSHA ID 172	1026	5000	30,000	2-5	2-5	10-50	300	4-8	15	GC-TCD	SB 253 Series or SB 263 Series 54
Carbon dioxide (by portable GC)	NIOSH 6603	1027	5000	30,000	varies	varies	20-100	20-100	varies	varies	P GC-TCD	SB 232 Series 53
Carbon disulfide	NIOSH 1600		1	10	10	3	20(50)	200	8(3.3)	15	GC-FPD	ST 226-01 38 DRT 226-44 39
Carbon monoxide	OSHA ID 209		50								DRI	DRI 805-18970 ..
Carbon monoxide	OSHA ID 210	1021	50		2-5	2-5	10-50	1000	varies	varies	GC-DID	SB 252 Series or SB 253 Series or SB 262 Series or SB 263 Series 54
Carbon tetrachloride	EPA TO-17	1689			1 & 4		16.7 & 66.7				TD, GC	ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49
Carbon tetrabromide	OSHA CSI				9	3	50	200	3	15	GC-ECD	ST 226-93 40
Carbon tetrachloride	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
Carbon tetrachloride	OSHA 07	1131	10	25	15	3	50	200	5	15	GC-FID	ST 226-01 38
Carbon tetrachloride (hydrocarbons, halogenated)	NIOSH 1003			2 (1 hr)		15		10-200		varies	GC-FID	ST 226-01 38
Carbon, activated *(see dust, total nuisance)*												
Carbonyl fluoride	OSHA CSI				480		2000		4		ISE	IMP 225-36-2 65 IT 225-22 65
Carboxin	OSHA CSI				200		1000		3.3		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
3-Carene (terpenes)	NIOSH 1552				24		50		8		GC-FID	ST 226-01 38
Catechol (pyrocatechol)	OSHA PV2014				100		1000		100 min		HPLC-UV	ST 226-57 39
Cell fragments (bioaerosols)					15-150		15000		1-10 min		varies	STC 225-9820 103
CELLOSOLVE acetate *(see 2-ethoxyethyl acetate)*												
CELLOSOLVE solvent *(see 2-ethoxyethanol)* (alcohols IV)	NIOSH 1403	1273										
Cellulose (paper fiber) (particulates, respirable)	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Cellulose (paper fiber) (particulates, total)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Cellulose *(see dust, total or respirable nuisance)*												
Cellulose insulation	NIOSH 7404				varies		1000		varies		SEM	FLT/CL 225-1604 93
Cerium	OSHA ID 121				960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Cesium hydroxide	OSHA CSI				960		2000		8		AA	F/CST 225-3-01 89 C/HLD 225-1 106
Chaetomium species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Chaetomium species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Chloramphenicol	OSHA CSI				60		1000		1		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Chlordane	NIOSH 5510		0.5 mg/m³		150		1000		2.5		GC-ECD	ST 226-107 40 FLT 225-5 88 CST 225-2LF 99 SCN 225-26 107 C/HLD 225-1 106
Chlordane	OSHA 67	1013	0.5 mg/m³		480		1000		8		GC-ECD	ST 226-30-16 38
Chlordane (non-occupational exposure)	ASTM D 4947	1417			240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

C

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	Vol. (liter) CLG/STEL Sample Time or Air Volume	Rate (ml/min) TWA Flow/Sampling Rate	Rate (ml/min) CLG/STEL Flow/Sampling Rate	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Chlordane (technical)	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
Chlorinated & organonitrogen herbicides	NIOSH 5602				480		1000		8		GC-ECD	ST 226-58 39
Chlorinated & organonitrogen herbicides (hand wash)	NIOSH 9200										GC-ECD	NA SKC
Chlorinated camphene (toxaphene)	NIOSH 5039		LFC		30	15	1000	1000	0.5	15	GC-ECD	F/CST 225-3-01 89 C/HLD 225-1 106
Chlorinated diphenyl ether (chlorinated diphenyl oxide)	NIOSH 5025		0.5 mg/m³		180		1000		3		GC-ECD	F/CST 225-3-01 89 C/HLD 225-1 106
Chlorinated diphenyl oxide	NIOSH 5025		0.5 mg/m³		90		1000		1.5		GC-ECD	F/CST 225-3-01 89 C/HLD 225-1 106
Chlorinated hydrocarbons (screening)	NIOSH 2549				5		20		4		GC-MS	ST 226-330 42
Chlorinated terphenyl (60% chlorine)	NIOSH 5014				720		1500		8		GC-ECD	F/CST 225-706 98 C/HLD 225-1 106
Chlorine	NIOSH 6011	1332	0.5	1	90	15	1000	1000	1.5	15	IC	CF/CST 225-9006 63 C/HLD 225-1 106
Chlorine	OSHA ID 101	1052		1 (C)	240	15	1000	1000	4	15	ISE	IMP 225-36-2 65 IT 225-22 65
Chlorine (prefiltered)	OSHA ID 101	1289		1 (C)	240	15	1000	1000	4	15	ISE	IMP 225-36-2 65 IT 225-22 65 CST 225-3-23 99 SP 225-2901 107 FLT 225-2708 94
Chlorine dioxide	OSHA ID 202	1462	0.1		120	7.5	500	500	4	15	IC-CD	IMP 225-36-2 65 IT 225-22 65
Chlorine trifluoride	OSHA CSI			0.1		15		1000		15	ISE	IMP 225-36-2 65 IT 225-22 65
1-Chloro-1-nitropropane	OSHA CSI		20		12		50		4		GC-FID	ST NA SKC
5-Chloro-2-methyl-4-isothiazolin-3-one (Kathon 886)	NON 55		0.75 mg/m³	0.23 mg/m³	50	7.5	200	500	4	15	HPLC-UV	ST 226-99 40
1-Chloro-4-(trifluoromethyl)benzene (parachlorobenzotrifluoride)	OSHA CSI				6		100		1		GC-FID	ST 226-01 38
2-Chloro-6-trichloromethyl pyridine (respirable dust)	OSHA CSI		15 mg/m³		480		1000		8		HPLC-UV	ST 226-30-16 38 CYC 225-105 105
2-Chloro-6-trichloromethyl pyridine (total dust)	OSHA CSI		5 mg/m³		varies		varies		varies		HPLC-UV	ST 226-30-16 38
Chloroacetaldehyde	NIOSH 2015		1		3		200		15		GC-ECD	ST 226-15GWS 38
Chloroacetaldehyde	OSHA 76		1 (C)		2.5		500		5		GC-ECD	ST 226-15GWS 38
Chloroacetic acid	NIOSH 2008				48		100		8		IC-CD	ST 226-47-01 39
alpha-Chloroacetophenone (phenacylchloride)	OSHA CSI		0.05		12		200		1		HPLC-UV	ST 226-35-02 38
Chloroacetyl chloride	OSHA CSI				10		50		3.3		HPLC-UV	ST NA SKC
o-Chloroaniline	OSHA CSI				5		20		4		HPLC-UV	ST 226-10 38
p-Chloroaniline	OSHA PV2109				6		100		1		HPLC-UV	ST 226-10 38
Chlorobenzene (monochlorobenzene)	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
Chlorobenzene	EPA TO-17	1689			1 & 4		16.7 & 66.7				TD, GC	ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49
Chlorobenzene (monochlorobenzene)	OSHA 07	1132	75		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Chlorobenzene (monochlorobenzene) (hydrocarbons, halogenated)	NIOSH 1003				10		10-200		varies		GC-FID	ST 226-01 38
4-Chlorobenzotrifluoride	NIOSH 1026				0.1-10.0		10-200		varies		GC-FID	ST 226-01 38
4-Chlorobenzotrifluoride	OSHA CSI				6		100		1		GC-FID	ST 226-01 38
p-Chlorobenzotrifluoride	NIOSH 1026				0.1-10.0		10-200		varies		GC-FID	ST 226-01 38
p-Chlorobenzotrifluoride	OSHA CSI				6		100		1		GC-FID	ST 226-01 38
Chlorobiphenyl	NIOSH 5503		0.001 mg/m³ (10 hr)		48		100(200)		8(4)		GC-ECD	FLT 225-16 98 CST 225-32 106 ST 226-39 39
Chlorobromomethane	OSHA CSI		200		5		20		4		GC-FID	ST 226-01 38
Chlorobromomethane (hydrocarbons, halogenated)	NIOSH 1003		200		5		10-200		varies		GC-FID	ST 226-01 38
Chlorodifluoromethane	OSHA CSI				1		50		20 min		GC-FID	ST NA SKC
Chlorodiphenyl	OSHA CSI				60		1000		1		GC-ECD	ST 226-30-16 38
Chlorodiphenyl (21% Cl) *(see polychlorinated biphenyls)*	OSHA CSI											
Chlorodiphenyl (32% Cl) *(see polychlorinated biphenyls)*	OSHA CSI											
Chlorodiphenyl (42% Cl)	OSHA PV2089			1	60		1000		1		GC-ECD	ST 226-30-16 38
Chlorodiphenyl (42% Cl) *(see polychlorinated biphenyls)*	NIOSH 5503											
Chlorodiphenyl (48% Cl) *(see polychlorinated biphenyls)*	OSHA CSI											
Chlorodiphenyl (54% Cl)	OSHA PV2088			0.5	60		1000		1		GC-ECD	ST 226-30-16 38
Chlorodiphenyl (54% Cl) *(see polychlorinated biphenyls)*	NIOSH 5503											
Chlorodiphenyl (60% Cl) *(see polychlorinated biphenyls)*	OSHA CSI											
Chlorodiphenyl (62% Cl) *(see polychlorinated biphenyls)*	OSHA CSI											
Chloroethane (ethyl chloride)	NIOSH 2519				3		50		1		GC-FID	ST 226-09 38
2-Chloroethanol (ethylene chlorohydrin)	NIOSH 2513			1	10		20(50)		8(3.3)		GC-FID	ST 226-81A 39
Chloroform (trichloromethane)	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
Chloroform (trichloromethane)	OSHA 05	1062		50 (C)	10		200		50 min		GC-FID	ST 226-01 38
Chloroform (trichloromethane) (hydrocarbons, halogenated)	NIOSH 1003	1269		2		15		10-200		varies	GC-FID	ST 226-01 38
bis-Chloromethyl ether	OSHA 10				50		500		100 min		GC-ECD	IMP 225-36-2 65 IT 225-22 65
Chloromethyl methyl ether	NON 29	1251			2.4	0.3	10	20	4	15	GC-ECD	ST NA SKC
Chloromethyl methyl ether	OSHA 10				50		500		100 min		GC-ECD	IMP 225-36-2 65 IT 225-22 65
4-Chloronitrobenzene (nitrobenzenes)	NIOSH 2005		0.1 ppm		96		200		8		GC-FID	ST 226-10 38
Chloropentafluoroethane	OSHA CSI				2.5		50		50 min		GC-FID	ST 226-01 38
Chlorophene	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-35 38
o-Chlorophenol	OSHA CSI				40		200		3.3		HPLC-UV	ST 226-10 38
p-Chlorophenol	NIOSH 2014				24		50		8		HPLC-UV	ST 226-10 38
Chloropicrin	NON 51		0.1		144		100		24		GC-MSD	ST 226-175 41
Chloropicrin	OSHA PV2103		0.1		3		200		15 min		GC-ECD	ST 226-93 40

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	Vol. (liter) CLG/STEL	Rate (ml/min) TWA Flow/Sampling Rate	Rate (ml/min) CLG/STEL	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
beta-Chloroprene	NIOSH 1002			1 (15 min)		1.5		100		15	GC-FID	ST 226-01 38
beta-Chloroprene	OSHA 07	1133	25		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
beta-Chloroprene	OSHA 112		25		6		50		2		GC-ECD	ST 226-111A 40
o-Chlorostyrene	OSHA CSI				20	3	200	200	100 min	15	GC-FID	ST 226-01 38
Chlorothalonil	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
Chlorothalonil	OSHA CSI				180		1000		3		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
o-Chlorotoluene	OSHA CSI				20		200		100 min		GC-FID	ST 226-01 38
Chlorotoluron	ASTM D 4861				240-7200		1000-5000		4-24		HPLC-UV	PUF 226-92 44
Chlorotrifluoroethylene	OSHA CSI				10		200		50 min		GC-FID	ST 226-01 38
Chlorpropham (organonitrogen pesticides)	NIOSH 5601				240		1000		4		HPLC-UV	ST 226-58 or ST 226-30-16 38
Chlorpyrifos (Dursban®)	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
Chlorpyrifos (Dursban)	OSHA 62	1394			480		1000		8		GC-FPD	ST 226-30-16 38
Chlorpyrifos (organophosphorus pesticides)	NIOSH 5600		0.2 mg/m³		240		1000		4		GC-FPD	ST 226-58 39
Chromic acid & chromates (as CrO_3)	OSHA ID 215 (V2)	1439	0.005 mg/m³		960		2000		8	15	IC-UV	F/CST 225-802 Ω 93 C/HLD 225-1 106
Chromic acid & chromates (chromium hexavalent)	NIOSH 7600		1 µg/m³ (10 hr)		240		1000		4		VAS	F/CST 225-803 93 C/HLD 225-1 106
Chromic acid & chromates (chromium hexavalent)	NIOSH 7604		1 µg/m³ (10 hr)		960		2000		8		IC-CD	F/CST 225-803 93 C/HLD 225-1 106
Chromium & compounds (as Cr)	NIOSH 7024	1457	0.5 mg/m³		10 - 1000		1000 - 3000		varies		AA-F	F/CST 225-3-01 or F/CST 225-8410 89 C/HLD 225-1 106
Chromium (elements by ICP Aqua Regia ashing)	NIOSH 7301		0.5 mg/m³		5-1000		1000-4000		varies		ICP-AES	F/CST 225-3-01 or F/CST 225-803 ¥ 93 C/HLD 225-1 106
Chromium (elements by ICP HNO_3 digestion)	NIOSH 7303		0.5 mg/m³		8-500,000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Chromium (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1455	0.5 mg/m³		5-1000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Chromium (elements on wipes)	NIOSH 9102				wipe						ICP-AES	W 225-2414 147 TMP 225-2403 or TMP 225-2415 147
Chromium acetate	OSHA ID 121				960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Chromium carbonate	OSHA ID 121				960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Chromium metal & insoluble compounds	OSHA ID 121	1043	1 mg/m³		960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Chromium metal & insoluble compounds	OSHA ID 125G ¶		1 mg/m³		480		2000		4		ICP-AES	F/CST 225-3-01 or F/CST 225-3100 or F/CST 225-803 or F/CST 225-8215 93 C/HLD 225-1 106
Chromium phosphate	OSHA ID 121				960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Chromium soluble salts (except hexavalent)	OSHA ID 121				960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Chromium trioxide (CR(VI))	OSHA ID 215 (V2)	1439	0.005 mg/m³		960		2000		8		IC-UV	F/CST 225-802 Ω 93 C/HLD 225-1 106
Chromium, hexavalent	ASTM D 6832				varies		1000-5000		varies		IC	F/CST 225-802 or F/CST 225-1713 or F/CST 225-709 or F/CST 225-401 104
Chromium, hexavalent	NIOSH 7600	1032	1 µg/m³ (10 hr)		240		1000		4		VAS	F/CST 225-802 93 C/HLD 225-1 106
Chromium, hexavalent	NIOSH 7604	1032	1 µg/m³ (10 hr)		240		1000		4		IC-CD	F/CST 225-802 93 C/HLD 225-1 106
Chromium, hexavalent	NIOSH 7605		0.001 mg/m³ (10 hr)		1-400		1000-4000		varies		IC-PCD-UV	F/CST 225-802 93 C/HLD 225-1 106
Chromium, hexavalent	NIOSH 7703		0.001 mg/m³ (10 hr)		10-1200		1000-4000		varies		P VAS	F/CST 225-802 93 C/HLD 225-1 106
Chromium, hexavalent	OSHA ID 103		0.005 mg/m³ (C)		960	30	2000	2000	8	15	DPP	F/CST 225-802 93 C/HLD 225-1 106
Chromium, hexavalent	OSHA W4001		0.005 mg/m³ (C)								IC-UV	FLT 225-5-37 or FLT 225-1822 116
Chromium, hexavalent (CR(VI))	OSHA ID 215 (V2)	1439	0.005 mg/m³		960		2000		8		IC-UV	F/CST 225-802 Ω 93 C/HLD 225-1 106
Chromium, hexavalent (in settled dust)	NIOSH 9101				bulk	bulk					CLR or VAS or IC	
Chrysene	OSHA 58		0.2 mg/m³		960		2000		8		GR & HPLC-FD, or GR & HPLC-UV	FLT 225-7 98 CST 225-2LF 99 C/HLD 225-1 106
Chrysene (polynuclear aromatic hydrocarbons by GC-MS)	ASTM D 6209				350 m³ (max)		225 L/min		1-24		GC-MS	PUF 226-131 45 FLT 225-1821 116
Chrysene (polynuclear aromatic hydrocarbons by GC)	NIOSH 5515		LFC		480		2000		4		GC-FID	F/CST 225-1713 94 ST 226-30-04 38 C/HLD 225-1 106
Chrysene (polynuclear aromatic hydrocarbons by HPLC)	NIOSH 5506		LFC		480		2000		4		HPLC-UV	F/CST 225-1713 94 ST 226-30-04 38 C/HLD 225-1 106
Chrysosporium species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Chrysosporium species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Chrysotile *(see asbestos fibers)*	NIOSH 9000				bulk						XRD	
Chrysotile fibers *(see asbestos fibers)*	NIOSH 7400											
Cladosporium species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Cladosporium species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Clopidol (respirable fraction)	OSHA CSI		5 mg/m³		varies		varies		varies		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106 CYC 225-105 105
Clopidol (total dust)	OSHA CSI		15 mg/m³		120		1000		2		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Co-Ral (coumaphos)	OSHA CSI				480		1000		8		GC-FPD	ST 226-30-16 38
Coal dust (< 5% SiO_2)	OSHA CSI		2.4 mg/m³/ (%SiO_2+2)		varies		varies		varies		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-105 105 CST 225-3LF 99
Coal dust (> 5% SiO_2)	OSHA ID 142		(10 mg/m³)/ (%SiO_2+2)		varies		varies		varies		GR & XRD	F/CST 225-803 93 C/HLD 225-1 106 CYC 225-105 105 CST 225-3LF 99
Coal tar naphtha (naphthas)	NIOSH 1550		100		3		20		2.5		GC-FID	ST 226-01 38

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

C

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	Vol. (liter) CLG/STEL	Rate (ml/min) TWA Flow/Sampling Rate	Rate (ml/min) CLG/STEL	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Coal tar pitch volatiles	OSHA 58	1076	0.2 mg/m³		960		2000		8		GR & HPLC-FD, or GR & HPLC-UV	FLT 225-7 98 CST 225-2LF 99 C/HLD 225-1 106
Cobalt	OSHA ID 213		0.1 mg/m³		480		2000		6		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Cobalt (elements by ICP Aqua Regia ashing)	NIOSH 7301		0.5 mg/m³ (dust, fume)		25-2000		1000-4000		varies		ICP-AES	F/CST 225-3-01 or F/CST 225-803 ¥ 93 C/HLD 225-1 106
Cobalt (elements by ICP HNO_3 digestion)	NIOSH 7303		0.5 mg/m³ (dust, fume)		3-500,000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Cobalt (elements by ICP $HNO_3/HClO_4$ ashing)	NIOSH 7300	1455	0.05 mg/m³ (dust, fume)		25-2000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Cobalt (elements on wipes)	NIOSH 9102				wipe						ICP-AES	W 225-2414 147 TMP 225-2403 or TMP 225-2415 147
Cobalt & compounds (as Co)	NIOSH 7027		0.05 mg/m³		960		2000		8		AA-F	F/CST 225-3-01 89 C/HLD 225-1 106
Cobalt acetate	OSHA ID 125G ¶				480		2000		4		ICP-AES	F/CST 225-3-01 or F/CST 225-3100 or F/CST 225-803 or F/CST 225-8215 93 C/HLD 225-1 106
Cobalt carbonyl	OSHA ID 121				960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Cobalt hydrocarbonyl	OSHA ID 121	1193	0.1 mg/m³ (as Co)		960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Cobalt metal, dust & fume	OSHA ID 125G ¶		0.1 mg/m³		480		2000		4		ICP-AES	F/CST 225-3-01 or F/CST 225-3100 or F/CST 225-803 or F/CST 225-8215 93 C/HLD 225-1 106
Cobalt metal, dust & fume (as Co)	OSHA ID 121	1210	0.1 mg/m³		960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Coke oven emissions	OSHA 58		0.15 mg/m³		960		2000		8		GR & HPLC-FD, or GR & HPLC-UV	FLT 225-7 98 CST 225-2LF 99 C/HLD 225-1 106
Command (dimethazone)	OSHA PV2066				60		1000		1		GC-ECD	ST 226-30-16 38
Copper (elements by ICP Aqua Regia ashing)	NIOSH 7301		1 mg/m³ (dust) 0.1 mg/m³ (fume)		5-1000		1000-4000		varies		ICP-AES	F/CST 225-3-01 or F/CST 225-803 ¥ 93 C/HLD 225-1 106
Copper (elements by ICP HNO_3 digestion)	NIOSH 7303		1 mg/m³ (dust) 0.1 mg/m³ (fume)		15-500,000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Copper (elements by ICP $HNO_3/HClO_4$ ashing)	NIOSH 7300	1455	1 mg/m³ (dust) 0.1 mg/m³ (fume)		5-1000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Copper (elements on wipes)	NIOSH 9102				wipe						ICP-AES	W 225-2414 147 TMP 225-2403 or TMP 225-2415 147
Copper dust	NIOSH 7029		1 mg/m³		480		1000		8		AA-F	F/CST 225-3-01 89 C/HLD 225-1 106
Copper dusts & mists	OSHA ID 125G ¶		1 mg/m³		480		2000		4		ICP-AES	F/CST 225-3-01 or F/CST 225-3100 or F/CST 225-803 or F/CST 225-8215 93 C/HLD 225-1 106
Copper dusts & mists (as Cu)	OSHA ID 121	1205	1 mg/m³		960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Copper fume	NIOSH 7029		0.1 mg/m³		480		1000		8		AA-F	F/CST 225-3-01 89 C/HLD 225-1 106
Copper fume	OSHA ID 121	1206	0.1 mg/m³		960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Copper fume	OSHA ID 125G ¶		0.1 mg/m³		480		2000		4		ICP-AES	F/CST 225-3-01 or F/CST 225-3100 or F/CST 225-803 or F/CST 225-8215 93 C/HLD 225-1 106
Copper fume (ICP analysis of metal/metalloid particulates from solder operations)	OSHA ID 206		0.1 mg/m³		480		2000		4		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Corn starch *(see dust, respirable nuisance)*												
Coronene	OSHA CSI				960		2000		8		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Corundum (Al_2O_3) *(see alpha-alumina [total dust])*												
Corundum (emery) (particulates, respirable)	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Corundum (emery) (particulates, total)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Corynebacterium species (bacteria)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Cotton Dust (raw)	OSHA CSI		1 mg/m³		960		2		8		GR	FLT 225-5-37-P with PPI 225-381 and IS 225-388 or PPI 225-386 116
Cotton Dust (raw)	OSHA CSI		1 mg/m³		2664		7.4		6		GR	F/CST 225-803 93 VERT. ELUTRI-ATOR NA SKC
Coumarin	OSHA CSI				96		200		8		HPLC-UV	ST 226-30-04 38
Crag herbicide (respirable dust)	OSHA CSI		5 mg/m³		varies		varies		varies		CLR	F/CST 225-803 93 C/HLD 225-1 106 CYC 225-105 105
Crag herbicide (total dust)	OSHA CSI		15 mg/m³		90		1500		1		CLR	F/CST 225-3-01 89 C/HLD 225-1 106
p-Cresidine *(see 5-methyl-o-anisidine)*	OSHA CSI											
di-tert-butyl-p-Cresol	OSHA PV2108				100		1000		100 min		GC-FID	ST 226-57 39
Cresols	**EPA TO-8**	**1668**			**< 80**		**100-1000**				**HPLC-UV**	**IMP 225-36-1 (2) 67 IT 225-22 67**
Cresol (all isomers)	NIOSH 2546		10 mg/m³		24		100		4		GC-FID	ST 226-95 40
Cresol (all isomers)	OSHA 32		5 mg/m³		24		100		4		HPLC-UV	ST 226-95 40
Cresylil acid *(see cresol, all isomers)*	OSHA CSI											
Cristobalite	OSHA ID 142				varies		varies		varies		GR & XRD	F/CST 225-803 93 C/HLD 225-1 106 CYC 225-105 105
Cristobalite (silica, crystalline [respirable] by XRD)	NIOSH 7500	1370	0.05 mg/m³		400-1000		2500		varies		XRD	F/CST 225-803 93 CYC 225-01-02 115 C/HLD 225-1 106

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	Vol. (liter) CLG/STEL	Rate (ml/min) TWA Flow/Sampling Rate	Rate (ml/min) CLG/STEL	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Cristobalite (silica, crystalline by IR)	NIOSH 7602		0.05 mg/m³		400-800		2500		varies		IR	F/CST 225-803 93; CYC 225-01-02 115; C/HLD 225-1 106
Cristobalite (silica, crystalline by VAS)	NIOSH 7601	1041	0.05 mg/m³		400-800		2500		varies		VAS	F/CST 225-803 93; CYC 225-01-02 115; C/HLD 225-1 106
Crocidolite fibers *(see asbestos fibers)*	NIOSH 7400											
Crotonaldehyde	ASTM D 5197				varies		500-1200		5 min-24 hrs		HPLC-UV	ST 226-120 O or ST 226-119 40
Crotonaldehyde	NIOSH 3516		2		48		200		4		DPP	IMP 225-36-2 65; IT 225-22 65
Crotonaldehyde	OSHA 81		2		6		100		1		HPLC-UV	CF/CST 225-9019 63; C/HLD 225-1 106
Crotonaldehyde (aldehydes, screening)	NIOSH 2539		2		5		20		4		GC-FID & GC-MS	ST 226-118 40
Crufomate	OSHA PV2015				60		1000		1		GC-FPD	ST 226-30-16 38
Cryolite (fluorides)	NIOSH 7902		2.5 mg/m³		480		1000		8		ISE	CF/CST 225-9001 63; C/HLD 225-1 106
Cumene	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42; CPC 224-26CPC-10 49; TH 224-26-02 49**
Cumene (isopropyl benzene)	OSHA 07	1065	50		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Cumene (isopropyl benzene)	OSHA PV2137		50		24		200		2		GC-FID	ST 226-01 38
Cumene (isopropyl benzene) (hydrocarbons, aromatic)	NIOSH 1501		50 (skin)		1-30		10-200		8(3.3)		GC-FID	ST 226-01 38
Cumene hydroperoxide	OSHA CSI				120		1000		2		HPLC-UV	IMP 225-36-1 65; IT 225-22 65
Cunninghamella species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89; C/HLD 225-1 106
Cunninghamella species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Cupric carbonate as Cu (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1455			960		1000-4000		varies		ICP-AES	F/CST 225-3-01 89; C/HLD 225-1 106
Curvularia species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89; C/HLD 225-1 106
Curvularia species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Cyanamide	OSHA CSI				10		100		100 min		HPLC-UV	ST 226-30-18 38
Cyanazine	NIOSH 5602				480		1000		8		GC-ECD	ST 226-58 39
Cyanide (as Cn)	OSHA ID 120		5 mg/m³		120		1000		2		ISE	F/CST 225-3-01 89; IT 225-22 65; IMP 225-36-2 65
Cyanides, aerosol & gas	NIOSH 7904			5 mg/m³ (10 min)	120		500		4		ISE	FLT 225-2705 Δ 94; IMP 225-36-2 65; C/HLD 225-1 106; CST 225-2LF 99; IT 225-22 65
Cyanogen	OSHA PV2104				12		200		1		GC-NPD	ST 226-117 40
Cyanogen chloride	OSHA CSI				1		200		5		GC-NPD	ST 226-117 40
Cyanuric acid	NIOSH 5030				480		1000		8		HPLC-UV	F/CST 225-802 93; C/HLD 225-1 106
Cyclohexane	OSHA 07	1134	300		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Cyclohexane (hydrocarbons, BP 36 to 216 C)	NIOSH 1500	1268	300		2.5-5		10-200		varies		GC-FID	ST 226-01 38
Cyclohexanol	OSHA 07	1135	50		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Cyclohexanol (alcohols combined)	NIOSH 1405		50 (skin)		1-10		10-200		varies		GC-FID	ST 226-01 38
Cyclohexanol (alcohols III)	NIOSH 1402		50		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Cyclohexanone	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42; CPC 224-26CPC-10 49; TH 224-26-02 49**
Cyclohexanone	OSHA 01	1073	50		10		20(50)		8(3.3)		GC-FID	ST 226-110 40
Cyclohexanone (ketones I)	NIOSH 1300		25		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Cyclohexanone (ketones I)	NIOSH 2555				1-10		10-200		varies		GC-FID	ST NA SKC
Cyclohexene	OSHA 07	1124	300		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Cyclohexene (hydrocarbons, BP 36 to 216 C)	NIOSH 1500		300		5-7		10-200		varies		GC-FID	ST 226-01 38
N-Cyclohexyl-2-benzothiazolesulfenamide	OSHA CSI				480		2000		4		HPLC-UV	F/CST 225-709 98; C/HLD 225-1 106
Cyclohexylamine	OSHA PV2016				20		200		100 min		GC-FID	ST 226-98 40
Cyclonite (RDX)	OSHA CSI		1.5 mg/m³ (skin)		120		1000		2		HPLC-UV	F/CST 225-709 98; C/HLD 225-1 106
Cyclopentane	OSHA CSI				5		200		25 min		GC-FID	ST 226-01 38
Cyhexatin	OSHA ID 197SG				480		2000		4		AA-GF	F/CST 225-709 98; C/HLD 225-1 106; ST 226-30 38
Cypermethrin	OSHA PV2063				60		1000		60 min		GC-ECD	ST 226-30-16 38
2,4-D (2-butoxyethyl ester)	NIOSH 5602				480		1000		8		GC-ECD	ST 226-58 39
2,4-D (2-butoxyethyl ester)	NIOSH 5602				480		1000		8		GC-ECD	ST 226-58 39
2,4-D (2,4-dichlorophenoxyacetic acid)	NIOSH 5001		10 mg/m³		180		1000		3		HPLC-UV	F/CST 225-706 98; C/HLD 225-1 106
2,4-D (2,4-dichlorophenoxyacetic acid)	OSHA CSI		10 mg/m³		180		3000		1		HPLC-UV	F/CST 225-709 98; C/HLD 225-1 106
D & C red #19	OSHA CSI				240		1000		4		HPLC-UV	F/CST 225-709 98; C/HLD 225-1 106
2,4-D acid	NIOSH 5602		10		480		1000		8		GC-ECD	ST 226-58 39
2,4-D, BE	NIOSH 5602				480		1000		8		GC-ECD	ST 226-58 39
2,4-D, EH	NIOSH 5602				480		1000		8		GC-ECD	ST 226-58 39
2,4-D, ME (2,4-dichlorophenoxyacetic acid)	NIOSH 5602				480		1000		8		GC-ECD	ST 226-58 39
Dacthal	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
DAP (diallyl phthalate)	OSHA CSI				60		1000		1		GC-FID	ST 226-30-16 38
DBP *(see dibutyl phthalate)*	OSHA 104											
p,p-DDE	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
DDT	OSHA CSI		1 mg/m³		90		1500		1		GC-ECD	F/CST 225-709 98; C/HLD 225-1 106
p,p-DDT	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
DDVP (dichlorvos)	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44

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References and abbreviations are found on pages 212-213.

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA	Vol. (liter) CLG/STEL	Rate (ml/min) TWA	Rate (ml/min) CLG/STEL	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
					Sample Time or Air Volume		Flow/Sampling Rate					
Decaborane	OSHA CSI		0.05		480	30	2000	2000	4	15	ICP	F/CST 225-3-01 89 C/HLD 225-1 106
Decabromodiphenyl oxide	NIOSH 2559				48-960		2000		varies		HPLC-UV	FLT 225-1822 116 SP 225-27 107 CST 225-2LF 99
Decabromodiphenyl oxide	OSHA CSI				200		1000		3		GC-ECD	F/CST 225-709 98 C/HLD 225-1 106
n-Decane	EPA TO-17	1689			1 & 4		16.7 & 66.7				TD, GC	ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49
n-Decane (hydrocarbons, BP 36 to 216 C)	NIOSH 1500				2		10-50		varies		GC-FID	ST 226-01 38
Decyl alcohol	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-01 38
DEHP *(see di-2-ethylhexyl phthalate)*	OSHA 104											
Dehydroabietic acid	OSHA CSI				180		2000		1.5		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Dehydroisoandrosterone	OSHA CSI				240		1000		4		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Demeton	NIOSH 5514		0.1 mg/m³		480		1000		8		GC-FPD	FLT 225-5 88 SCN 225-26 107 CST 225-2LF 99 ST 226-30-05 38 C/HLD 225-1 106
Demeton (Systox)	OSHA CSI		0.1 mg/m³		480		1000		8		GC-FPD	ST 226-30-16 38
Demosan	OSHA CSI				960		2000		8		GC-ECD	F/CST 225-709 98 C/HLD 225-1 106
DEP *(see diethyl phthalate)*	OSHA 104											
Desflurane	OSHA 106	1760			3		50		1		GC-FID	ST 226-81A 39
Di-(2-ethylhexyl) adipate	OSHA CSI				180		1000		3		GC-FID	FLT 225-17-04 94 CST 225-3LF 99 C/HLD 225-1 106
Di-(2-ethylhexyl) phthalate	OSHA CSI		5 mg/m³		60	15	1000	1000	1	15	GC-FID	ST 226-30-16 38
Di-(2-ethylhexyl) phthalate (DEHP)	NIOSH 5020				180		1000		3		GC-FID	F/CST 225-3-01 89 C/HLD 225-1 106
Di-n-hexyl phthalate	OSHA PV2076				240		1000		4		GC-FID	ST 226-56 39
Di-n-octyl phthalate (DNOP)	OSHA 104				240		1000		4		GC-FID	ST 226-56 39
Di-n-octyl-phthalate (DNOP)	OSHA CSI				90		1000		1.5		GC-ECD	ST 226-56 39
Di-sec-octyl phthalate *(see di-[2-ethylhexy] phthalate)*												
Di(ethyleneglycol) ethyl ether acrylate	OSHA PV2132		1 mg/m³		48		200		4		GC-FID	ST 226-110 40
Diacetone alcohol	OSHA 07	1123	50		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Diacetone alcohol (alcohols combined)	NIOSH 1405		50		1-10		10-200		varies		GC-FID	ST 226-01 38
Diacetone alcohol (alcohols III)	NIOSH 1402		50		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Diacetyl	NIOSH 2557				6		100		1		GC	ST NA SKC
Diacetyl	OSHA 1012		0.05		9	3	50	200	3	15	GC-FID	ST 226-183 41
Diacetyl	OSHA 1013		0.05		9	3	50	200	3	15	GC-FID	ST 226-183 41
Diallyl disulfide	OSHA PV2086				10		20(50)		8(3.3)		GC-FPD	ST 226-110 40
Diallyl phthalate	OSHA CSI				60		1000		1		GC-FID	ST 226-30-16 38
1,2-Diaminoethane	NIOSH 2540				10		100		1.7		HPLC-UV	ST 226-30-18 38
o-Dianisidine	OSHA 71	1235			100		1000		100 min		GC-ECD	CF/CST 225-9004 63 C/HLD 225-1 106
o-Dianisidine dyes (dyes, benzidine)	NIOSH 5013		LFC		480		1000		8		HPLC-UV	FLT 225-17A 94 CST 225-3LF 99 C/HLD 225-1 106
o-Dianisidine-based dyes	OSHA CSI				480		1000		8		HPLC-UV	FLT 225-17-04 94 CST 225-3LF 99 C/HLD 225-1 106
DiaziNON	ASTM D 4861				240-7200		1000-5000		4-24		GC-NPD	PUF 226-92 44
DiaziNON	OSHA 62	1396			480		1000		8		GC-FPD	ST 226-30-16 38
Diazinon (organophosphorus pesticides)	NIOSH 5600		0.1 mg/m³		240		1000		4		GC-FPD	ST 226-58 39
Diazomethane	NIOSH 2515		0.2		10		200		50 min		GC-FID	ST 226-23 38
Diazomethane	OSHA CSI		0.2		10		200		50 min		GC-FID	ST 226-23 38
Dibenz(a,h)anthracene	OSHA CSI				960		2000		8		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Dibenz(a,h)anthracene (polynuclear aromatic hydrocarbons by GC-MS)	ASTM D 6209				350 m³ (max)		225 L/min		1-24		GC-MS	PUF 226-131 45 FLT 225-1821 116
Dibenz(a,h)anthracene (polynuclear aromatic hydrocarbons by GC)	NIOSH 5515				480		2000		4		GC-FID	F/CST 225-1713 94 ST 226-30-04 38 C/HLD 225-1 106
Dibenz(a,h)anthracene (polynuclear aromatic hydrocarbons by HPLC)	NIOSH 5506				480		2000		4		HPLC-FD	F/CST 225-1713 94 ST 226-30-04 38 C/HLD 225-1 106
Diborane	NIOSH 6006		0.1		120		1000		2		PES	ST 226-151 41 FLT NA SKC and CST 225-32 106
Dibrom	OSHA CSI		3 mg/m³		60		1000		1		GC-FPD	ST 226-30-16 38
1,2-Dibromo-3-chloropropane (DBCP)	OSHA CSI		1 ppb		10		20(50)		8(3.3)		GC-ECD	ST 226-81A 39
Dibromodifluoromethane (difluorodibromomethane)	NIOSH 1012		100		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
1,2-Dibromoethane (ethylene dibromide)	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
1,2-Dibromoethane (ethylene dibromide)	NIOSH 1008		0.045	0.13	24	3	50	200	8	15	GC-ECD	ST 226-01 38
Dibutyl amine	OSHA CSI				120		1000		2		GC-NPD	IMP 225-36-2 65 IT 225-22 65
2-Dibutyl aminoethanol (aminoethanol compounds I)	NIOSH 2007		2		10		20(50)		8(3.3)		GC-FID	ST 226-10-04 38
Dibutyl phosphate	NIOSH 5017		1	2	240		2000		2		GC-FPD	FLT 225-17-01 94 CST 225-2LF 99
Dibutyl phthalate	NIOSH 5020		5 mg/m³		100		1000		100 min		GC-FID	F/CST 225-3-01 89 C/HLD 225-1 106
Dibutyl phthalate (DBP)	OSHA 104		5 mg/m³		240		1000		4		GC-FID	ST 226-56 39
Dibutyltin bis (isooctyl mercaptoacetate) (organotin compounds as Sn)	NIOSH 5504		0.1 mg/m³		480		1000		8		HPLC & AA-GF	ST 226-30 38 F/CST 225-709 98 C/HLD 225-1 106
Dibutyltin dilaurate (as Sn)	OSHA ID 218SG				500		1000		500 min		AA	F/CST 225-3-01 89 C/HLD 225-1 106
Dibutyltin maleate (as Sn)	OSHA ID 224SG				200		1000		200 min		AA-GF	F/CST 225-3-01 89 C/HLD 225-1 106
Dicamba	OSHA CSI				200		1000		3.3		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	Vol. (liter) CLG/STEL Sample Time or Air Volume	Rate (ml/min) TWA Flow/Sampling Rate	Rate (ml/min) CLG/STEL Flow/Sampling Rate	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Dicamba sodium salt	OSHA CSI				200		1000		3.3		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
1,1-Dichloro-1-fluoroethane	OSHA 113				1		50		20 min		GC-FID	ST NA SKC
1,1-Dichloro-1-nitroethane	NIOSH 1601		2		10		20(50)		8(3.3)		GC-FID	ST 226-81A 39
1,1-Dichloro-1-nitroethane	OSHA 07			10		15		1000		15	GC-FID	ST 226-81A 39
1,1-Dichloro-1-nitroethane	OSHA CSI			10	10		20		8		GC-FID	ST 226-81A 39
2,2-Dichloro-1,1,1-trifluoroethane	NON 50				9		50		3		GC-FID	ST 226-09 38
3,3-Dichloro-1,1,1,2,2-pentafluoropropane	OSHA CSI				9		50		3		GC-FID	ST 226-01 38
1,3-Dichloro-1,1,2,2,3-pentafluoropropane	OSHA CSI				9		50		3		GC-FID	ST 226-01 38
Dichloroacetylene	OSHA CSI					1		200		5	GC-FID	ST 226-01 38
3,4-Dichloroaniline	OSHA CSI				100		1000		1.5		HPLC	F/CST 225-803 93 C/HLD 225-1 106
m-Dichlorobenzene	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
m-Dichlorobenzene	OSHA CSI				10		200		50 min		GC-FID	ST 226-01 38
o-Dichlorobenzene	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
o-Dichlorobenzene	OSHA 07	1122		50 (C)		3		200		15	GC-FID	ST 226-01 38
p-Dichlorobenzene	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
p-Dichlorobenzene	OSHA 07	1121	75		3	0.75	20	50	2.5	15	GC-FID	ST 226-01 38
o-Dichlorobenzene (hydrocarbons, halogenated)	NIOSH 1003			50		3		10-200		varies	GC-FID	ST 226-01 38
p-Dichlorobenzene (hydrocarbons, halogenated)	NIOSH 1003		1.7 (LOQ)		3		10-200		varies		GC-FID	ST 226-01 38
3,3'-Dichlorobenzidine	OSHA 65	1238			100		1000		100 min		GC-ECD	CF/CST 225-9004 63 C/HLD 225-1 106
Dichlorodifluoroethane	OSHA CSI				3		100		30 min		GC-FID	ST 226-01 38
Dichlorodifluoromethane	NIOSH 1018		1000		3		20		2.5		GC-FID	ST 226-01 38 ST 226-09 38
1,2-Dichloroethane	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
1,2-Dichloroethane (ethylene dichloride)	OSHA 07	1119	50	100	10		20(50)		8(3.3)		GC-FID	ST 226-01 38
1,1-Dichloroethane (ethylidene chloride)	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
1,1-Dichloroethane (ethylidene chloride)	OSHA 07		100		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
1,1-Dichloroethane (hydrocarbons, halogenated)	NIOSH 1003	1267	100		10		10-200		varies		GC-FID	ST 226-01 38
Dichloroethyl ether	NIOSH 1004		5	10	10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Dichloroethyl ether	OSHA 07			15	10	15	20	1000	8	15	GC-FID	ST 226-01 38
1,2-Dichloroethylene	OSHA 07	1118	200		3		20		2.5		GC-FID	ST 226-01 38
cis-1,2-Dichloroethylene	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
1,2-Dichloroethylene (hydrocarbons, halogenated)	NIOSH 1003		200		3		10-200		varies		GC-FID	ST 226-01 38
Dichloromethane (methylene chloride)	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
Dichlorofluoromethane	NIOSH 2516		10		3		20		2.5		GC-FID	ST 226-25 38
Dichloromethane	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
Dichloromethane *(see methylene chloride)*												
Dichloromonofluoromethane (dichlorofluoromethane)	NIOSH 2516		10		3		20		2		GC-FID	ST 226-09 38
Dichloromonofluoromethane (dichlorofluoromethane)	OSHA CSI		1000		3		20		2.5		GC-FID	ST 226-09 ♠ 38
2,4-Dichlorophenoxyacetic acid (2,4-D)	NIOSH 5001		10 mg/m^3		180		1000		3		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
1,2-Dichloropropane (propylene dichloride)	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
1,2-Dichloropropane (propylene dichloride)	NIOSH 1013		LFC		3		20		2.5		GC-ECN	ST 226-81A 39
1,3-Dichloropropene	OSHA CSI				5		200		25 min		GC-FID	ST 226-01 38
cis-1,3-Dichloropropene	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
trans-1,3-Dichloropropene	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
3,4-Dichloropropionanilide	OSHA CSI										W	FLT 225-7 98
2,2-Dichloropropionic acid	OSHA PV2017				10		200		50 min		HPLC-UV	ST 226-10 38
Dichlorotetrafluoroethane	OSHA CSI				3		50		1		GC-FID	ST 226-09 38 ST 226-01 38
1,1-Dichlorotetrafluoroethane	OSHA CSI				2		50		40 min		GC-FID	ST 226-01 38 ST 226-09 38
1,2-Dichlorotetrafluoroethane (dichlorodifluoromethane)	NIOSH 1018		1000		3		20		2.5		GC-FID	ST 226-01 38 ST 226-09 38
Dichlorotrifluoroethane	NON 50				9		50		3		GC-FID	ST 226-09 38
Dichlorvos (DDVP)	ASTM D 4861				240-7200		1000- 5000		4-24		GC-ECD	PUF 226-92 44
Dichlorvos (DDVP)	OSHA 62	1395	1 mg/m^3		480		1000		8		GC-FPD	ST 226-30-16 38
Dicloran	ASTM D 4861				240-7200		1000- 5000		4-24		GC-ECD	PUF 226-92 44
Dicofol	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
Dicofol	OSHA CSI										W	SM TB 225-24 147
Dicrotophos	ASTM D 4861				240-7200		1000-5000		4-24		HPLC-UV	PUF 226-92 44
Dicrotophos (Bidrin)	OSHA PV2099				480		1000		8		GC-FPD	ST 226-30-16 38
Dicrotophos (organophosphorus pesticides)	NIOSH 5600		0.25 mg/m^3		240		1000		4		GC-FPD	ST 226-58 39
Dicyclopentadiene	OSHA PV2098				10		100		100 min		GC-FID	ST 226-01 38
Dicyclopentadienyl iron (respirable dust)	OSHA CSI		5 mg/m^3		varies		varies		varies		GR	F/CST 225-803 93 C/HLD 225-1 106
Dicyclopentadienyl iron (total dust)	OSHA CSI		15 mg/m^3		960		2000		8		AA	F/CST 225-3-01 89 C/HLD 225-1 106
Dieldrin	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
Dieldrin	OSHA CSI		0.25 mg/m^3		180		1500		2		GC-ECD	F/CST 225-709 98 C/HLD 225-1 106
Diesel emissions *(see elemental carbon)*	NIOSH 5040										TOA-FID	
Diesel exhaust particles *(see elemental carbon)*	NIOSH 5040										TOA-FID	

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References and abbreviations are found on pages 212-213.

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Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	Vol. (liter) CLG/STEL Sample Time or Air Volume	Rate (ml/min) TWA Flow/Sampling Rate	Rate (ml/min) CLG/STEL Flow/Sampling Rate	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Diesel particulate matter	ASTM D 6877				varies		1000-4000		varies		EGA-TOS	DPM 225-317 or F/CST 225-401 104
Diesel particulate matter	MSHA 30CFR57		350 µg/m³ (total carbon)		varies		2000		varies		TOA-FID	DPM 225-317 104 C/HLD 225-1 106 CYC 225-105 105
Diesel particulate matter	MSHA 30CFR57		350 µg/m³ (total carbon)		varies		varies		varies		TOA-FID	F/CST 225-401 104 C/HLD 225-1 106 CYC 225-100 105
Diethanolamine	OSHA PV2018				10		100		100 min		HPLC-UV	ST 226-30-18 38
Diethanolamine (DEA) (aminoethanol compounds II)	NIOSH 3509	1006	3		240		1000		4		IC	IMP 225-36-1 65 IT 225-22 65
Diethyl ether (ethyl ether)	NIOSH 1610				0.25-3		10-200		varies		GC-FID	ST 226-01 38
Diethyl ketone (3-pentanone)	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST NA SKC
Diethyl phthalate (DEP)	OSHA 104				240		1000		4		GC-FID	ST 226-56 39
Diethyl sulfate	OSHA CSI				15		1000		15 min		GC-FID	ST 226-10 38
Diethylamine	OSHA 41	1697	25		10	3	200	200	50 min	15	HPLC	ST 226-96 40
Diethylamine (amines, aliphatic)	NIOSH 2010		10	25	24	3	50	200	8	15	GC-FID	ST 226-10 38
2-Diethylaminoethanol	OSHA CSI		10		24		200		2		GC-FID	ST 226-10-04 38
2-Diethylaminoethanol (aminoethanol compounds I)	NIOSH 2007		10		10		20(50)		8(3.3)		GC-FID	ST 226-10-04 38
Diethylaminopropylamine (DEP)	OSHA CSI				100		1000		100 min		GC-NPD	IMP 225-36-1 65 IT 225-22 65
Diethylene dioxide *(see dioxane)*												
Diethylene ether *(see dioxane)*												
Diethylene glycol (glycols)	NIOSH 5523	1387			60		1000		1		GC-FID	ST 226-57 39
Diethylene glycol methyl ether	OSHA CSI				10		100		100 min		GC-FID	ST 226-01 38
Diethylene glycol monobutyl ether acetate	OSHA CSI				9.6		100		1.6		GC-FID	ST 226-01 38
Diethylene glycol monoethyl ether	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Diethylenetriamine	OSHA 60	1285			10		100		100 min		HPLC-UV	ST 226-30-18 38
Difluorodibromomethane	NIOSH 1012		100		6		50		2		GC-FID	ST 226-01 38
Difluorodibromomethane	OSHA 07		100		10		20		8		GC-FID	ST 226-01 38
Diglycidyl ether of bisphenol A	OSHA 1018				240		1000		240 (min)		HPLC-UV/PDA	F/CST 225-709 98 C/HLD 225-1 106
Diglycolamine	OSHA CSI				20		100		3		GC-NPD	IMP 225-36-1 65 IT 225-22 65
Diglyme	OSHA CSI				20		200		100 min		GC-FID	ST 226-01 38
Dihexyl phthalate	OSHA PV2076				240		1000		4		GC-FID	ST 226-56 39
Dihydrocapsaicin	NIOSH 5041				480	15	1000	1000	8	15	HPLC-FD	FLT 225-16 98 CST 225-32 106
Diisobutyl ketone	OSHA 07	1116	50		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Diisobutyl ketone (ketones I)	NIOSH 1300		25		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Diisobutyl ketone (ketones I)	NIOSH 2555				1-10		10-200		varies		GC-FID	ST NA SKC
Diisocyanates	OSHA 42	1458			240	15	1000	1000	4	15	HPLC-UV or HPLC-FD	CF/CST 225-9002 or CF/CST 225-9013 63 C/HLD 225-1 106
Diisopropylamine	OSHA CSI		5		120		1000		2		GC-FID	IMP 225-36-1 65 IT 225-22 65
Dimethazone	OSHA PV2066				60		1000		1		GC-ECD	ST 226-30-16 38
Dimethoate	OSHA PV2113				480		1000		8		GC-FPD	ST 226-30-16 38
2,5-Dimethoxyaniline	OSHA CSI				17		50		5.7		HPLC-UV	ST 226-30-04 38
Dimethoxymethane (methylal)	NIOSH 1611		1000		2		20		1.5		GC-FID	ST 226-01 38
Dimethoxymethane (methylal)	OSHA 07	1115	1000		2		20		1.5		GC-FID	ST 226-01 38
Dimethyl adipate	OSHA PV2019				20		200		100 min		GC-FID	ST 226-01 38
Dimethyl arsenic acid (arsenic, organo-)	NIOSH 5022				960		2000		8		IC-AA	FLT 225-17-01 94 C/HLD 225-1 106 CST 225-2LF 99
Dimethyl disulfide	NON 42	1413			12		1000		12 min		GC-FPD	SB 253-10 or SB 231-10 52
Dimethyl disulfide	OSHA CSI				6		100		1		GC-FID	ST 226-01 38
Dimethyl glutarate	OSHA PV2020				20		200		100 min		GC-FID	ST 226-01 38
Dimethyl phthalate (DMP)	OSHA 104		5 mg/m³		240		1000		4		GC-FID	ST 226-56 39
Dimethyl succinate	OSHA PV2021				20		200		100 min		GC-FID	ST 226-01 38
Dimethyl sulfate	NIOSH 2524	1284	0.1 (8 hrs.)		12		50		4		GC-ECN	ST 226-114 40
Dimethyl sulfate	OSHA PV2147		1		10		100		100 min		GC-FPD	ST 226-115 40
Dimethyl sulfide	NON 42	1413			12		1000		12 min		GC-FPD	SB 263-10 or SB 231-10 52
Dimethyl sulfide	OSHA CSI				5		20		4		GC-FPD	ST 226-01 38
Dimethyl sulfoxide	OSHA CSI				10		100		100 min		GC-FID	ST 226-01 38
Dimethyl-1,2-dibromo-2,2-dichloroethyl phosphate	OSHA CSI		3 mg/m³		60		1000		1		GC-FPD	ST 226-30-16 38
2,3-Dimethyl-2,3-dinitrobutane	NON 44		0.15 mg/m³ OEL		10		200		50 min		GC-ECD	ST 226-35-03 39
N,N-Dimethyl-p-toluidine (amines, aromatic)	NIOSH 2002	1055			96		200		8		GC-FID or GC-NSD	ST 226-10 38
Dimethylacetamide	NIOSH 2004	1695	10		48		100		8		GC-FID	ST 226-10 38
Dimethylacetamide	OSHA CSI		10		60		1000		1		GC-FID	ST 226-10 38
Dimethylamine	NIOSH 2010		10		24		50		8		GC-FID	ST 226-10 38
Dimethylamine	OSHA 34	1696	10		10		20		8		HPLC	ST 226-96 40
2-Dimethylamino ethanol	NIOSH 2561				10-24		20-100		varies		GC-FID	ST 226-94 40
1-Dimethylamino-2-propanol	NIOSH 2561				10-24		20-100		varies		GC-FID	ST 226-94 40
4-Dimethylaminoazobenzene	OSHA CSI				60		1000		1		HPLC-UV	F/CST 225-706 98 IMP 225-36-1 65 C/HLD 225-1 106 IT 225-22 65
Dimethylaminobenzene	OSHA CSI		5		24		50		8		GC-FID	ST 226-10 38

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	CLG/STEL (ppm)	Vol. (liter) TWA	CLG/STEL	Rate (ml/min) TWA	CLG/STEL	Time TWA (hrs)	CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
					Sample Time or Air Volume		Flow/Sampling Rate					
2,4-Dimethylaminobenzene (amines, aromatic)	NIOSH 2002		2		24		50		8		GC-FID or GC-NSD	ST 226-10 38
N,N-Dimethylaniline	OSHA 07		5		10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
N,N-Dimethylaniline	OSHA PV2064		5		30		200		2.5		GC-FID	ST 226-98 40
N,N-Dimethylaniline (amines, aromatic)	NIOSH 2002	1054	5	10	24	3	50	200	8	15	GC-FID or GC-NSD	ST 226-10 38
2,5-Dimethylbenzaldehyde	ASTM D 5197				varies		500-1200		5 min-24 hrs		HPLC-UV	ST 226-120 [O] or ST 226-119 40
trans-1,4-Dimethylcyclohexane	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-01 38
N,N-Dimethylethanolamine	NIOSH 2561				10-24		20-100		varies		GC-FID	ST 226-94 40
N,N-Dimethylethanolamine	OSHA CSI				24		50		8		GC-FID	ST 226-10-04 38
N,N-Dimethylethylamine	OSHA PV2096				40		100		40 min		GC-NPD	ST 226-18 38
N,N-Dimethylformamide	NIOSH 2004		10		24		50		8		GC-FID	ST 226-10 38
N,N-Dimethylformamide	OSHA 66	1271	10		9.6	3	20	200	8	15	GC-NPD	ST 226-01 38
1,1-Dimethylhydrazine	NIOSH 3515		0.06 (120 min)		60		1000		1		VAS	IMP 225-36-2 65 IT 225-22 65
1,1-Dimethylhydrazine	OSHA CSI		0.5		96		200		8		CLR	IMP 225-36-2 65 IT 225-22 65
Dimethyltin dichloride	NIOSH 5526		0.1 mg/m³		60	60	250	1000	4	60	GC-FPD	ST 226-30-16 38
Dinitolmide	OSHA CSI				240		1000		4		HPLC	F/CST 225-706 98 C/HLD 225-1 106
Dinitro-o-cresol	OSHA CSI		0.2 mg/m³		180		1500		2		HPLC-UV	F/CST 225-3-01 89 IT 225-22 65 IMP 225-36-1 65
4,6-Dinitro-o-sec-butyl phenol	OSHA CSI				24		50		8		HPLC-UV	ST 226-95 40
Dinitrobenzene (all isomers)	OSHA CSI		1 mg/m³		60		1000		1		HPLC-UV	ST 226-30-16 38
2-(2,4-Dinitrophenoxy)ethanol	OSHA CSI				10		20(50)		8(3.3)		HPLC-UV	ST 226-10 38
Dinitrotoluene (DNT)	OSHA 44		1.5 mg/m³		60		1000		1		GC-TEA	ST 226-56 39
n-Dioctyl phthalate (DNOP)	OSHA 104				240		1000		4		GC-FID	ST 226-56 39
Dioxane (diethylene dioxide)	NIOSH 1602		1 (30 min)		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Dioxane (diethylene dioxide)	OSHA 07	1114	100		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Dioxathion (delnav)	OSHA CSI				480		1000		8		GC-FPD	ST 226-30-16 38
Dioxins (including PHDDs, PCDDs, PBDDs)	EPA TO-9A	1673					200-280 L/min		24 hrs		HRGC-HRMS	PUF 226-131 45 FLT 225-1821 45
Diphenyl	NIOSH 2530		0.2		30		100		5		GC-FID	ST 226-35-01 38
Diphenyl ether	OSHA PV2022		0.2		20		200		100 min		GC-FID	ST 226-95 40
p,p-Diphenyl methane diisocyanate (MDI) *(see methylene bisphenyl isocyanate)*	OSHA 47											
2-Diphenylacetyl-1,3-indandione	OSHA CSI				480		2000		4		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Diphenylamine	OSHA 78	1229			100		1000		100 min		HPLC-UV	CF/CST 225-9004 63 C/HLD 225-1 106
5,5-Diphenylhydantoin	OSHA CSI				60		1000		1		HPLC-UV	FLT 225-7 ‡ 98 C/HLD 225-1 106 CST 225-3LF 99
Diphenylmethane-4,4'-diisocyanate (4,4-methylene bisphenyl isocyanate) (isocyanates)	NIOSH 5521	1001	50 µg/m³	200 µg/m³ (10 min) C	480	10	1000	1000	8	10	HPLC-ELCHM & HPLC-UV	IMP 225-36-1 65 IT 225-22 65
Dipropyl disulfide	OSHA PV2086				10		20(50)		8(3.3)		GC-FPD	ST 226-110 40
Dipropyl ketone	OSHA CSI				10		20		8		GC-FID	ST NA SKC
Dipropylene glycol methyl ether	OSHA 07	1113	100		10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
Dipropylene glycol methyl ether	OSHA 101		100		10		100		100 min		GC-FID	ST 226-01 38
Dipropylene glycol methyl ether (glycol ethers)	NIOSH 2554				3-25		100-200		varies		GC-FID	ST 226-81A 39
Dipropylene glycol monomethyl ether (glycol ethers)	NIOSH 2554				3-25		100-200		varies		GC-FID	ST 226-81A 39
Diquat	OSHA CSI				120		1000		2		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Direct black 38	OSHA CSI				100		1000		100 min		HPLC	F/CST 225-706 98 C/HLD 225-1 106
Direct black 38 (dyes, benzidine)	NIOSH 5013		LFC		480		1000		8		HPLC	FLT 225-17A 94 C/HLD 225-1 106 CST 225-3LF 99
Direct blue	OSHA CSI				60		1000		1		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Direct blue 2	OSHA CSI				100		1000		100 min		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Direct blue 6	OSHA CSI				100		1000		100 min		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Direct blue 6 (dyes, benzidine)	NIOSH 5013		LFC		480		1000		8		HPLC	FLT 225-17A 94 C/HLD 225-1 106 CST 225-3LF 99
Direct blue 8 (dyes, benzidine)	NIOSH 5013		LFC		480		1000		8		HPLC	FLT 225-17A 94 C/HLD 225-1 106 CST 225-3LF 99
Direct blue 98	OSHA CSI				180		1000		3		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Direct brown 31	OSHA CSI				180		1000		3		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Direct brown 95	OSHA CSI				100		1000		100 min		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Direct brown 95 (dyes, benzidine)	NIOSH 5013		LFC		480		1000		8		HPLC	FLT 225-17A 94 C/HLD 225-1 106 CST 225-3LF 99
Direct red 2	OSHA CSI				120		1000		2		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Direct red 2 (dyes, benzidine)	NIOSH 5013		LFC		480		1000		8		HPLC	FLT 225-17A 94 C/HLD 225-1 106 CST 225-3LF 99
Direct red 28 (dyes, benzidine)	NIOSH 5013		LFC		480		1000		8		HPLC	FLT 225-17A 94 C/HLD 225-1 106 CST 225-3LF 99
Direct red 81	OSHA CSI				100		1000		100		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Disperse yellow 3	OSHA CSI				100		1000		100 min		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Disulfiram (tetraethylthiuram disulfide)	OSHA CSI				120		1000		2		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Disulfoton	OSHA PV2105				480		1000		8		GC-FPD	ST 226-30-16 38

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

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Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	CLG/STEL (ppm)	Vol. (liter) TWA	CLG/STEL	Rate (ml/min) TWA	CLG/STEL	Time TWA (hrs)	CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
					Sample Time or Air Volume		Flow/Sampling Rate					
Disulfoton (organophosphorus pesticides)	NIOSH 5600		0.1 mg/m³		240		1000		4		GC-FPD	ST 226-58 39
Disyston	OSHA CSI				480		1000		8		GC-FPD	ST 226-30-16 38
2,2'-Dithiobis(benzothiazole)	OSHA CSI				480		2000		4		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Diuron	ASTM D 4861				240-7200		1000-5000		4-24		HPLC-UV	PUF 226-92 44
Diuron (organonitrogen pesticides)	NIOSH 5601		10 mg/m³		240		1000		4		HPLC-UV	ST 226-58 or ST 226-30-16 38
Divinyl benzene	OSHA 89				12		50		4		GC-FID	ST 226-73 39
Divinyl sulfide	OSHA CSI				2.5		20		2		GC	ST 226-01 38
DMP *(see dimethyl phthalate)*	OSHA 104											
DNOP *(see di-n-octyl phthalate)*	OSHA 104											
DNT (dinitrotoluene)	OSHA 44		1.5 mg/m³		60		1000		1		GC-TEA	ST 226-56 39
n-Dodecane	EPA TO-17	1689			1 & 4		16.7 & 66.7				TD, GC	ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49
Dodecyl alcohol (lauryl alcohol)	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Dodine	OSHA CSI				240		1000		2		HPLC-UV	ST 226-30 38
Dursban (chlorpyrifos)(organophosphorus pesticides)	NIOSH 5600		0.2 mg/m³	0.6 mg/m³	240		1000		4		GC-FPD	ST 226-58 39
Dust, inorganic					15-150		15000		1-10 min		varies	STC 225-9820 103
Dust, respirable (in workplace atmospheres)	ASTM D 4532	1418			varies		2500		varies		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Dust, respirable nuisance	OSHA CSI		5.0 mg/m³		varies		varies		varies		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-105 105 CST 225-3LF 99
Dust, respirable nuisance (particulates)	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Dust, total nuisance	OSHA CSI		15 mg/m³		720		1500		8		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Dust, total nuisance (particulates)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Dust, total, particulates not otherwise regulated	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Dyes, benzidine, o-tolidine, o-dianisidine	NIOSH 5013		LFC		480		1000		8		HPLC-UV	FLT 225-17A 94 CST 225-3LF 99 C/HLD 225-1 106
Dyfonate	OSHA CSI				480		1000		8		GC-FPD	ST 226-30-16 38
Elemental carbon (diesel exhaust)	MSHA				varies		varies		varies		EGA-TOS	DPM 225-317 104 CYC 225-105 105
Elemental carbon (diesel exhaust)	NIOSH 5040				varies		varies		varies		TOA-FID	F/CST 225-401 104 CYC 225-100 105 C/HLD 225-1 106
Elements by ICP Aqua Regia ashing *(see specific element)*	NIOSH 7301		varies		varies		1000-4000		varies		ICP-AES	F/CST 225-3-01 or F/CST 225-803 ¥ 93 C/HLD 225-1 106
Elements by ICP HNO_3 digestion *(see specific element)*	NIOSH 7303		varies		varies		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Elements by ICP HNO_3/$HClO_4$ ashing *(see specific element)*	NIOSH 7300	1455	varies		varies		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Elements on wipes *(see specific element)*	NIOSH 9102				wipe						ICP-AES	W 225-2414 147 TMP 225-2403 or TMP 225-2415 147
Elements qualitative	OSHA ID 204				480		2000		8		XRF	F/CST 225-3-01 89 C/HLD 225-1 106
Emery (corundum) (particulates, respirable)	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Emery (corundum) (particulates, total)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Emery (respirable dust)	OSHA CSI		5 mg/m³		varies		varies		varies		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-105 105 CST 225-3LF 99
Emery (total dust)	OSHA CSI		15 mg/m³		960		2000		8		GR	F/CST 225-803 93 C/HLD 225-1 106
Endosulfan (thiodan)	OSHA PV2023				60		1000		1		GC-ECD	ST 226-30-16 38
Endotoxins (bacteria in air)	NON 48				62.5-375		12500 +		5-30		varies	BS 225-9595 128 VT 225-9598A◊ 128
Endrin	NIOSH 5519		0.1 mg/m³		240		1000		4		GC-ECD	CST 225-2LF 99 FLT 225-5 88 SCN 225-26 107 ST NA SKC C/HLD 225-1 106
Enflurane (ethrane)	OSHA 103	1348			12		50		4		GC-FID	ST 226-81A 39
Enflurane (ethrane)	OSHA 29				10		20		8		GC-FID	ST 226-01 38
Environmental tobacco smoke (nicotine & 3-ethenylpyridine)	NON 49				90-720		1500		1-8		GC-NSD	ST 226-170 41
Environmental tobacco smoke (respirable particles)	ASTM D 5955	1419			varies		varies		varies		GR & HPLC-UV & HPLC-FD	FLT 225-2705 94 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Environmental tobacco smoke (solanesol, respirable particles)	ASTM D 6271				150-3600		2500		1-24		HPLC-UV	FLT 225-2705 94 CST 225-3LF 99 CYC 225-01-02 115 C/HLD 225-1 106
Epichlorohydrin	NIOSH 1010		LFC		10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
Epichlorohydrin	OSHA 07	1112	5		20		100		3.3		GC-FID	ST 226-01 38
Epicoccum species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Epicoccum species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
EPN	NIOSH 5012		0.5 mg/m³		480		1000		8		GC-FPD	F/CST 225-709 98 C/HLD 225-1 106
EPN	OSHA CSI		0.5 mg/m³		480		1000		8		GC-FPD	ST 226-30-16 38
1,2-Epoxyethylbenzene	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-35 38
1,2-Epoxypropane *(see propylene oxide)*												
2,4,D-Esters	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	Vol. (liter) CLG/STEL Sample Time or Air Volume	Rate (ml/min) TWA Flow/Sampling Rate	Rate (ml/min) CLG/STEL Flow/Sampling Rate	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Esters I *(see specific compounds)*	NIOSH 1450		varies		1-10		varies		varies		GC-FID	ST 226-01 38
Estradiol	OSHA PV2001				240		1000		4		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Estriol	OSHA PV2001				60		1000		1		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Estrone	OSHA PV2001				60		1000		1		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
1,2-Ethanediol (ethylene glycol) (glycols)	NIOSH 5523	1401			24		100		4		GC-FID	ST 226-57 39
1,2-Ethanediol dinitrate	OSHA 43			0.2 (C)		15		1000		15	HPLC-TEA	ST 226-35-03 39
2-(2-methoxyethoxy)Ethanol	OSHA CSI				6		100		1		GC-FID	ST 226-01 38
Ethanol	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
Ethanolamine	OSHA PV2111		3		10	1.5	100	100	100 min	15	HPLC-UV	ST 226-30-18 38
3-Ethenylpyridine	NON 49				90-720		1500		1-8		GC-NSD	ST 226-170 41
3-Ethenylpyridine & nicotine	ASTM D 5075	1427			90-2160		1500		1-24		GC-NPD	ST 226-93 40
Ethion (nialate)	OSHA CSI				480		1000		8		GC-FPD	ST 226-30-16 38
Ethion (organophosphorus pesticides)	NIOSH 5600		0.4 mg/m³		240		1000		4		GC-FPD	ST 226-58 39
Ethoprop (organophosphorus pesticides)	NIOSH 5600				240		1000		4		GC-FPD	ST 226-58 39
1-Ethoxy-2-propanol	OSHA CSI				48		100		8		GC-FID	ST 226-01 38
2-Ethoxyethanol	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
2-Ethoxyethanol (alcohols IV)	NIOSH 1403	1273	0.5 (skin)		1-6		10-50		varies		GC-FID	ST 226-01 38
2-Ethoxyethanol (CELLOSOLVE solvent)	OSHA 79	1277	200		48	15	100	1000	8	15	GC-FID	ST 226-01 38
2-Ethoxyethanol (CELLOSOLVE solvent) (alcohols IV)	NIOSH 1403	1273	0.5 (skin)		1-6		10-50		varies		GC-FID	ST 226-01 38
2-Ethoxyethyl acetate	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
2-Ethoxyethyl acetate (CELLOSOLVE acetate)	OSHA 79	1277	100		48	15	100	1000	8	15	GC-FID	ST 226-01 38
2-Ethoxyethyl acetate (esters I)	NIOSH 1450		0.5 (skin)		1-10		10-200		varies		GC-FID	ST 226-01 38
Ethrane (enflurane)	OSHA 29				10		100		1.6		GC-FID	ST 226-01 38
Ethyl 2-cyanoacrylate	OSHA 55				12		100		2		HPLC-UV	ST 226-98 40
Ethyl acetate	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
Ethyl acetate	NIOSH 1457		400		10		20		8		GC-FID	ST 226-01 38
Ethyl acetate	OSHA 07	1111	400		5		20		4		GC-FID	ST 226-01 38
Ethyl acrylate	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
Ethyl acrylate	NON 54		5	15	10	3	20	200	8	15	GC-FID	ST 226-81A 39
Ethyl acrylate	OSHA 92		25		12	0.75	50	50	4	15	GC-FID	ST 226-73 39
Ethyl acrylate (esters I)	NIOSH 1450		4 (LOQ)		1-10		10-200		varies		GC-FID	ST 226-01 38
Ethyl alcohol (ethanol)	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
Ethyl alcohol (ethanol)	OSHA 07	1109	1000		1		50		20 min		GC-FID	ST 226-01 38
Ethyl alcohol (ethanol)	OSHA 100	1283	1000		12		50		4		GC-FID	ST 226-82 40
Ethyl alcohol (ethanol) (alcohols I)	NIOSH 1400		1000		1		50		20 min		GC-FID	ST 226-01 38
Ethyl amyl ketone	OSHA 07	1158	25		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Ethyl benzene	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
Ethyl benzene	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
Ethyl benzene	OSHA 07	1108	100		10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
Ethyl benzene	OSHA 1002	1746	100		12		50		4		GC-FID	ST 226-01 38
Ethyl benzene	OSHA 1002	1746	100				13.83		8		GC-FID	PS 575-002 69
Ethyl benzene (hydrocarbons, aromatic)	NIOSH 1501	1053	100	125	1-24	1-24	10-200	10-200	varies	varies	GC-FID	ST 226-01 38
Ethyl bromide (bromoethane)	NIOSH 1011				4		20		3.3		GC-FID	ST 226-01 38
Ethyl bromide (bromoethane)	OSHA 07	1107	200		5	3	20	200	4	15	GC-FID	ST 226-01 38
Ethyl butyl ketone (3-heptanone)	OSHA 07	1106	50		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Ethyl butyl ketone (3-heptanone) (ketones II)	NIOSH 2553		50		1-25		10-200		varies		GC-FID	ST NA SKC
Ethyl butyl ketone (3-heptanone) (ketones II)	NIOSH 1301		50		24		200		2		GC-FID	ST 226-01 38
Ethyl chloride	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
Ethyl chloride	NIOSH 2519				3		50		1		GC-FID	ST 226-25 38
Ethyl chloride	OSHA 07		1000		3		50		1		GC-FID	ST 226-01 38
Ethyl ether (diethyl ether)	OSHA 07	1105	400		3	3	20	200	2.5	15	GC-FID	ST 226-01 38
Ethyl ether (ethyl ether)	NIOSH 1610				0.25-3		10-200		varies		GC-FID	ST 226-01 38
Ethyl formate	NIOSH 1452		100		10		20		8		GC-FID	ST 226-01 38
Ethyl formate	OSHA 07	1104	100		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Ethyl lactate	OSHA PV2081				10		200		50 min		GC-FID	ST 226-01 38
Ethyl mercaptan	OSHA CSI			10 (C)		120		1000		120	GC-FPD	CF/CST 225-9007 63 C/HLD 225-1 106
Ethyl mercaptan (mercaptans)	NIOSH 2542	1330		0.5 (15 min)	48	12	100	200	8	60	GC-FPD	CF/CST 225-9007 63 C/HLD 225-1 106
Ethyl methacrylate	NIOSH 2537				1-8		10-50		varies		GC-FID	ST 226-30-06 38
Ethyl methacrylate	OSHA PV2100				10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Ethyl O-(p-nitrophenyl) phenylphosphonothionate (EPN)	NIOSH 5012		0.5 mg/m³		480		1000		8		GC-FPD	F/CST 225-709 98 C/HLD 225-1 106
Ethyl parathion	ASTM D 4861				240-7200		1000-5000		4-24		GC-NPD	PUF 226-92 44
Ethyl propionate	OSHA CSI				10		20(50)		8(3.3)		GC	ST 226-01 38

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Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	CLG/STEL (ppm)	Vol. (liter) TWA	CLG/STEL	Rate (ml/min) TWA	CLG/STEL	Time TWA (hrs)	CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
					Sample Time or Air Volume		Flow/Sampling Rate					
Ethyl silicate	OSHA CSI		100		9		50		3		GC-FID	ST 226-30-04 38
2-Ethyl toluene	EPA TO-17	1689			1 & 4		16.7 & 66.7				TD, GC	ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49
3-Ethyl toluene	EPA TO-17	1689			1 & 4		16.7 & 66.7				TD, GC	ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49
4-Ethyl toluene	EPA TO-17	1689			1 & 4		16.7 & 66.7				TD, GC	ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49
Ethyl vinyl benzene	OSHA 89				12		50		4		GC-FID	ST 226-73 39
Ethyl-3-ethoxypropionate	OSHA PV2025				10		100		100 min		GC-FID	ST 226-01 38
Ethylamine	OSHA 36		10		10		200		50 min		HPLC-UV	ST 226-96 40
Ethylene	OSHA CSI										DET TB	DT 800-28051 or DT 810-172 or DT 800-01331 or DT 810-172L
Ethylene chlorohydrin	NIOSH 2513			1	10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-81A 39
Ethylene chlorohydrin	OSHA 07	1159	5		20		40		8		GC-FID	ST 226-81A 39
Ethylene dibromide (1,2-dibromoethane)	NIOSH 1008		0.045	0.13(15 min)	10	3	20(50)	200	8(3.3)	15	GC-ECD	ST 226-01 38
Ethylene dibromide (1,2-dibromoethane)	OSHA 02	1072	20	30	10	1	20(50)	200	8(3.3)	5	GC-ECD	ST 226-01 38
Ethylene dichloride	EPA TO-17	1689			1 & 4		16.7 & 66.7				TD, GC	ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49
Ethylene dichloride (1,2-dichloroethane)	OSHA 03	1063	50	100	10	3	200	200	1	15	GC-ECD	ST 226-01GWS 38
Ethylene dichloride (1,2-dichloroethane) (hydrocarbons, halogenated)	NIOSH 1003		1	2	3	3	10-200	10-200	varies	varies	GC-FID	ST 226-01 38
Ethylene glycol (glycols)	NIOSH 5523	1401			60		1000		1		GC-FID	ST 226-57 39
Ethylene glycol dinitrate	OSHA 43			0.2 (C)		15		1000		15	HPLC-TEA	ST 226-35-03 39
Ethylene glycol dinitrate (nitroglycerine)	NIOSH 2507			0.1 mg/m³		15		1000		15	GC-ECD	ST 226-35-03 39
Ethylene glycol isopropyl ether (isopropyl CELLOSOLVE solvent)	OSHA CSI				9		100		1.5		GC-FID	ST 226-01 38
Ethylene glycol monohexyl ether	OSHA CSI				10		200		50 min		GC-FID	ST 226-01 38
Ethylene oxide	ASTM D 4413				6	3	100	200	1	15	GC-FID	ST 226-16 or ST 226-36 39
Ethylene oxide	ASTM D 5578				9.6	1.5	20	100	8	15	GC-ECD	ST 226-178 41
Ethylene oxide	NIOSH 1614		0.1	5 (10 min)	24	1.5	100	150	4	10	GC-ECD	ST 226-178 41
Ethylene oxide	OSHA 1010	1751	1	5.0 EL	12	0.75	50	50	4	15	GC-ECD	ST 226-178 41
Ethylene oxide (by portable GC)	NIOSH 3702	1031	0.1	5 (10 min)	varies	varies	20-4000	varies	varies	varies	P GC-PID	SB 232 Series 53
Ethylene oxide (Qazi-Ketcham)	NON 14				10		20(50)		8(3.3)		GC	ST 226-36 39
Ethylene thiourea	NIOSH 5011		LFC		480		2000		4		VAS	F/CST 225-802 93 C/HLD 225-1 106
Ethylene thiourea	OSHA 95				480		2000		4		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Ethylenediamine	NIOSH 2540		10		10		100		1.7		HPLC-UV	ST 226-30-18 38
Ethylenediamine	OSHA 60	1287	10		10		100		100 min		HPLC-UV	ST 226-30-18 38
Ethylenimine	NIOSH 3514				48		200		4		HPLC-UV	IMP 225-36-2 65 IT 225-22 65
2-Ethylhexanol	OSHA CSI				48		200		4		GC-FID	ST 226-01 38
Ethylhexyl acetate	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-01 38
2-Ethylhexyl acrylate	OSHA PV2026				12		100		2		GC-FID	ST 226-73 39
di-2-Ethylhexyl phthalate (DEHP)	OSHA 104		5 mg/m³		240		1000		4		GC-FID	ST 226-56 39
N-Ethylmorpholine	OSHA CSI		20		10		20(50)		8(3.3)		GC-FID	ST 226-10 38
ETS *(see environmental tobacco smoke)*	NON 49											
Exserohilum species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Exserohilum species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Fenamiphos	OSHA CSI				480		1000		8		GC-FPD	ST 226-30-16 38
Fenamiphos (organophosphorus pesticides)	NIOSH 5600		0.1 mg/m³		240		1000		4		GC-FPD	ST 226-58 39
Fenarimol	OSHA CSI				30		1000		30 min		HPLC-UV	ST 226-30-16 38
Fensulfothion (dansanit)	OSHA CSI				480		1000		8		GC-FPD	ST 226-30-16 38
Fenthion	OSHA CSI				480		1000		8		GC-FPD	ST 226-30-16 38
Fenvalerate	ASTM D 4861				240-7200		1000-5000		4-24		HPLC-UV	PUF 226-92 44
Ferbam	OSHA CSI		15 mg/m³		480		1000		8		HPLC-UV	ST 226-30-16 38
Ferric chloride *(see iron salts, soluble as Fe)*	OSHA ID 121											
Ferrovanadium dust	OSHA ID 125G ¶	1218	1 mg/m³		480	30	2000	2000	4	15	ICP-AES	F/CST 225-3-01 or F/CST 225-3100 or F/CST 225-803 or F/CST 225-8215 93 C/HLD 225-1 106
Fibers (bioaerosols)					15-150		15000		1-10 min		varies	STC 225-9820 103
Fibers *(see specific compounds)*												
Fibrous glass (particulates, respirable)	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Fibrous glass (particulates, total)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Fibrous glass dust	OSHA CSI		15 mg/m³		960		2000		8		GR	F/CST 225-8204 93 C/HLD 225-1 106
Flax dust *(see dust, total and respirable nuisance)*	OSHA CSI											
Fluoboric acid	OSHA CSI				120		1000		2		ISE	IMP 225-36-2 65 IT 225-22 65
Fluometuron	ASTM D 4861				240-7200		1000-5000		4-24		HPLC-UV	PUF 226-92 44
Fluoranthene	OSHA CSI				960		2000		8		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Fluoranthene (polynuclear aromatic hydrocarbons by GC-MS)	ASTM D 6209				350 m³ (max)		225 L/min		1-24		GC-MS	PUF 226-131 45 FLT 225-1821 116

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References and abbreviations are found on pages 212-213.

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	CLG/STEL (ppm)	Vol. (liter) TWA	CLG/STEL	Rate (ml/min) TWA	CLG/STEL	Time TWA (hrs)	CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
					Sample Time or Air Volume		Flow/Sampling Rate					
Fluoranthene (polynuclear aromatic hydrocarbons by GC)	NIOSH 5515				480		2000		4		GC-FID	F/CST 225-1713 94 ST 226-30-04 38 C/HLD 225-1 106
Fluoranthene (polynuclear aromatic hydrocarbons by HPLC)	NIOSH 5506				480		2000		4		HPLC-FD	F/CST 225-1713 94 ST 226-30-04 38 C/HLD 225-1 106
Fluorene	OSHA CSI				960		2000		8		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Fluorene (polynuclear aromatic hydrocarbons by GC-MS)	ASTM D 6209				350 m^3 (max)		225 L/min		1-24		GC-MS	PUF 226-131 45 FLT 225-1821 116
Fluorene (polynuclear aromatic hydrocarbons by GC)	NIOSH 5515				480		2000		4		GC-FID	F/CST 225-1713 94 ST 226-30-04 38 C/HLD 225-1 106
Fluorene (polynuclear aromatic hydrocarbons by HPLC)	NIOSH 5506				480		2000		4		HPLC-UV	F/CST 225-1713 94 ST 226-30-04 38 C/HLD 225-1 106
Fluoride (particulate)	NIOSH 7906		2.5 mg/m^3		960		2000		8		IC-CD	CF/CST 225-9031 63 C/HLD 225-1 106
Fluorides	ASTM D 4765	1421			varies		2000		varies		ISE	CF/CST 225-9001 63 C/HLD 225-1 106
Fluorides (aerosol & gas by ISE)	NIOSH 7902	1226	2.5 mg/m^3	6 (HF)	480	22.5	1000	1500	8	15	ISE	CF/CST 225-9001 63 C/HLD 225-1 106
Fluorides (as F)	OSHA ID 110	1227	2.5 mg/m^3		90	22.5	1500	1500	1	15	ISE	CF/CST 225-9001 63 C/HLD 225-1 106
Fluorine	OSHA CSI		0.1		480		1000		8		ISE	IMP 225-36-2 65 IT 225-22 65
Fluorotrichloromethane (trichlorofluoromethane)	NIOSH 1006			1000		5		20		240	GC-FID	ST 226-09 38
5-Fluorouracil	OSHA CSI				180		1000		3		HPLC-UV	ST 226-30-16 38
Folpet	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
Fonofos (Dyfonate)	OSHA PV2027				480		1000		8		GC-FPD	ST 226-30-16 38
Fonofos (organophosphorus pesticides)	NIOSH 5600		0.1 mg/m^3		240		1000		4		GC-FPD	ST 226-58 39
Formaldehyde	ASTM D 5197	1442			varies		500-1200		5 min-24 hrs		HPLC-UV	ST 226-120 ○ or ST 226-119 40
Formaldehyde	NIOSH 2016	1761	0.016	0.1 (C)	1-<15	1-<15	30-500	30-500	varies	varies	HPLC-UV	ST 226-119 ♠ 40
Formaldehyde	NIOSH 2541	1015	0.016	0.1 (C)	24	1	100	100	4	10	GC-FID	ST 226-118 40
Formaldehyde	NIOSH 3500		0.016	0.1	96	15	200	1000	8	15	VAS	IMP 225-36-1 65 IT 225-22 65 FLT 225-1709** 94 CST 225-2LF** 99 SCN 225-26** 107
Formaldehyde	OSHA 1007		0.75	2	13.8	0.43	28.6	28.6	8	15	HPLC-UV	PS 500-100 82
Formaldehyde	OSHA 52	1020	0.75	2	24	3	100	200	4	15	GC-NPD	ST 226-117 or ST 226-54 39
Formaldehyde (aldehydes, screening)	NIOSH 2539		0.016	0.1	5		20		4		GC-FID & GC-MS	ST 226-118 40
Formaldehyde	**EPA IP-11A**	**1082**					**100-2000**		**varies**		**HPLC-UV**	**ST 226-119 or ST 226-120 40**
Formaldehyde	**EPA IP-6A**	**1664**					**100-1000**		**5 min-24 hrs**		**HPLC-UV**	**ST 226-119 or ST 226-120 40**
Formaldehyde on dust (textile or wood)	NIOSH 5700		0.016	0.1	240		2000		4		HPLC-UV	IOM 225-70A 112 FLT 225-5-25 93
Formamide	OSHA CSI				10	1.5	100	100	100 min		GC-NPD	ST 226-10 38
Formetanate (organonitrogen pesticides)	NIOSH 5601				240		1000		4		HPLC-UV	ST 226-58 or ST 226-30-16 38
Formic acid	NIOSH 2011		5		24		200		2		IC-CD	FLT 225-2708 94 CST 225-3-25LF 99 ST 226-10-03 38 C/HLD 225-1 106
Formic acid	OSHA ID 186SG		5		48		100		8		IC	ST 226-09 38
Freon 11	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
Freon 113	OSHA 113		1000		1		50		20 min		GC-FID	ST NA SKC
Freon 113 (1,1,2-Trichloro-1,2,2-trifluoroethane)	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
Freon 114	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
Freon 12	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
Freon 123	NON 50				9		50		3		GC-FID	ST 226-09 38
Freon 141b	OSHA 113		1000		1		50		20 min		GC-FID	ST NA SKC
Fumarin	OSHA CSI				180		1000		3		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Fungi	NIOSH 0800				varies		28,300		varies		varies	BI 225-9611 126
Fungi (in air)					15-150		15000		1-10 min		varies	STC 225-9820 103
Fungi (in air) (BioSampler method)	NON 48				62.5-375		12500 +		5-30		varies	BS 225-9595 128 VT 225-9598A◊ 128
Furans (including PHDFs, PCDFs, PBDFs)	**EPA TO-9A**	**1673**					**200-280 L/min**		**24 hrs**		**HR GC-HRMS**	**PUF 226-131 45 FLT 225-1821 45**
Furfural	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49** **CPC 224-26CPC-10 49**
Furfural	NIOSH 2529				5		20		4		GC-FID	ST 226-118 40
Furfural	OSHA 72		5		180		1000		3		GC-FID	ST 226-81A 39
Furfural (aldehydes, screening)	NIOSH 2539				5		20		4		GC-FID & GC-MS	ST 226-118 40
Furfuryl alcohol	NIOSH 2505		10	15	5		20		4		GC-FID	ST 226-115 40
Fusarium species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Fusarium species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Gallium	OSHA CSI				960		2000		8		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Gallium (elements by ICP HNO_3 digestion)	NIOSH 7303				1-3300		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Gasoline	OSHA PV2028				10	1.5	20(50)	100	8(3.3)	15	GC-FID	ST 226-01 38
Gentian violet	OSHA CSI				180		1000		3		HPLC-UV	FLT 225-7 ‡ 98 CST 225-2LF 99 C/HLD 225-1 106
Germanium oxide	OSHA CSI				960		2000		8		AA-GF	F/CST 225-3-01 89 C/HLD 225-1 106
Glass, fibrous *(see asbestos fibers)*	NIOSH 7400											
Glass, fibrous dust	OSHA CSI				960		2000		8		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99

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Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	Vol. (liter) CLG/STEL Sample Time or Air Volume	Rate (ml/min) TWA Flow/Sampling Rate	Rate (ml/min) CLG/STEL Flow/Sampling Rate	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Gliocladium species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Gliocladium species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Glutaraldehyde	NIOSH 2531		0.2		4		200			20	HPLC-UV	ST 226-118 40
Glutaraldehyde	NIOSH 2532	1346	0.2		3		200			15	HPLC-UV	ST 226-119 40
Glutaraldehyde	NON 43				30	15	250	1000	2	15	GC-FID	ST 226-10 38
Glutaraldehyde	OSHA 64	1241				15		1000		15	HPLC-UV	CF/CST 225-9003 63 C/HLD 225-1 106
Glycerin mist (particulates, respirable)	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Glycerin mist (respirable)	OSHA CSI		5 mg/m³		varies		varies		varies		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-105 105 CST 225-3LF 99
Glycerin mist (total dust)	OSHA CSI		15 mg/m³		96		2000		8		GR	F/CST 225-803 93 C/HLD 225-1 106
Glycidol (2,3-epoxy-1-propanol)	NIOSH 1608		25		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Glycidol (2,3-epoxy-1-propanol)	OSHA 07	1157	50		48		100(200)		8(4)		GC-FID	ST 226-01 38
Glycol chlorohydrin *(see ethylene chlorohydrin)*												
Glycol ethers	NIOSH 2554				3-25		100-200		varies		GC-FID	ST 226-81A 39
Glycols	NIOSH 5523	1402			60		1000		1		GC-FID	ST 226-57 39
Glyphosate	OSHA PV2067				100		1000		100 min		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Gold	OSHA ID 121				960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Gold (elements by ICP HNO_3 digestion)	NIOSH 7303				1-3300		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Grain dust (oats, wheat, barley)	OSHA CSI		10 mg/m³		960		2000		8		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Graphite (natural) (respirable dust)	OSHA ID 142		15 mppcf		varies		varies		varies		GR & XRD	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-105 105 CST 225-3LF 99
Graphite (synthetic) (particulates, respirable)	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Graphite (synthetic) (particulates, total)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Graphite (synthetic) (respirable dust)	OSHA CSI		5 mg/m³		varies		varies		varies		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-105 105 CST 225-3LF 99
Graphite (synthetic) (total dust)	OSHA CSI		15 mg/m³		960		2000		8		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Graphium species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Graphium species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Grunerite fibers *(see asbestos)*	OSHA ID 160											
Gypsum (particulates, respirable)	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Gypsum (particulates, total)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Hafnium	OSHA ID 121		0.5 mg/m³		960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Halothane	OSHA 103	1347			12		50		4		GC-FID	ST 226-81A 39
Halothane	OSHA 29				9		100		1.5		GC-FID	ST 226-01 38
Haloxon	OSHA CSI										W	W 225-2401A 147
HDI *(see hexamethylene diisocyanate)*												
Heptachlor	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
Heptachlor	OSHA PV2029		0.5 mg/m³		60		1000		1		GC-ECD	ST 226-30-16 38
Heptachlor (non-occupational exposure)	ASTM D 4947	1417			240-7200	250	1000-5000		4-24		GC-ECD	PUF 226-92 44
Heptachlor epoxide	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
Heptanal (aldehydes, screening)	NIOSH 2539				5		20		4		GC-FID & GC-MS	ST 226-118 40
n-Heptane	EPA TO-17	1689			1 & 4		16.7 & 66.7				TD, GC	ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49
n-Heptane	OSHA 07	1156	500		5	3	20	200	4	15	GC-FID	ST 226-01 38
3-Heptanone (ethyl butyl ketone) (Ketones II)	NIOSH 2553		50		1-25		10-200		varies		GC-FID	ST NA SKC
2-Heptanone (methyl n-amyl ketone) (Ketones II)	NIOSH 2553		100		1-25		10-200		varies		GC-FID	ST NA SKC
1-Heptene	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Hexachloro-1,3-cyclopentadiene	NIOSH 2518		0.01		24		50		8		GC-ECD	ST 226-116 40
Hexachlorobenzene	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
Hexachlorobenzene	OSHA CSI				480		2000		4		GC-ECD	F/CST 225-706 98 C/HLD 225-1 106
Hexachlorobutadiene	NIOSH 2543		0.02		48		100		8		GC-ECD	ST 226-30-04 38
Hexachlorocyclopentadiene	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-124 44
Hexachlorocyclopentadiene (hexachloro-1,3-cyclopentadiene)	NIOSH 2518		0.01		48		100		8		GC-ECD	ST 226-116 40
Hexachloroethane	OSHA 07	1155	1		30		100		5		GC-FID	ST 226-01 38
Hexachloroethane (hydrocarbons, halogenated)	NIOSH 1003		1		10		10-200		varies		GC-FID	ST 226-01 38
Hexachloronaphthalene	OSHA CSI		0.2 mg/m³		30		1000		30 min		GC-ECD	F/CST 225-3-01 89 C/HLD 225-1 106
Hexamethylene diisocyanate	NIOSH 5522		35 µg/m³	140 µg/m³	360	20	1000	2000	6	10	HPLC-FD	IMP 225-36-1 65 IT 225-22 65
1,6-Hexamethylene diisocyanate	OSHA 42	1458			15		1000		15 min		HPLC-UV or HPLC-FD	CF/CST 225-9002 or 106 CF/CST 225-9013 63 C/HLD 225-1
Hexamethylene diisocyanate (gaseous)	ASTM D 6562				15		1000		15 min		HPLC-UV or HPLC-FD	CF/CST 225-9023 or 106 CF/CST 225-9022 63 C/HLD 225-1

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Hexamethylene diisocyanate (HDI) (isocyanates)	OR-OSHA 1010		0.02	0.02	45	5	1000	1000	45 min	5	HPLC	IMP 225-36-1 65 IT 225-22 65 CF/CST 225-9029 63
1,6-Hexamethylene diisocyanate (isocyanates, total)	NIOSH 5525		35 µg/m³	140 µg/m³ (10 min) (C)	1-500		1000-2000		varies		HPLC-UV	FLT 225-7 ‡ 98 CST 225-4 99 SP 225-27 or IOM 225-76A 112 FLT 225-702 ‡ 98
Hexamethylene diisocyanate (isocyanates)	NIOSH 5521		35 µg/m³	140 µg/m³ (10 min) (C)	480	10	1000	1000	8	10	HPLC-ELCHM & HPLC-UV	IMP 225-36-1 65 IT 225-22 65
Hexamethylene diisocyanate (monomeric aerosol)	ASTM D 6561				15		1000		15 min		HPLC-UV	CF/CST 225-9023 or 106 CF/CST 225-9022 ▼ 63 C/HLD 225-1
Hexamethylene diisocyanate (monomeric gaseous)	ASTM D 6561				15		1000		15 min		HPLC-UV	CF/CST 225-9023 or 106 CF/CST 225-9022 63 C/HLD 225-1
Hexamethylene diisocyanate (oligomeric aerosol)	ASTM D 6561				15		1000		15 min		HPLC-UV	CF/CST 225-9023 or 106 CF/CST 225-9022 ▼ 63 C/HLD 225-1
Hexamethylene diisocyanate biuret	OSHA PV2030				15		1000		15 min		HPLC-UV	FLT 225-7 ‡ 98 CST 225-3LF 99 C/HLD 225-1 106
Hexamethylene diisocyanate biuret (HDI-BT) (isocyanates)	OR-OSHA 1010		1.0 mg/m³	0.5 mg/m³	45	5	1000	1000	45 min	5	HPLC	IMP 225-36-1 65 IT 225-22 65 CF/CST 225-9029 63
Hexamethylene diisocyanate isocyanurate (HDI-IC) (isocyanates)	OR-OSHA 1010		1.0 mg/m³	0.5 mg/m³	45	5	1000	1000	45 min	5	HPLC	IMP 225-36-1 65 IT 225-22 65 CF/CST 225-9029 63
Hexamethylenediamine	OSHA CSI				12		100		2		HPLC-UV	ST 226-30-18 38
Hexamethylenetetramine	NON 52				15		1000		15 min		GC-NPD or GC-FID	ST 226-57 39
Hexamethylenetetramine	OSHA CSI				15		1000		15 min		GC-NPD	F/CST 225-3-01 89 IMP 225-36-1 65 IT 225-22 65
Hexanal	ASTM D 5197				varies		500-1200		5 min-24 hrs		HPLC-UV	ST 226-120 ᴼ or ST 226-119 40
Hexanal (aldehydes, screening)	NIOSH 2539				5		20		4		GC-FID & GC-MS	ST 226-118 40
n-Hexane	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49** **CPC 224-26CPC-10 49**
n-Hexane	OSHA 07	1154	500		5		20		4		GC-FID	ST 226-01 38
Hexane (isomers other than n-hexane)	OSHA CSI				4	3	20	200	3.3	15	GC-FID	ST 226-01 38
1,6-Hexanediol	OSHA CSI				6		100		1		GC-FID	ST 226-09 38
Hexanediol diacrylate	NON 39				480		1000		8		GC-FID	ST 226-56 39
1,6-Hexanediol diacrylate	OSHA CSI				10		20(50)		8(3.3)		HPLC	ST 226-95 40
1,6-Hexanediol diacrylate	OSHA PV2133		1 mg/m³		48		200		4		GC-FID	ST 226-110 40
2-Hexanone (ketones I)	NIOSH 2555				1-10		10-200		varies		GC-FID	ST NA SKC
2-Hexanone (methyl butyl ketone)	OSHA 07	1153	100		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
2-Hexanone (methyl butyl ketone) (ketones I)	NIOSH 1300		1		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Hexavalent chromium	ASTM D 6832				varies		1000-5000		varies		IC	F/CST 225-802 or F/CST 225-1713 or 104 F/CST 225-709 or F/CST 225-401
Hexavalent chromium	NIOSH 7600	1032	1 µg/m³ (10 hr)		240		1000		4		VAS	F/CST 225-802 93 C/HLD 225-1 106
Hexavalent chromium	NIOSH 7604	1032	1 µg/m³ (10 hr)		240		1000		4		IC-CD	F/CST 225-802 93 C/HLD 225-1 106
Hexavalent chromium	NIOSH 7605		0.001 mg/m³ (10 hr)		1-400		1000-4000		varies		IC-PCD-UV	F/CST 225-802 93 C/HLD 225-1 106
Hexavalent chromium	NIOSH 7703		0.001 mg/m³ (10 hr)		10-1200		1000-4000		varies		P VAS	F/CST 225-802 93 C/HLD 225-1 106
Hexavalent chromium	OSHA ID 103			0.005 mg/m³ (C)	960	30	2000	2000	8	15	DPP	F/CST 225-802 93 C/HLD 225-1 106
Hexavalent chromium	OSHA W4001			0.005 mg/m³ (C)							IC-UV	FLT 225-5-37 or FLT 225-1822 116
Hexavalent chromium (CR(VI))	OSHA ID 215 (V2)	1439	0.005 mg/m³		960		2000		8		IC-UV	F/CST 225-802 93 C/HLD 225-1 106
Hexavalent chromium (in settled dust)	NIOSH 9101				bulk	bulk					CLR or VAS or IC	
Hexone	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49** **CPC 224-26CPC-10 49**
Hexone	OSHA 1004		100				13.62		8		GC-FID	PS 575-002 69
Hexone	OSHA 1004		100		12		50		4		GC-FID	ST NA SKC
Hexone (ketones I)	NIOSH 2555		50		1-10		10-200		varies		GC-FID	ST NA SKC
Hexone (methyl isobutyl ketone)	OSHA 07		100		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Hexone (methyl isobutyl ketone) (ketones I)	NIOSH 1300		50	75	10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
n-Hexyl acetate	OSHA CSI				6		200		30 min		GC-FID	ST 226-01 38
sec-Hexyl acetate	OSHA 07	1152	50		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Hexyl alcohol	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Hexyl carbitol	OSHA CSI				6		200		30 min		GC-FID	ST 226-01 38
Hexylene glycol	OSHA PV2101					3		200		15	GC-FID	ST 226-01 38
HMX	OSHA PV2032				480		1000		8		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
HydramethylNON					90		1000		1.5		HPLC-UV	F/CST 225-3-01 89 C/HLD 225-1 106
Hydrazine	NIOSH 3503			0.03 (120 min)	90		1000		1.5		VAS	IMP 225-36-2 65 IT 225-22 65
Hydrazine	NON 22				96		200		8		CLR	ST 226-42-02 39
Hydrazine	OSHA 108		1		240		1000		4		IC-UV	CF/CST 225-9012 63 C/HLD 225-1 106
Hydrazine	OSHA 20	1281	1		20		100		3.3		HPLC-UV	ST 226-42-02 39
Hydrazoic acid	NON 25					15		1000		15	HPLC-UV	ST 226-55 39

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

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Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	Vol. (liter) CLG/STEL Sample Time or Air Volume	Rate (ml/min) TWA Flow/Sampling Rate	Rate (ml/min) CLG/STEL Flow/Sampling Rate	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Hydrazoic acid	OSHA ID 211				5		1000		5		IC-UV	ST 226-55 39 FLT 225-5-37-P 93 CST 225-2LF 99 SPC 225-23 107 C/HLD 225-1 106
Hydrobromic acid (acids, inorganic)	NIOSH 7903	1016		3	48	4.5	200	300	4	15	IC	ST 226-10-03 38
Hydrocarbons BP 36 to 216 C *(see specific compounds)*	NIOSH 1500		varies		varies		varies		varies		GC-FID	ST 226-01 38
Hydrocarbons, aromatic *(see specific compounds)*	NIOSH 1501	1453	varies		varies		varies		varies		GC-FID	ST 226-01 38
Hydrocarbons, halogenated *(see specific compounds)*	NIOSH 1003	1454	varies		varies		varies		varies		GC-FID	ST 226-01 38
Hydrofluoric acid (fluorides)	NIOSH 7906		3	6	960	30	2000	2000	8	15	IC-CD	CF/CST 225-9031 63 C/HLD 225-1 106
Hydrogen	OSHA CSI										DET TB	DT 810-30
Hydrogen bromide	NIOSH 7907			3		30		2000		15	IC/CD	CF/CST 226-9032 63
Hydrogen bromide	OSHA ID 165SG		3		97	3	200	200	8	15	IC	ST 226-10-03 38
Hydrogen bromide (acids, inorganic)	NIOSH 7903	1016		3	48	4.5	200	300	4	15	IC	ST 226-10-03 38
Hydrogen chloride	NIOSH 7907			5		30		2000		15	IC/CD	CF/CST 226-9032 63
Hydrogen chloride (hydrochloric acid)	OSHA ID 174SG			5		7.5		500		15	IC	ST 226-10-03 38
Hydrogen chloride (hydrochloric acid) (acids, inorganic)	NIOSH 7903	1016		5	48	4.5	200	300	4	15	IC	ST 226-10-03 38
Hydrogen cyanide	NIOSH 6010			4.7		2-90		50-200		varies	VAS	ST 226-28 38
Hydrogen cyanide	NIOSH 6017			4.7		2-90		50-200		varies	IC/ELCM	ST 226-28 38
Hydrogen cyanide	OSHA 1015		10				28.4		8	15	IC-ELCM	PS 590-400 84
Hydrogen cyanide	OSHA ID 120		10		120	15	1000	1000	2	15	ISE	CST 225-3LF 99 IMP 225-36-2 65 IT 225-22 65 FLT 225-5 88 SP 225-2902 107
Hydrogen cyanide (cyanides)	NIOSH 7904			5 mg/m³ (10 min)		15		1000		15	ISE	FLT 225-2705 Δ 94 CST 225-2LF 99 IMP 225-36-2 65 IT 225-22 65 C/HLD 225-1 106
Hydrogen fluoride	NIOSH 7906		3	6	960	30	2000	2000	8	15	IC-CD	CF/CST 225-9031 63 C/HLD 225-1 106
Hydrogen fluoride (acids, inorganic)	NIOSH 7903	1016	3	6	48	4.5	200	300	4	15	IC	ST 226-10-03 38
Hydrogen fluoride (as F)	OSHA ID 110		3	6	90	22	1500	1500	1	15	ISE	CF/CST 225-9001 63 C/HLD 225-1 106
Hydrogen fluoride (fluorides)	NIOSH 7902		3	6	480	30	1000	2000	8	15	ISE	CF/CST 225-9001 63 C/HLD 225-1 106
Hydrogen peroxide (90%)	OSHA ID 126SG	1005	1		100		1000		100 min		DPP	IMP 225-36-2 65 IT 225-22 65
Hydrogen selenide (as Se)	OSHA CSI		0.05		480		1000		8		AA	IMP 225-36-2 65 IT 225-22 65
Hydrogen sulfide	NIOSH 6013			10 (10 min)	24	3	100	300	4	10	IC	ST NA SKC
Hydrogen sulfide	NON 42	1414			12		1000		12 min		GC-FPD	SB 231-10 52
Hydrogen sulfide	OSHA 1008		10	20	12	7.5	50	500	4	15	IC	ST 226-177 41
Hydrogenated terphenyls	OSHA CSI				30		1000		30		GC-FID	FLT 225-17-04 94 CST 225-2LF 99 C/HLD 225-1 106
Hydroquinone	NIOSH 5004			2 mg/m³ (15 min)		30		2000		15	HPLC-UV	F/CST 225-3-01 89 C/HLD 225-1 106
Hydroquinone	OSHA PV2094		2 mg/m³		20		200		100 min		HPLC-UV	ST 226-98 40
2-Hydroxy-4-methoxyacetophenone	OSHA CSI				10		200		50 min		HPLC-UV	ST 226-30 38
4-Hydroxy-4-methyl-2-pentanone *(see diacetone alcohol)*												
4-Hydroxy-4-methyl-2-petanone (alcohols combined)	NIOSH 1405		50		1-10		10-200		varies		GC-FID	ST 226-01 38
m-Hydroxyacetophenone	OSHA CSI				10		200		50 min		HPLC-UV	ST 226-30-04 38
m-Hydroxybenzoic acid	OSHA CSI				180		1000		3		HPLC-UV	F/CST 225-3-01 89 C/HLD 225-1 106
4-Hydroxycoumarin	OSHA CSI				10		200		50 min		HPLC-UV	ST 226-30-04 38
Hydroxyethyl acrylate	OSHA CSI				12		200		2		GC-FID	ST 226-15GWS 38
2-Hydroxyethyl methacrylate	OSHA CSI				10		200		50 min		GC-FID	ST 226-01 38
2-Hydroxypropyl acrylate	OSHA PV2078				10		100		100 min		GC-FID	ST 226-73 39
2-Imidazolidinethione (ethylene thiourea)	NIOSH 5011		LFC		480		1000		8		VAS	F/CST 225-803 93 C/HLD 225-1 106
Indene	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-110 40
Indeno(1,2,3-cd)pyrene (polynuclear aromatic hydrocarbons by GC-MS)	ASTM D 6209				350 m³ (max)		225 L/min		1-24		GC-MS	PUF 226-131 45 FLT 225-1821 116
Indeno(1,2,3-cd)pyrene (polynuclear aromatic hydrocarbons by GC)	NIOSH 5515				480		2000		4		GC-FID	F/CST 225-1713 94 ST 226-30-04 38 C/HLD 225-1 106
Indeno(1,2,3-cd)pyrene (polynuclear aromatic hydrocarbons by HPLC)	NIOSH 5506				480		2000		4		HPLC-FD	F/CST 225-1713 94 ST 226-30-04 38 C/HLD 225-1 106
Indium	OSHA ID 121		0.1 mg/m³		960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Indium (elements by ICP HNO_3 digestion)	NIOSH 7303				15-500,000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Indium & compounds (as In)	OSHA CSI		0.1 mg/m³		960		2000		8		ICP-DCP	F/CST 225-3-01 89 C/HLD 225-1 106
Inorganic acids (acids, inorganic)	NIOSH 7903	1016									IC	ST 226-10-03 38
Iodine	NIOSH 6005			0.1		15		1000		15	IC	ST 226-67 39
Iodine	NON 16				48		100		8		IC	ST 226-67 39
Iodine	OSHA ID 212			0.1 (C)		2.5		500		5	IC	ST 226-80 39
Iodine (particulates)	OSHA ID 212			0.1		2.5		500		5	IC	ST 226-142 41
Iodine (vapor)	OSHA ID 212			0.1		2.5		500		5	IC	ST 226-80 39
Iodoform	OSHA CSI				10		100		100 min		GC-ECD	F/CST 225-706 98 ST 226-93 40 C/HLD 225-1 106
Iridium	OSHA CSI				960		2000		8		AA	F/CST 225-3-01 89
Iron	OSHA ID 121				960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Iron (bulk)	OSHA ID 125G ¶				480		2000		4		ICP-AES	F/CST 225-3-01 or F/CST 225-3100 or F/CST 225-803 or F/CST 225-8215 93 C/HLD 225-1 106

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	CLG/STEL	Rate (ml/min) TWA Flow/Sampling Rate	CLG/STEL	Time TWA (hrs)	CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Iron (elements by ICP Aqua Regia ashing)	NIOSH 7301		5 mg/m³ (dust, fume)		5-100		1000-4000		varies		ICP-AES	F/CST 225-3-01 or 106 F/CST 225-803 ¥ 93 C/HLD 225-1
Iron (elements by ICP HNO_3 digestion)	NIOSH 7303		0.5 mg/m³ (dust, fume)		1-5000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Iron (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1455	5 mg/m³ (dust, fume)		5-100		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Iron (elements on wipes)	NIOSH 9102				wipe						ICP-AES	W 225-2414 147 TMP 225-2403 or TMP 225-2415 147
Iron & compounds (as Fe)	OSHA ID 121	1209			960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Iron oxide (elements by ICP HNO_3 digestion)	NIOSH 7303				1-5000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Iron oxide fume	OSHA ID 121	1045	10 mg/m³		960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Iron oxide fume	OSHA ID 125G ¶		10 mg/m³		480		2000		4		ICP-AES	F/CST 225-3-01 or F/CST 225-3100 or F/CST 225-803 or F/CST 225-8215 93 C/HLD 225-1 106
Iron pentacarbonyl (as Fe)	OSHA CSI				480	30	2000	2000	4	15	CLR	IMP 225-36-2 65 IT 225-22 65
Iron salts, soluble (as Fe)	OSHA ID 121	1208			960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Isoamyl acetate	OSHA 07	1151	100		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Isoamyl acetate (esters I)	NIOSH 1450		100		1-10		10-200		varies		GC-FID	ST 226-01 38
Isoamyl alcohol	OSHA CSI		100		10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
Isoamyl alcohol (alcohols combined)	NIOSH 1405		100	125 (skin)	1-10	1-10	10-200	10-200	varies	varies	GC-FID	ST 226-01 38
Isoamyl alcohol (alcohols III)	NIOSH 1402		100	125	10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
Isoamyl nitrite	OSHA CSI				5		20		4		HPLC-UV	ST 226-01 38
Isobutanol (isobutyl alcohol)	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
Isobutyl acetate	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
Isobutyl acetate	OSHA 07	1150	150		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Isobutyl acetate	OSHA 1009	1750	150		12	0.75	50	50	4	15	GC-FID	ST 226-01 38
Isobutyl acetate	OSHA 1009	1750	150				13.16	13.16	8	15	GC-FID	PS 575-002 69
Isobutyl acetate (esters I)	NIOSH 1450		150		1-10		10-200		varies		GC-FID	ST 226-01 38
Isobutyl acrylate	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Isobutyl alcohol (Isobutanol)	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
Isobutyl alcohol	OSHA 07	1149	100		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Isobutyl alcohol (alcohols combined)	NIOSH 1405		50		2-10		10-200		varies		GC-FID	ST 226-01 38
Isobutyl alcohol (alcohols II)	NIOSH 1401		50		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Isobutyl isobutyrate	OSHA PV2090				10		200		50 min		GC-FID	ST 226-01 38
Isobutyl nitrite	OSHA CSI				5		20		4		HPLC-UV	ST 226-01 38
Isobutylbenzene	OSHA CSI				6		200		30 min		GC-FID	ST 226-01 38
Isobutyraldehyde (aldehydes, screening)	NIOSH 2539				5		20		4		GC-FID & GC-MS	ST 226-118 40
Isobutyric acid	OSHA CSI				6		100		1		GC-FID	ST 226-110 40
Isobutyronitrile	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Isocyanates *(see specific isocyanate)*	NIOSH 5521	1459	varies		480	10	1000	1000	8	10	HPLC-ELCHM & HPLC-UV	IMP 225-36-1 65 IT 225-22 65
Isocyanates *(see specific isocyanate)*	NIOSH 5522	1460	varies	varies	360	20	1000	2000	6	10	HPLC-FD	IMP 225-36-1 65 IT 225-22 65
Isocyanates *(see specific isocyanate)*	OR-OSHA 1010		varies	varies	45	5	1000	1000	45 min	5	HPLC	IMP 225-36-1 65 IT 225-22 65 CF/CST 225-9029 63
Isocyanates, total *(see specific isocyanate)*	NIOSH 5525		varies	varies	1-500	1-500	1000-2000	1000-2000	varies	varies	HPLC-UV	FLT 225-7 ‡ 98 CST 225-4 99 SP 225-27 or IOM 225-76A 112 FLT 225-702 ‡ 98
Isofenphos	OSHA CSI				480		1000		8		GC-FPD	ST 226-30-16 38
Isoflurane	OSHA 103	1349			12		50		4		GC-FID	ST 226-81A 39
Isooctane	OSHA CSI										DET TB	DT 810-101
Isooctyl alcohol	OSHA PV2033		100		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Isophorone	NIOSH 2508		4		10		20(50)		8(3.3)		GC-FID	ST 226-81A 39
Isophorone	NIOSH 2556		4		2-25		10-100		varies		GC-FID	ST 226-93 40
Isophorone	OSHA 07	1160	25		10		20(50)		8(3.3)		GC-FID	ST 226-81A 39
Isophorone (3,5,5-Trimethylcyclohex-2-enone)	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
Isophorone diisocyanate	OSHA PV2034				60	15	1000	1000	1	15	HPLC-UV	CF/CST 225-9002 63 C/HLD 225-1 106
Isophorone diisocyanate (IPDI)	OR-OSHA 1010		0.02	0.02	45	5	1000	1000	45 min	5	HPLC	IMP 225-36-1 65 IT 225-22 65 CF/CST 225-9029 63
Isophorone diisocyanate (isocyanates, total)	NIOSH 5525		45 µg/m³	180 µg/m³ (10 min) C	1-500		1000-2000		varies		HPLC-UV	FLT 225-7 ‡ 98 CST 225-4 99 SP 225-27 or IOM 225-76A 112 FLT 225-702 ‡ 98
Isophthalic acid	OSHA CSI				bulk						HPLC-UV	
Isopropanol (Isopropyl alcohol)	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
Isopropyl acetate	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

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Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA	Vol. (liter) CLG/STEL	Rate (ml/min) TWA	Rate (ml/min) CLG/STEL	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
					Sample Time or Air Volume		Flow/Sampling Rate					
Isopropyl acetate	NIOSH 1454				9		50		3		GC-FID	ST 226-01 38
Isopropyl acetate	NIOSH 1460				0.1-9.0		20-200		varies		GC-FID	ST 226-01 38
Isopropyl acetate	OSHA 07	1148	250		10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
Isopropylalcohol (Isopropanol)	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49; CPC 224-26CPC-10 49**
Isopropyl alcohol	OSHA 07	1147	400		3	1.5	20	100	2.5	15	GC-FID	ST 226-01 38
Isopropyl alcohol	OSHA 109		400		18	3	50	200	6	15	GC-FID	ST 226-82 40
Isopropyl alcohol (alcohols I)	NIOSH 1400		400	500	3	3	20	200	2.5	15	GC-FID	ST 226-01 38
Isopropyl amine	OSHA CSI		5		90	15	1000	1000	1.5	15	GC-FID	IMP 225-36-2 65 IT 225-22 65
N-Isopropyl aniline	OSHA 78	1228			100		1000		100 min		HPLC-UV	CF/CST 225-9004 63 C/HLD 225-1 106
Isopropylbenzene	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49; CPC 224-26CPC-10 49**
Isopropyl bromide	OSHA CSI				12		100		2		GC-FID	ST 226-01 38
Isopropyl CELLOSOLVE solvent *(see ethylene glycol isopropyl ether)*	OSHA CSI											
Isopropyl ether	NIOSH 1618		500		0.1-3		10-50		varies		GC-FID	ST 226-01 38
Isopropyl ether	OSHA 07	1146	500		3	0.75	20	50	2.5	15	GC-FID	ST 226-01 38
Isopropyl glycidyl ether	NIOSH 1620			50 (15 min)		3		200		15	GC-FID	ST 226-01 38
Isopropyl glycidyl ether	OSHA 07	1145	50		10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
Isopropyl m-chlorocarbanilate	OSHA CSI				30		1000		30 min		HPLC-UV	IMP 225-36-1 65 IT 225-22 65
Isovaleraldehyde	ASTM D 5197				varies		500-1200		5 min-24 hrs		HPLC-UV	ST 226-120 ○ or ST 226-119 40
Isovaleraldehyde (aldehydes, screening)	NIOSH 2539				5		20		4		GC-FID & GC-MS	ST 226-118 40
Jet fuel	OSHA CSI					3		200		15	GC-FID	ST 226-01 38
Kaolin (particulates, respirable)	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106; CYC 225-01-02 115 CST 225-3LF 99
Kaolin (particulates, total)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106; CST 225-2LF 99
Kaolin (respirable dust)	OSHA CSI		5 mg/m³		varies		varies		varies		GR	FLT 225-5-37-P 93 C/HLD 225-1 106; CYC 225-105 105 CST 225-3LF 99
Kaolin (total dust)	OSHA CSI		15 mg/m³		960		2000		8		GR	F/CST 225-803 93 C/HLD 225-1 106
Kathon 886 (kathon biocide)	NON 55				50	7.5	200	500	4	15	HPLC-UV	ST 226-99 40
Kepone	NIOSH 5508		1 µg/m³		480		1000		8		GC-ECD	F/CST 225-3-01 89 IMP 225-36-1 65; IT 225-22 65
Kepone	OSHA CSI				480		1000		8		GC-ECD	F/CST 225-3-01 89 IMP 225-36-1 65; IT 225-22 65
Kerosene	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Kerosene	OSHA PV2139				20		100		200 min		GC-FID	ST 226-01 38
Kerosene (naphthas)	NIOSH 1550		100 mg/m³		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Ketene	OSHA CSI		0.5		50	15	1000	1000	50 min	15	CLR	IMP 225-36-2 65 IT 225-22 65
Ketones (screening)	NIOSH 2549				5		20		4		GC-MS	ST 226-330 42
Ketones	**EPA TO-5**	**1671**			**< 80**		**100-1000**				**HPLC-UV**	**IMP 225-36-1 65 IT 225-22 65**
Ketones I *(see specific compounds)*	NIOSH 1300		varies		varies		10-200		varies		GC-FID	ST 226-01 38
Ketones I *(see specific compounds)*	NIOSH 2555				varies		varies		varies		GC-FID	ST NA SKC
Ketones II *(see specific compounds)*	NIOSH 1301		varies		varies		varies		8		GC-FID	ST 226-01 38
Ketones II *(see specific ketone)*	NIOSH 2553		varies	varies	1-25	1-25	10-200	10-200	varies	varies	GC-FID	ST NA SKC
Lactic Acid	OSHA CSI				800		2000		400 min		IC	ST 226-01 pp cc
Lactose powder	NON 53											F/CST 225-1725 or FLT 225-2714 and; CST 225-2257 and SP 225-2901 107
Lake Red C	OSHA CSI				300		2000		2.5		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Landrin	OSHA CSI				60		1000		1		HPLC-UV	ST 226-30-16 38
Lanthanum (elements by ICP Aqua Regia ashing)	NIOSH 7301				5-1000		1000-4000		varies		ICP-AES	F/CST 225-3-01 or F/CST 225-803 ¥ 93; C/HLD 225-1 106
Lanthanum (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1455			5-1000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Lanthanum (elements on wipes)	NIOSH 9102				wipe						ICP-AES	W 225-2414 147 TMP 225-2403 or; TMP 225-2415 147
Lasso (aroclor)	OSHA PV2035				100		1000		100 min		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Lead	NIOSH 7082	1034	< 0.1 mg/m³		720		1500		8		AAS-F	F/CST 225-3-01 89 C/HLD 225-1 106
Lead	NIOSH 7105	1034	< 0.1 mg/m³		720		1500		8		AAS-GF	F/CST 225-3-01 89 C/HLD 225-1 106
Lead (by field portable XRF)	NIOSH 7702		< 0.1 mg/m³		960		2000		8		XRF	F/CST 225-3-01 89
Lead (by portable ultrasound extraction/ASV)	NIOSH 7701		0.05 mg/m³		20-1500		1000-4000		varies		P ASV	F/CST 225-3-01 89 C/HLD 225-1 106
Lead (elements by ICP Aqua Regia ashing)	NIOSH 7301		0.05 mg/m³		50-2000		1000-4000		varies		ICP-AES	F/CST 225-3-01 or F/CST 225-803 ¥ 93; C/HLD 225-1 106
Lead (elements by ICP HNO_3 digestion)	NIOSH 7303		0.5 mg/m³		35-100,000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Lead (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1034	0.05 mg/m³		50-2000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Lead (elements on wipes)	NIOSH 9102				wipe						ICP-AES	W 225-2414 147 TMP 225-2403 or; TMP 225-2415 147
Lead (ICP analysis of metal/metalloid particulates from solder operations)	OSHA ID 206				480		2000		4		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Lead (in air by chemical spot test)	NIOSH 7700	1369	< 0.1 mg/m³		240		2000		2		SPOT	W 225-2404 147 F/CST 225-3-01 89
Lead (in dust wipes)	NIOSH 9105										SPOT	W 550-001 or W 550-002 145

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	Vol. (liter) CLG/STEL Sample Time or Air Volume	Rate (ml/min) TWA Flow/Sampling Rate	Rate (ml/min) CLG/STEL Flow/Sampling Rate	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Lead (in surface dust)	ASTM E 1792				bulk						Varies	W 225-2414 147 TMP 225-2403 147
Lead (in surface dust)	OSHA ID 125G ¶				wipe						ICP-AES	W 225-2414 147 TMP 225-2403 147
Lead (in workplace air)	ASTM D 6785				varies		varies		varies		AAS-F	IOM 225-70A 112 FLT 225-1930 88
Lead (on surfaces)	NIOSH 9100										AA-F or AA-GF or ICP	W 225-2401A 147
Lead chromate (as Pb)	OSHA CSI		50 µg/m³		960		2000		8		AA	F/CST 225-3-01 89 C/HLD 225-1 106
Lead chromate (as Pb) *(see lead, inorganic fumes & dusts or chromic acid & chromates)*	OSHA CSI											
Lead chromate (CR(VI))	OSHA ID 215 (V2)	1439	0.005 mg/m³		960		2000		8		IC-UV	F/CST 225-802 93 C/HLD 225-1 106
Lead oxide (as lead)	NIOSH 7082	1034	< 0.1 mg/m³		720		1500		8		AAS-F	F/CST 225-3-01 89 C/HLD 225-1 106
Lead oxide (as Pb)	NIOSH 7105	1034	< 0.1 mg/m³		720		1500		8		AAS-GF	F/CST 225-3-01 89 C/HLD 225-1 106
Lead oxide (by field portable XRF)	NIOSH 7702		< 0.1mg/m³		960		2000		8		XRF	F/CST 225-3-01 89
Lead oxide (by portable ultrasound extraction/ASV)	NIOSH 7701		0.05 mg/m³		20-1500		1000-4000		varies		P ASV	F/CST 225-3-01 89 C/HLD 225-1 106
Lead sulfide (as Pb)	NIOSH 7505		< 0.1 mg/m³		750		2500		5		XRD	F/CST 225-803 93 C/HLD 225-1 106 CYC 225-01-02 115
Lead, inorganic fumes & dusts (as Pb)	OSHA ID 121	1196	0.05 mg/m³		960	30	2000	2000	8	15	AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Lead, inorganic fumes & dusts (as Pb)	OSHA ID 125G ¶		0.05 mg/m³		480	30	2000	15	4		ICP-AES	F/CST 225-3-01 or F/CST 225-3100 or F/CST 225-803 or F/CST 225-8215 93 C/HLD 225-1 106
Lead, inorganic surface dusts (as Pb)	OSHA ID 121	1179									AA or AES	W 225-2401A 147
Limestone (particulates, total)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Limestone *(see calcium carbonate)*												
Limestone *(see dust, total & respirable nuisance)*												
Limonene	OSHA PV2036				10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Limonene (terpenes)	NIOSH 1552				24		50		8		GC-FID	ST 226-01 38
Lindane	OSHA CSI		0.5 mg/m³		240		1000		4		GC-ECD	F/CST 225-706 98 C/HLD 225-1 106 IMP 225-36-1 65 IT 225-22 65
Lindane (gamma-BHC)	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
Linuron	ASTM D 4861				240-7200		1000-5000		4-24		HPLC-UV	PUF 226-92 44
Linuron	OSHA CSI				240		1000		4		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Lithium	OSHA ID 121				960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Lithium (elements by ICP Aqua Regia ashing)	NIOSH 7301				100-2000		1000-4000		varies		ICP-AES	F/CST 225-3-01 or F/CST 225-803 ¥ 93 C/HLD 225-1 106
Lithium (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1455			100-2000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Lithium hydride (as Li)	OSHA ID 121		0.025 mg/m³		960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Lithium hydroxide (alkaline dust)	NIOSH 7401				960		2000		8		TITRA	F/CST 225-1715 94 C/HLD 225-1 106
Lithium hydroxide (as Li)	OSHA ID 121				960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
LPG (liquified petroleum gas)	OSHA CSI		1000								DET TB	DT 810-100A
Machette	OSHA CSI				100		1000		100 min		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Magnesite (particulates, respirable)	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Magnesite (particulates, total)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Magnesite *(see dust, total & respirable nuisance)*	OSHA CSI											
Magnesium	OSHA ID 121	1192			960	30	2000	2000	8	15	AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Magnesium (elements by ICP Aqua Regia ashing)	NIOSH 7301		10 mg/m³ (fume, as oxide)		5-67		1000-4000		varies		ICP-AES	F/CST 225-3-01 or F/CST 225-803 ¥ 93 C/HLD 225-1 106
Magnesium (elements by ICP HNO_3 digestion)	NIOSH 7303				1-10,000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1
Magnesium (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1455	10 mg/m³ (fume, as oxide)		5-67		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Magnesium oxide (as Mg, elements by ICP)	NIOSH 7303		10		5-33000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Magnesium oxide fume (respirable dust)	OSHA ID 121	1214	5 mg/m³		960		2000		8		GR & AA or GR & AES	F/CST 225-3-01 89 C/HLD 225-1 106 CYC 225-105 105
Magnesium oxide fume (total dust)	OSHA ID 121	1213	15 mg/m³		960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Malathion	ASTM D 4861				240-7200		1000-5000		4-24		GC-NPD	PUF 226-92 44
Malathion	OSHA 62	1397	15 mg/m³		60		1000		1		GC-FPD	ST 226-30-16 38
Malathion (organophosphorus pesticides)	NIOSH 5600		10 mg/m³		60		1000		1		GC-FPD	ST 226-58 39
Malbranchea species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Malbranchea species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Maleic anhydride	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49** **CPC 224-26CPC-10 49**
Maleic anhydride	NIOSH 3512		0.25		360		1000		6		HPLC-UV	IMP 225-36-2 65 IT 225-22 65
Maleic anhydride	OSHA 25		0.25		20		100		3.3		HPLC-UV	ST 226-30-07 38 ST 226-30 38
Maleic anhydride	OSHA 86		0.25		60		500		2		HPLC-UV	CF/CST 225-9021 †† 63 C/HLD 225-1 106
Maneb	OSHA 107				500		2000		250		HPLC-UV	F/CST 225-3-01 89 C/HLD 225-1 106
Maneb	OSHA CSI										W	W 225-2401A 147
Manganese (elements by ICP Aqua Regia ashing)	NIOSH 7301		1 mg/m³	3 mg/m³	5-200	5-200	1000-4000	1000-4000	varies	varies	ICP-AES	F/CST 225-3-01 or F/CST 225-803 ¥ 93 C/HLD 225-1 106
Manganese (elements by ICP HNO_3 digestion)	NIOSH 7303		1 mg/m³	3 mg/m³	0.05-10,000	0.05-10,000	1000-4000	1000-4000	varies	varies	ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Manganese (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1455	1 mg/m³	3 mg/m³	5-200	5-200	1000-4000	1000-4000	varies	varies	ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

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Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA	Vol. (liter) CLG/STEL	Rate (ml/min) TWA	Rate (ml/min) CLG/STEL	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
					Sample Time or Air Volume		Flow/Sampling Rate					
Manganese (elements on wipes)	NIOSH 9102				wipe						ICP-AES	W 225-2414 147 TMP 225-2415 147 TMP 225-2403 or
Manganese & compounds (as Mn)	OSHA ID 121	1194		5 mg/m³ (C)	960	10	2000	2000	8	5	AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Manganese & compounds (as Mn)	OSHA ID 125G ¶			5 mg/m³		10		2000		5	ICP-AES	F/CST 225-3-01 or F/CST 225-3100 or F/CST 225-803 or F/CST 225-8215 93 C/HLD 225-1 106
Manganese cyclopentadienyl tricarbonyl (as Mn)	OSHA CSI				480		1000		8		AA	F/CST 225-3-01 89 IMP 225-36-2 65 IT 225-22 65
Manganese fume	OSHA ID 125G ¶			5 mg/m³	480	30	2000	2000	4	15	ICP-AES	F/CST 225-3-01 or F/CST 225-3100 or F/CST 225-803 or F/CST 225-8215 93 C/HLD 225-1 106
Manganese fume (as Mn)	OSHA ID 121	1195		5 mg/m³ (C)	960	10	2000	2000	8	5	AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Manganese in welding fume	NON 58			5 mg/m³ *	varies		750		varies		GR	C/HLD 225-6200 106 CST 225-6201 106 FLT 225-8050
Manganese tetroxide (as Mn)	OSHA ID 121	1191			960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Manganese tetroxide (as Mn)	OSHA ID 125G ¶				480		2000		4		ICP-AES	F/CST 225-3-01 or F/CST 225-3100 or F/CST 225-803 or F/CST 225-8215 93 C/HLD 225-1 106
Marble (particulates, respirable)	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Marble (particulates, total)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Marble *(see dust, total and respirable nuisance)*												
MCPA (2-methyl-4-chlorophenoxyacetic acid)	OSHA CSI				240		500		8		HPLC	F/CST 225-706 98 C/HLD 225-1 106
MCPP	OSHA CSI				240		1000		4		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
MDI (4,4-methylene bisphenyl isocyanate)	OSHA 47		50 µg/m³	200 µg/m³		10		1000		10	HPLC-UV	CF/CST 225-9002 or CF/ 225-9013 63 C/HLD 225-1 106 CST
MDI (4,4-methylenebis[phenyl isocyanate]) (isocyanates, total)	NIOSH 5525		50 µg/m³	200 µg/m³ (10 min) C	1-500		1000-2000		varies		HPLC-UV	FLT 225-7 ‡ 98 CST 225-4 99 SP 225-27 or IOM 225-76A 112 FLT 225-702 ‡ 98
MDI (4,4'-methylenebisphenyl isocyanate) (isocyanates)	NIOSH 5521	1001	50 µg/m³	200 µg/m³ (10 min) C	480	10	1000	1000	8	10	HPLC-ELCHM & HPLC-UV	IMP 225-36-1 65 IT 225-22 65
MEK *(see methyl ethyl ketone)*												
Melamine	OSHA CSI				40		1000		40 min		HPLC	F/CST 225-709 98 C/HLD 225-1 106
Melengestrol acetate	OSHA CSI				120		1000		2		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Menadione	OSHA CSI				10		20(50)		8(3.3)		HPLC-UV	ST 226-30 38
Mercaptans *(see specific compounds)*	NIOSH 2542	1330		0.5 (15 min)	48	12	100	200	8	60	GC-FPD	CF/CST 225-9007 63 C/HLD 225-1 106
Mercaptoethanol	OSHA CSI				10		20(50)		8(3.3)		GC-FPD	ST 226-10 38
Mercury	NIOSH 6009		0.05 mg/m³		48		200		4		AA	ST 226-17-1A 38 F/CST 225-3-01 89
Mercury (Rathje & Marcero)	NON 17				48		100		8		AA	ST 226-17-1A 38
Mercury (Rathje & Marcero)	NON 17				varies		1000-3000		varies		AA	ST 226-17-3A 38
Mercury (vapor)	OSHA ID 140	1677	0.1 mg/m³		3-100		200		varies		AA	ST 226-17-1A 38 F/CST 225-3-01 89
Mercury (vapor)	OSHA ID 140	1677	0.1 mg/m³		9.6		20		8		AA	CH 520-03 84 C 520-02A 84
Mercury, Particulate (in Workplace Atmospheres, air samples)	OSHA ID 145			0.01 mg/m³		30		2000		15	AA	F/CST 225-3-01 89 C/HLD 225-1 106
Mercury, Particulate (in Workplace Atmospheres, wipe samples)	OSHA ID 145			0.01 mg/m³							wipe	SM TB 225-24 147
Mesitylene	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
Mesityl oxide	OSHA 07	1144	25		10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
Mesityl oxide (Ketones II)	NIOSH 2553		10		1-25		10-200		varies		GC-FID	ST NA SKC
Mesityl oxide (ketones II)	NIOSH 1301		10		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Mestranol	OSHA PV2068				480		2000		4		HPLC	F/CST 225-802 93 C/HLD 225-1 106
Metal & metalloid particulates	OSHA ID 121	1177	varies	varies	960	30	2000	2000	8	15	AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Metal & metalloid particulates	OSHA ID 125G ¶	1371	varies	varies	480	30	2000	2000	4	15	ICP-AES	F/CST 225-3-01 or F/CST 225-3100 or F/CST 225-803 or F/CST 225-8215 93 C/HLD 225-1 106
Metal removal fluid (aerosol)	ASTM D 7049				960		2000		8		GR	FLT 225-27-07 94 CST 225-2LF 99 C/HLD 225-1 106
Metal working fluids (aerosols)	ASTM D 7049				960		2000		8		GR	FLT 225-27-07 94 CST 225-2LF 99 C/HLD 225-1 106
Metals (in settled dust)	ASTM D 6966				wipe		wipe		wipe		Varies	W 225-2414 147 TMP 225-2403 or TMP 225-2415 147
Metals in workplace atmospheres	ASTM D 4185	1426			varies		2000		varies		AAS	F/CST 225-3-01 89 C/HLD 225-1 106
Metals, trace (elements by ICP $HNO_3/HClO_4$ ashing)	NIOSH 7300	1455	varies	varies	varies	varies	1000-4000	1000-4000	varies	varies	ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Metalworking fluids (thoracic particulates)	NIOSH 5524●		0.4 mg/m³ (thoracic particulates)		2000		varies		varies		GR	PPI 225-381 116 FLT 225-27-07 § 94 IS 225-388 116 SP 225-27 or SCN 225-26 107
Metalworking fluids (total particulates)	NIOSH 5524●	1726	0.5 mg/m³ (total particulates)		1000 (min)		2000		varies		GR	FLT 225-27-07 § 94 CST 225-4 99 C/HLD 225-1 106
Methacrylic acid	OSHA PV2005				24		100		4		HPLC-UV	ST 226-30-08 38
Metham sodium	OSHA CSI				40		1000		40 min		HPLC-UV	ST 226-58 39
Methamidophos	OSHA CSI				480		1000		8		GC-FPD	ST 226-30-16 38

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	CLG/STEL (ppm)	Vol. (liter) TWA	CLG/STEL	Rate (ml/min) TWA	CLG/STEL	Time TWA (hrs)	CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
					Sample Time or Air Volume		Flow/Sampling Rate					
Methamidophos (organophosphorus pesticides)	NIOSH 5600				240		1000		4		GC-FPD	ST 226-58 39
Methane	OSHA CSI										DET TB	DT 800-20001
Methanol (methyl alcohol)	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
Methanol (methyl alcohol)	NIOSH 2000		200	250	5	3	20	200	4	15	GC-FID	ST 226-51 39
Methidathion	OSHA PV2074				60		1000		1		GC-ECD	ST 226-58 39
Methiocarb (organonitrogen pesticides)	NIOSH 5601				240		1000		4		HPLC-UV	ST 226-58 or ST 226-30-16 38
Methomyl	OSHA PV2114				60		1000		1		HPLC-UV	ST 226-30-16 38
Methomyl (organonitrogen pesticides)	NIOSH 5601		2.5 mg/m³		240		1000		4		HPLC-UV	ST 226-58 or ST 226-30-16 38
Methotrexate	OSHA PV2146				120		1000		2		HPLC-UV	ST 226-30-16 38
2-Methoxy-1-propanol	OSHA 99				10		100		100 min		GC-FID	ST 226-01 38
2-Methoxy-1-propyl acetate	OSHA 99				10		100		100 min		GC-FID	ST 226-01 38
1-Methoxy-2-propanol	OSHA 99				10		100		100 min		GC-FID	ST 226-01 38
1-Methoxy-2-propanol (glycol ethers)	NIOSH 2554				3-25		100-200		varies		GC-FID	ST 226-81A 39
1-Methoxy-2-propyl acetate	OSHA 99				10		100		100 min		GC-FID	ST 226-01 38
1-Methoxy-2-propyl acetate (glycol ethers)	NIOSH 2554				3-25		100-200		varies		GC-FID	ST 226-81A 39
Methoxychlor	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
Methoxychlor	OSHA PV2038		15 mg/m³		60		1000		1		GC-ECD	ST 226-30-16 38
2-Methoxyethanol	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
2-Methoxyethanol (methyl CELLOSOLVE solvent)	OSHA 79	1277	25		48	15	100	1000	8	15	GC-FID	ST 226-01 38
2-Methoxyethanol (methyl CELLOSOLVE solvent) (alcohols IV)	NIOSH 1403	1274	0.1 (skin)		6-50		10-50		varies		GC-FID	ST 226-01 38
2-Methoxyethel acetate	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
2-Methoxyethyl acetate (methyl CELLOSOLVE acetate)	OSHA 79	1277	25		48	15	100	1000	8	15	GC-FID	ST 226-01 38
Methoxyflurane	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-01 38
2-Methoxyphenol	OSHA PV2039				20		200		100 min		GC-FID	ST 226-95 40
3-Methoxyphenol	OSHA PV2039				20		200		100 min		GC-FID	ST 226-95 40
4-Methoxyphenol	OSHA PV2039				20		200		100 min		GC-FID	ST 226-95 40
Methoxypropanol	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
Methyl acetate	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
Methyl acrylate	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
Methyl alcohol (methanol)	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
6-Methoxytetralone	OSHA CSI				10		20(50)		8(3.3)		HPLC-UV	ST 226-30 38
Methyl acetate	NIOSH 1458		200	250	5	3	20	200	4	15	GC-FID	ST 226-01 38
Methyl acetate	OSHA 07	1143	200		5	3	20	200	4	15	GC-FID	ST 226-01 38
Methyl acetylene-propadiene mixture	OSHA 07	1142	1000		2	0.75	20	50	100 min	15	GC-FID	ST 226-01 38
Methyl acrylate	NIOSH 1459		10		5		20		4		GC-FID	ST 226-01 38
Methyl acrylate	NIOSH 2552		10		1-5		10-200		varies		GC-FID	ST NA SKC
Methyl acrylate	NON 54		5	15	10	3	20	200	8	15	GC-FID	ST 226-81A 39
Methyl acrylate	OSHA 92		10		12		50		4		GC-FID	ST 226-73 39
Methyl acrylonitrile	OSHA 37				20		200		100 min		GC-NPD	ST 226-01 38
Methyl alcohol (methanol)	NIOSH 2000		200	250	5	3	20	200	4	15	GC-FID	ST 226-51 39
Methyl alcohol (RH < 50% at 25 C)	OSHA 91	1328	200		3	0.75	50	50	1	15	GC-FID	ST 226-82 40
Methyl alcohol (RH > 50% at 25 C)	OSHA 91	1328	200		5	0.75	50	50	100 min	15	GC-FID	ST 226-82 40
Methyl amine	OSHA 40		10		10		20		8		HPLC-UV	ST 226-96 40
Methyl arsonic acid (arsenic, organo-)	NIOSH 5022				480		1000		8		IC-AA	FLT 225-17-01 94 CST 225-2LF 99 C/HLD 225-1 106
Methyl bromide	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
Methyl bromide	OSHA PV2040			20		3		200		15	GC-FID	ST 226-83 40
Methyl butyl ketone (ketones I)	NIOSH 2555				1-10		10-200		varies		GC-FID	ST NA SKC
Methyl butyl ketone (MBK, 2-hexanone) (ketones I)	NIOSH 1300		1		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Methyl CELLOSOLVE acetate (2-methoxyethyl acetate)	NIOSH 1451		0.1		12		50		4		GC-FID	ST 226-01 38
Methyl CELLOSOLVE acetate (2-methoxyethyl acetate)	OSHA 79	1277	25		48	15	100	1000	8	15	GC-FID	ST 226-01 38
Methyl CELLOSOLVE solvent (2-methoxyethanol)	OSHA 79	1277	25		48	15	100	1000	8	15	GC-FID	ST 226-01 38
Methyl CELLOSOLVE solvent (2-methoxyethanol) (alcohols IV)	NIOSH 1403	1274	0.1 (skin)		6-50		10-50		varies		GC-FID	ST 226-01 38
Methyl chloride	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
Methyl chloride	NIOSH 1001		LFC			0.5		100		5	GC-FID	ST 226-09 38 ST 226-01 38
Methyl chloroform	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
Methyl chloroform (1,1,1-trichloroethane)	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
Methyl chloroform (1,1,1-trichloroethane)	OSHA 14		350		3	3	20	200	2.5	15	GC-FID	ST 226-01 38

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

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Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA	Vol. (liter) CLG/STEL	Rate (ml/min) TWA	Rate (ml/min) CLG/STEL	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Methyl chloroform (1,1,1-trichloroethane) (hydrocarbons, halogenated)	NIOSH 1003			350		3		10-200		varies	GC-FID	ST 226-01 38
Methyl cyclohexane	OSHA 07	1069	500		5		20		4		GC-FID	ST 226-01 38
Methyl cyclohexane (hydrocarbons, BP 36 to 216 C)	NIOSH 1500		400		4		10-200		varies		GC-FID	ST 226-01 38
Methyl demeton	OSHA CSI				480		1000		8		GC-FPD	ST 226-30-16 38
N-Methyl dicyclohexylamine	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-10 38
Methyl ethyl ketone	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49; CPC 224-26CPC-10 49**
Methyl ethyl ketone	OSHA 1004		200		12		50		4		GC-FID	ST NA SKC
Methyl ethyl ketone (Ketones I)	NIOSH 2555				1-10		10-200		varies		GC-FID	ST NA SKC
Methyl ethyl ketone (MEK, 2-butanone)	OSHA 1004		200				16.88		8		GC-FID	PS 575-002 69
Methyl ethyl ketone (MEK) *(see 2-butanone)*												
Methyl ethyl ketone (MEK) *(see 2-butanone)*	NIOSH 2500	1012	200	300	10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-81A 39
Methyl ethyl ketone peroxide	NIOSH 3508	1002		0.2 (15 min)		120		1000		120	VAS	IMP 225-36-1 65 IT 225-22 65
Methyl ethyl ketone peroxide	OSHA 77					15		1000		15	HPLC-UV	ST 226-93 40
Methyl formate	OSHA PV2041		100		3		50		1		GC-FID	ST 226-83 40
Methyl iodide	NIOSH 1014		2		48		100		8		GC-FID	ST 226-01 38
Methyl iodide	OSHA CSI		5		50		200		4		GC-FID	ST 226-01 38
Methyl isoamyl acetate (esters I)	NIOSH 1450		50		1-10		10-200		varies		GC-FID	ST 226-01 38
Methyl isobutyl ketone	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49; CPC 224-26CPC-10 49**
Methyl isoamyl ketone	OSHA PV2042		100		24		50		8		GC-FID	ST 226-01 38
Methyl isobutyl carbinol (methyl amyl alcohol)	OSHA 07	1068	25		10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
Methyl isobutyl carbinol (methyl amyl alcohol) (alcohols combined)	NIOSH 1405		25	40 (skin)	1-10	1-10	10-200	10-200	varies	varies	GC-FID	ST 226-01 38
Methyl isobutyl carbinol (methyl amyl alcohol) (alcohols III)	NIOSH 1402		25	40	10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
Methyl isobutyl ketone	OSHA 1004		100		12		50		4		GC-FID	ST NA SKC
Methyl isobutyl ketone (hexone)	OSHA 07	1070	100		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Methyl isobutyl ketone (hexone)	OSHA 1004		100				13.62		8		GC-FID	PS 575-002 69
Methyl isobutyl ketone (hexone) (ketones I)	NIOSH 1300		50	75	10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
Methyl isobutyl ketone (ketones I)	NIOSH 2555		50		1-10		10-200		varies		GC-FID	ST NA SKC
Methyl isocyanate (MIC)	OSHA 54		0.02		15		50		5		HPLC-FD	ST NA SKC
Methyl isopropyl ketone	OSHA CSI				10		20		8		GC-FID	ST 226-01 38
Methyl isothiocyanate	OSHA CSI				120		1000		2		GC-FID	ST 226-01 38
Methyl mercaptan	NIOSH 2542	1330		0.5 (15 min)	48	12	100	200	8	60	GC-FPD	CF/CST 225-9007 63 C/HLD 225-1 106
Methyl mercaptan	NON 42	1412			12		1000		12 min		GC-FPD	SB 231-10 52
Methyl mercaptan	OSHA 26			10	20		200		100 min		GC-FPD	CF/CST 225-9007 63 C/HLD 225-1 106
Methyl methacrylate	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49; CPC 224-26CPC-10 49**
Methyl methacrylate	NIOSH 2537		100		1-8		10-50		varies		GC-FID	ST 226-30-06 38
Methyl methacrylate	NON 54		50	75	10	3	20	200	8	15	GC-FID	ST 226-81A 39
Methyl methacrylate	OSHA 94		100		3		50		1		GC-FID	ST 226-73 39
4-Methyl morpholine	OSHA CSI				30		100		5		GC-FID	ST 226-98 40
Methyl n-amyl ketone (2-heptanone) (Ketones II)	NIOSH 2553		100		1-25		10-200		varies		GC-FID	ST NA SKC
Methyl parathion	ASTM D 4861				240-7200		1000-5000		4-24		GC-NPD	PUF 226-92 44
Methyl parathion	OSHA PV2112				480		1000		8		GC-FPD	ST 226-30-16 38
Methyl parathion (organophosphorus pesticides)	NIOSH 5600		0.2 mg/m³		240		1000		4		GC-FPD	ST 226-58 39
Methyl propyl ketone (2-pentanone)	OSHA 07		200		10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
Methyl propyl ketone (Ketones I)	NIOSH 2555				1-10		10-200		varies		GC-FID	ST NA SKC
Methyl silicate	OSHA CSI				9		50		3		GC-FID	ST 226-30-04 38
Metyl styrene (vinyl toluene)	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49; CPC 224-26CPC-10 49**
alpha-Methyl styrene	OSHA 07	1066		100 (C)	30	3	200	200	2.5	15	GC-FID	ST 226-01 38
alpha-Methyl styrene (hydrocarbons, aromatic)	NIOSH 1501		50	100	1-30	1-30	10-200	10-200	varies	varies	GC-FID	ST 226-01 38
beta-Methyl styrene (hydrocarbons, aromatic)	NIOSH 1501		50	100	1-30	1-30	10-200	10-200	varies	varies	GC-FID	ST 226-01 38
17-a-Methyl testosterone	OSHA PV2001				60		1000		1		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Methyl-2-cyanoacrylate	OSHA 55				12		100		2		HPLC-UV	ST 226-98 40
3-Methyl-2-cyclopentene-2-ol-one	OSHA CSI				10		200		50 min		HPLC-UV	ST 226-30-04 38
1-Methyl-2-ethyl benzene	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49; CPC 224-26CPC-10 49**
1-Methyl-2-pyrrolidinone	OSHA PV2043				10		200		50 min		GC-FID	ST 226-01 38
N-Methyl-2-pyrrolidinone	NIOSH 1302				96		200		8		GC-NPD, FID	ST 226-01 38
N-Methyl-2-pyrrolidinone	OSHA PV2043				10		200		50 min		GC-FID	ST 226-01 38
1-Methyl-3-ethyl benzene	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49; CPC 224-26CPC-10 49**
1-Methyl-4-ethyl benzene	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49; CPC 224-26CPC-10 49**
5-Methyl-3-heptanone (ketones II)	NIOSH 2553		25		1-25		10-200		varies		GC-FID	ST NA SKC

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA	Vol. (liter) CLG/STEL	Rate (ml/min) TWA	Rate (ml/min) CLG/STEL	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
					Sample Time or Air Volume		Flow/Sampling Rate					
5-Methyl-3-heptanone (ketones II)	NIOSH 1301		25		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
2-Methyl-4-isothiazolin-3-one (Kathon 886)	NON 55		1.5 mg/m³	4.5 mg/m³	50	7.5	200	500	4	15	HPLC-UV	ST 226-99 40
Methyl-n-amyl ketone (2-heptanone)	OSHA CSI		100		24		200		2		GC-FID	ST 226-01 38
Methyl-n-amyl ketone (2-heptanone) (ketones II)	NIOSH 1301		100		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
5-Methyl-o-anisidine	OSHA CSI				60		1000		1		HPLC-UV	ST 226-30-04 38
Methyl-t-butyl-ether (MTBE)	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49; CPC 224-26CPC-10 49**
Methyl-tert-butyl ether	NIOSH 1615	1017			96		200		8		GC-FID	ST 226-37 39
Methylacetylene (propyne)	OSHA CSI		1000		2		50		40 min		GC-FID	ST 226-01 38
Methylal (dimethoxymethane)	NIOSH 1611		1000		1.8		20		1.5		GC-FID	ST 226-01 38
Methylal *(see dimethoxymethane)*												
6-Methylcoumarin	OSHA CSI				10		20(50)		8(3.3)		HPLC-UV	ST 226-30 38
Methylcyclohexanol	NIOSH 1404		50		12		25		8		GC-FID	ST 226-01 38
Methylcyclohexanol	OSHA CSI		100		12		25		8		GC-FID	ST 226-01 38
Methylcyclohexanone	NIOSH 2521		50	75	3		50		1		GC-FID	ST 226-115 40
o-Methylcyclohexanone	OSHA CSI		100		6	0.75	50	50	2	15	GC-FID	ST 226-115 40
Methylcyclopentadienyl manganese tricarbonyl (as Mn)	OSHA CSI			5 (C)	10		200		1		AA	ST 226-30 38
N-Methyldiethanolamine	OSHA CSI				20		100		3.3		GC-NPD	ST 226-42-02 39
4,4-Methylene bisphenyl isocyanate (MDI)	OSHA 47	1242		200 µg/m³		15		1000		15	HPLC-UV	CF/CST 225-9002 or 106 CF/CST; C/HLD 225-1 106 C/HLD
4,4-Methylene bisphenyl isocyanate (MDI) (isocyanates)	NIOSH 5521	1001	50 µg/m³	200 µg/m³ (10 min) C	480	10	1000	1000	8	10	HPLC-ELCHM & HPLC-UV	IMP 225-36-1 65 IT 225-22 65
4,4-Methylene bisphenyl isocyanate (MDI) (isocyanates)	OR-OSHA 1010		0.02	0.005	45	5	1000	1000	45 min	5	HPLC	IMP 225-36-1 65 IT 225-22 65; CF/CST 225-9029 63
Methylene chloride	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49; CPC 224-26CPC-10 49**
Methylene chloride	NIOSH 1005	1018	LFC		2	1.5	20	100	1.6	15	GC-FID	ST 226-01 38
Methylene chloride	OSHA 59	1358	25	125	10	0.25	50	50	3.3	5	GC-FID	ST 226-09-02 38
Methylene chloride	OSHA 80		25	125	3	0.25	50	50	1	5	GC-FID	ST NA SKC
4,4-Methylene diphenyl isocyanate (MDI)	NIOSH 5522		50 µg/m³	200 µg/m³ (10 min) C	360	20	1000	2000	6	10	HPLC-FD	IMP 225-36-1 65 IT 225-22 65
Methylene-bis-(4-cyclohexylisocyanate)	OSHA PV2092					15		1000		15	HPLC-UV	CF/CST 225-9013 63 C/HLD 225-1 106
Methylene-bis-(4-cyclohexylisocyanate) (isocyanates, total)	NIOSH 5525			110 µg/m³ (10 min) C		1-500		1000-2000		varies	HPLC-UV	FLT 225-7 ‡ 98 CST 225-4 99; SP 225-27 or IOM 225-76A 112; FLT 225-702 ‡ 98
2,2'-Methylene-bis(4-chlorophenol)	OSHA CSI				750		2000		6.25		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
4,4'-Methylenebis(2-chloroaniline) (MOCA)	OSHA 71	1234			100		1000		100 min		GC-ECD	CF/CST 225-9004 63 C/HLD 225-1 106
4,4-Methylenebisphenyl isocyanate (MDI) (isocyanates, total)	NIOSH 5525		50 µg/m³	200 µg/m³ (10 min) C	1-500		1000-2000		varies		HPLC-UV	FLT 225-7 ‡ 98 CST 225-4 99; SP 225-27 or IOM 225-76A 112; FLT 225-702 ‡ 98
4,4'-Methylenedianiline (MDA)	NIOSH 5029		LFC		480		1000		8		HPLC-UV	CF/CST 225-9004 63 C/HLD 225-1 106
4,4'-Methylenedianiline (MDA)	OSHA 57	1240			100		1000		100		GC-ECD	CF/CST 225-9004 63 C/HLD 225-1 106
2-Methylpentane	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-01 38
3-Methylpentane	OSHA CSI				5		20		4		GC	ST 226-01 38
Methylphenols	**EPA TO-8**	**1668**			**< 80**		**100-1000**				**HPLC-UV**	**IMP 225-36-1 (2) 65 IT 225-22 65**
Methyltetrahydrophthalic anhydride	NON 28				200	20	40	1000	8	20	GC-FID	ST 226-30 38
Methyltin dichloride	NIOSH 5526		0.1 mg/m³		60	60	250	1000	4	60	GC-FPD	ST 226-30-16 38
Methyltin mercaptide (tin, organic compounds [as Sn])	OSHA CSI				480		1000		8		AA-GF	ST 226-30-16 38
Metolachlor	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
Metolachlor	NIOSH 5602				480		1000		8		GC-ECD	ST 226-58 39
Metribuzin	OSHA PV2044				240		1000		4		GC-FPD	ST 226-30-16 38
Mevinphos (phosdrin)	OSHA CSI		0.1 mg/m³		480	15	1000	1000	8	15	GC-FPD	ST 226-30-16 38
Mevinphos (phosdrin) (organophosphorus pesticides)	NIOSH 5600		0.01		240		1000		4		GC-FPD	ST 226-58 39
Mexacarbate	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
MIBK *(see methyl isobutyl ketone)*												
MIC (methyl isocyanate)	OSHA 54		0.02		15		50		5		HPLC-FD	ST NA SKC
Mica	OSHA ID 142		20 mppcf		varies		varies		varies		GR & XRD	CYC 225-105 105 F/CST 225-803 93; C/HLD 225-1 106
Mineral spirits (naphthas)	NIOSH 1550		350 mg/m³	1800 mg/m³	3	1	20	200	2.5	5	GC-FID	ST 226-01 38
Mineral wool fiber	OSHA CSI				960		2000		8		GR	FLT 225-5-37-P 93 C/HLD 225-1 106; CST 225-2LF 99
Mineral wool fiber (particulates, respirable)	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106; CYC 225-01-02 115 CST 225-3LF 99
Mineral wool fiber (particulates, total)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106; CST 225-2LF 99
Mirex	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
MOCAP	OSHA CSI				480		1000		8		GC-FPD	ST 226-30-16 38
Mold spores (in air)					15-150		15000		1-10 min		varies	STC 225-9820 103
Molybdenum (elements by ICP Aqua Regia ashing)	NIOSH 7301		5 mg/m³ (sol) 10 mg/m³ (insoluble)		5-67		1000-4000		varies		ICP-AES	F/CST 225-3-01 or 106 F/CST; C/HLD 225-1 106 C/HLD; 225-803 ¥ 93

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

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Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	Vol. (liter) CLG/STEL Sample Time or Air Volume	Rate (ml/min) TWA Flow/Sampling Rate	Rate (ml/min) CLG/STEL Flow/Sampling Rate	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Molybdenum (elements on wipes)	NIOSH 9102				wipe						ICP-AES	W 225-2414 147 TMP 225-2415 147
Molybdenum (elements by ICP HNO_3 digestion)	NIOSH 7303		5 mg/m³ (soluble) 10 mg/m³ (insoluble)		0.5-10,000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Molybdenum (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1455	5 mg/m³ (sol) 10 mg/m³ (insoluble)		6-67		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Molybdenum insolubles (as Mo)	OSHA ID 125G ¶		15 mg/m³		480		2000		4		ICP-AES	F/CST 225-3-01 or F/CST 225-3100 or F/CST 225-803 or F/CST 225-8215 93 C/HLD 225-1 106
Molybdenum insolubles (as Mo) (respirable fraction)	OSHA ID 121	1212	15 mg/m³ (total dust)		960		2000		8		GR & AA or GR & AES	F/CST 225-3-01 89 C/HLD 225-1 106 CYC 225-105 105
Molybdenum solubles (as Mo)	OSHA ID 121	1211	5 mg/m³		960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Monensin	OSHA CSI				960		2000		8		CLR	F/CST 225-706 98 C/HLD 225-1 106
Monilia species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Monilia species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Monochloroacetic acid	OSHA CSI				96		200		8		IC	ST 226-47-01 39
Monochloroacetic acid (chloroacetic acid)	NIOSH 2008				48		100		8		IC-CD	ST 226-47-01 39
Monocrotophos (Azodrin)	OSHA PV2045				480		1000		8		GC-FPD	ST 226-30-16 38
Monocrotophos (organophosphorus pesticides)	NIOSH 5600		0.25 mg/m³		240		1000		4		GC-FPD	ST 226-58 39
Monoethanolamine (2-aminoethanol)	NIOSH 3509		3	6	240		1000		4		IC	IMP 225-36-1 65 IT 225-22 65
Monoethanolamine *(see 2-aminoethanol)*												
Monomethyl aniline	NIOSH 3511		0.5		100		1000		100 min		GC-FID	IMP 225-36-2 65 IT 225-22 65
Monomethyl aniline	OSHA CSI		2		100		1000		100 min		GC-FID	IMP 225-36-2 65 IT 225-22 65
Monomethyl hydrazine	NIOSH 3510			0.04 (120 min)		15		1000		15	VAS	IMP 225-36-2 65 IT 225-22 65
Monomethyl hydrazine	OSHA 20			0.2		4.5		300		15	HPLC-UV	ST 226-42-02 39
Monuron	ASTM D 4861				240-7200		1000-5000		4-24		HPLC-UV	PUF 226-92 44
Morpholine	OSHA PV2123		20		10		100		100 min		GC-FID	ST 226-98 40
Mortierella species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Mortierella species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Mucor (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Mucor (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Mycobacteria	NIOSH 0801				50-300		28,300		varies		GC-FID	BI 225-9611 126
Mycobacterium tuberculosis (airborne)	NIOSH 0900				1920		4000		8		PCR	FLT 225-2705 94 SP 225-27 107 CST 225-3LF 99 C/HLD 225-1 106
Mycotoxins (fungi in air)	NON 48				62.5-375		12500 +		5-30		varies	BS 225-9595 128 VT 225-9598A◊ 128
Naphtha (coal tar)	NIOSH 1550		100		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Naphtha (coal tar)	OSHA 48		100		3		200		15 min		GC-FID	ST 226-01 38
Naphthalene	OSHA 35	1060	10		10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-110 40
Naphthalene (polynuclear aromatic hydrocarbons by GC-MS)	ASTM D 6209				350 m³ (max)		225 L/min		1-24		GC-MS	PUF 226-131 45 FLT 225-1821 116
Naphthalene (polynuclear aromatic hydrocarbons by GC)	NIOSH 5515				480		2000		4		GC-FID	F/CST 225-1713 94 ST 226-30-04 38 C/HLD 225-1 106
Naphthalene (polynuclear aromatic hydrocarbons by HPLC)	NIOSH 5506		10	15	480		2000		4		HPLC-UV	F/CST 225-1713 94 ST 226-30-04 38 C/HLD 225-1 106
1,5-Naphthalene diisocyanate	OSHA PV2046				60		1000		1		HPLC-UV-FD	CF/CST 225-9013 63 C/HLD 225-1 106
1,5-Naphthalene diisocyanate (isocyanates, total)	NIOSH 5525		40 µg/m³	70 µg/m³ (10 min) C	1-500	1-500	1000-2000	1000-2000	varies	varies	HPLC-UV	FLT 225-7 ‡ 98 CST 225-4 99 SP 225-27 or IOM 225-76A 112 FLT 225-702 ‡ 98
Naphthas *(see specific compounds)*	NIOSH 1550		varies		varies		varies		8		GC-FID	ST 226-01 38
beta-Naphthol	OSHA CSI				60		1000		1		HPLC-UV	IMP 225-36-1 65 IT 225-22 65
alpha-Naphthylamine	OSHA 93	1232			100		1000		100 min		GC-ECD	CF/CST 225-9004 63 C/HLD 225-1 106
beta-Naphthylamine	OSHA 93	1232			100		1000		100 min		GC-ECD	CF/CST 225-9004 63 C/HLD 225-1 106
Naphthylamines (alpha- & beta-)	NIOSH 5518				96		200		8		GC-FID	FLT 225-16 98 CST 225-32 106 ST 226-51 39
Naphthylene diisocyanate (NDI) (isocyanates)	NIOSH 5521		40 µg/m³	70 µg/m³ (10 min) C	480	10	1000	1000	8	10	HPLC-ELCHM & HPLC-UV	IMP 225-36-1 65 IT 225-22 65
Naphthylthiourea *(see ANTU)*												
Neurospora species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Neurospora species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Nickel (elements by ICP Aqua Regia ashing)	NIOSH 7301		0.015 mg/m³		5-1000		1000-4000		varies		ICP-AES	F/CST 225-3-01 or F/CST 225-803 ¥ 93 C/HLD 225-1 106
Nickel (elements by ICP HNO_3 digestion)	NIOSH 7303		0.012 mg/m³		1-50,000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Nickel (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1455	0.15 mg/m³		5-1000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Nickel (elements on wipes)	NIOSH 9102				wipe						ICP-AES	W 225-2414 147 TMP 225-2403 or TMP 225-2415 147
Nickel (metal & insoluble compounds as Ni)	OSHA ID 125G ¶		1 mg/m³		480		2000		4		ICP-AES	F/CST 225-3-01 or F/CST 225-3100 or F/CST 225-803 or F/CST 225-8215 93 C/HLD 225-1 106
Nickel (metal, soluble, & insoluble compounds as Ni)	OSHA ID 121	1044	1 mg/m³		960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Nickel (soluble compounds as Ni)	OSHA ID 121	1197	1 mg/m³		960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106

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References and abbreviations are found on pages 212-213.

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	Vol. (liter) CLG/STEL Sample Time or Air Volume	Rate (ml/min) TWA Flow/Sampling Rate	Rate (ml/min) CLG/STEL Flow/Sampling Rate	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Nickel (soluble compounds as Ni)	OSHA ID 125G ¶		1 mg/m³		480		2000		4		ICP-AES	F/CST 225-3-01 or F/CST 225-3100 or F/CST 225-803 or F/CST 225-8215 or C/HLD 225-1 106
Nickel carbonyl	NIOSH 6007		0.001		72		150		8		AA-GF	ST NA SKC F/CST 225-3-01 89
Nickel carbonyl	OSHA CSI		0.001		480		1000		8		AA-GF	F/CST 225-709 98 C/HLD 225-1 106 IMP 225-36-2 65 IT 225-22 65
Nicotine	NIOSH 2544		0.5 mg/m³		360		1000		6		GC-NPD	ST 226-30-04 38
Nicotine	NIOSH 2551		0.5 mg/m³		480		1000		8		GC-NPD	ST 226-93 40
Nicotine	NON 19				120		1000		2		GC	ST 226-93 40
Nicotine	NON 49				90-720		1500		1- 8		GC-NSD	ST 226-170 41
Nicotine & 3-ethenylpyridine	ASTM D 5075	1427			varies		1500		varies		GC-NPD	ST 226-93 40
Nigrospora species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Nigrospora species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Niobium (elements by ICP HNO_3 digestion)	NIOSH 7303		0.012 mg/m³		0.1-3300		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Nitric acid	NIOSH 7907		2	4	600	30	2000	2000	5	15	IC-CD	CF/CST 225-9032 C/HLD 225-1
Nitric acid	OSHA ID 165SG		2		96	7.5	200	500	8	15	IC	ST 226-10-03 38
Nitric acid (acids, inorganic)	NIOSH 7903	1016	2	4	48	3	200	200	4	15	IC	ST 226-10-03 38
Nitric oxide	OSHA ID 190		25		6		25		4		IC	ST 226-40 39
Nitric oxide & nitrogen dioxide	NIOSH 6014	1390	25 (NO)	1 (NO_2)	1.5-6		25		1-4		VAS	ST 226-40 39
5-Nitro-2-furaldehyde semicarbazone	OSHA CSI				240		1000		24 min		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
p-Nitroaniline	NIOSH 5033		3 mg/m³		240		1000		4		HPLC-UV	F/CST 225-3-01 89 C/HLD 225-1 106
p-Nitroaniline	OSHA CSI		1 mg/m³		90		1500		1		HPLC-UV	F/CST 225-3-01 89 C/HLD 225-1 106
Nitrobenzene	EPA TO-17	1689			1 & 4		16.7 & 66.7				TD, GC	ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49
Nitrobenzene	NIOSH 2005		1		48		100		8		GC-FID	ST 226-10 38
Nitrobenzene	NIOSH 2017		1		24		200		2		GC-FID	CF/CST 225-9004 63 ST 226-15 38
4-Nitrobiphenyl	OSHA CSI				240		500		8		GC-FID	ST 226-30-16 38
p-Nitrochlorobenzene	OSHA CSI		1 mg/m³		150		1000		2.5		GC-FID	ST 226-10 38
p-Nitrochlorobenzene (nitrobenzenes)	NIOSH 2005		0.1		96		200		8		GC-FID	ST 226-10 38
Nitrochloroform	NON 51		0.1		144		100		24		GC-MSD	ST 226-175 41
Nitrochloromethane	NON 51		0.1		144		100		24		GC-MSD	ST 226-175 41
4-Nitrodiphenyl	OSHA PV2082				240		500		8		GC-FID	ST 226-30-16 38
Nitroethane	NIOSH 2526		100		2.4		20		2		GC-FID	ST 226-3002A 42
Nitrofurazone	OSHA PV2069				240		1000		4		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Nitrogen dioxide	NIOSH 6014			1 (NO_2)	1.5-6		25-200		varies		VAS	ST 226-40-02 39
Nitrogen dioxide	OSHA ID 182	1406		5 (C)		3		200		15	IC	ST 226-40 or ST 226-40-02 39
Nitrogen dioxide & nitric oxide	NIOSH 6014	1390	25 (NO)	1 (NO_2)	1.5-6		25		1-4		VAS	ST 226-40 39
Nitrogen dioxide & nitric oxide	NON 11					0.75		50		15	CLR	ST 226-40 39
Nitrogen dioxide & nitric oxide	OSHA ID 182	1389	25 (NO)	5 (NO_2)	6	3	25	200	4	15	IC	ST 226-40 39
Nitroglycerin	NIOSH 2507			0.1 mg/m³		3		200		15	GC-ECD	ST 226-35-03 39
Nitroglycerin	OSHA 43			0.1 mg/m³		15		1000		15	HPLC	ST 226-35-03 39
Nitromethane	NIOSH 2527				2.4		20		2		GC-NSD	ST 226-111A 40
Nitromethane	OSHA CSI		100		3		50		1		GC-NPD	ST 226-111A 40
p-Nitrophenol	OSHA CSI				100		1000		100 min		HPLC-UV	IMP 225-36-1 65 IT 225-22 65
1-Nitropropane	OSHA 46		25		3		100		30 min		GC-FID	ST 226-93 40
2-Nitropropane	NIOSH 2528		LFC		2		20		1.5		GC-FID	ST 226-110 40
2-Nitropropane	OSHA 46		25		3		100		30 min		GC-FID	ST 226-93 40
1-Nitropyrene	OSHA CSI				960		2000		8		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
1-Nitropyrene in diesel particulates	NIOSH 2560				480-960		1000-2000		varies		GC-NCD	FLT 225-7 98 SP 225-27 107 SPC 225-23 107
N-Nitrosodiethanolamine	OSHA 31				480		2000		4		GC-TEA	F/CST 225-706 98 C/HLD 225-1 106
N-Nitrosodiphenylamine	OSHA 23				240		1000		4		HPLC-UV	IMP 225-36-2 65 IT 225-22 65
Nitrotoluene (m-isomer)	OSHA CSI		5		30		200		2.5		GC-FID	ST 226-10 38
m-Nitrotoluene (nitroaromatic compounds)	NIOSH 2005		2 ppm		96		200		8		GC-FID	ST 226-10 38
o-Nitrotoluene (nitroaromatic compounds)	NIOSH 2005		2 ppm		96		200		8		GC-FID	ST 226-10 38
p-Nitrotoluene (nitroaromatic compounds)	NIOSH 2005		2 ppm		96		200		8		GC-FID	ST 226-10 38
Nitrotoluene (nitrobenzenes)	NIOSH 2005		2 ppm		96		200		8		GC-FID	ST 226-10 38
Nitrous oxide	NIOSH 6600	1028	25		3		100-4000		varies		P IR	SB 231-05 52
Non-sporulating fungi	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Non-sporulating fungi	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
trans-Nonachlor	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
Nonane	EPA TO-17	1689			1 & 4		16.7 & 66.7				TD, GC	ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49
Nonane	OSHA CSI				3		50		1		GC-FID	ST 226-01 38
n-Nonane (hydrocarbons, BP 36 to 216 C)	NIOSH 1500		200		4		10-200		varies		GC-FID	ST 226-01 38
Nonpolar organic compounds	NON 38		varies		varies				varies		GC	PUF 226-129 45
Nonyl alcohol	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Nonylphenol	OSHA CSI				24		100		4		HPLC-UV	ST 226-95 40
Norethindrone	OSHA PV2070				480		2000		4		HPLC-UV	F/CST 225-802 93 C/HLD 225-1 106

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Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	Vol. (liter) CLG/STEL Sample Time or Air Volume	Rate (ml/min) TWA Flow/Sampling Rate	Rate (ml/min) CLG/STEL Flow/Sampling Rate	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Nuisance dust (particulates, respirable)	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Nuisance dust (particulates, total)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Nuisance dust *(see dust, respirable nuisance)*												
Octachloronaphthalene	OSHA CSI		0.1 mg/m³		30	15	1000	1000	0.5	15	GC-ECD	F/CST 225-3-01 89 C/HLD 225-1 106
Octadecanol	OSHA CSI				10		100		100 min		GC-FID	ST 226-01 38
Octane	OSHA 07	1141	500		5	3	20	200	4	15	GC-FID	ST 226-01 38
n-Octane	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
n-Octane	OSHA PV2138		500		4		50		80 min		GC-FID	ST 226-01 38
n-Octane (hydrocarbons, BP 36 to 216 C)	NIOSH 1500		75	385	4	4	0-200	0-200	varies	varies	GC-FID	ST 226-01 38
1-Octanethiol	NIOSH 2510			0.5 (15 min)		3		200		15	GC-FPDS	ST 226-35-03 39
Octanol	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
Octyl alcohol	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
Oil mist (mineral)	NIOSH 5026	1526	5 mg/m³	10 mg/m³	480	30	1000	2000	8	15	IR	F/CST 225-3-01 or F/CST 225-802 93 C/HLD 225-1 106
Oil mist (mineral)	OSHA ID 128		5 mg/m³		960		2000		8		FLUOR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Oil mist (mineral)	OSHA ID 178SG		5 mg/m³		960		2000		8		GR & IR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Oil mist (total aerosol)	NON 46		5 mg/m³		varies		2000		varies		GR	IOM 225-70A 112 FLT 225-5-25 93
Oil mist (vegetable) *(see dust, total & respirable nuisance)*												
Oil of vitriol (acids, inorganic)	NIOSH 7903	1016	1 mg/m³		48		200		4		IC	ST 226-10-03 38
Organic vapors (charcoal tube method)	ASTM D 3686				varies	varies	varies	varies	varies	varies	GC	ST 226-01 38
Organic vapors (diffusive sampler method)	ASTM D 4597				varies	varies	varies	varies	varies	varies	GC	PS 575-001 or PS 575-002 69
Organonitrogen pesticides *(see specific compounds)*	NIOSH 5601				240		1000		4		HPLC-UV	ST 226-58 or ST 226-30-16 38
Organophosphorus pesticides *(see specific compounds)*	NIOSH 5600		varies		varies		varies		8		GC-FPD	ST 226-58 39
Organotin compounds as Sn *(see specific compounds)*	NIOSH 5504		0.1 mg/m³		480		1000		8		HPLC & AA-GF	ST 226-30 38 F/CST 225-709 98 C/HLD 225-1 106
Organotincompounds as Sn *(see specific compounds)*	NIOSH 5526		0.1 mg/m³		60	60	250	1000	4	60	GC-FPD	ST 226-30-16 38
Orthene (acephate)	OSHA CSI				240		1000		4		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Oryzalin	OSHA CSI				120		1000		2		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106 IMP 225-36-1 65 IT 225-22 65
Osmium tetroxide (as Os)	OSHA 125G		0.002		480	15	1000	1000	8	15	ICP	F/CST 225-3-01 89 IMP 225-36-1 65 IT 225-22 65
Oxalic acid	OSHA PV2115		1 mg/m³		100		1000		100 min		IC	FLT 225-701 89 CST 225-3LF C/HLD 225-1 225-1
Oxamyl (organonitrogen pesticides)	NIOSH 5601				240		1000		4		HPLC-UV	ST 226-58 or ST 226-30-16 38
Oxamyl (Vydate)	OSHA CSI				60		1000		1		HPLC	ST 226-30-16 38
Oxychlordane	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
Oxydemeton methyl	OSHA CSI				480		1000		8		GC-FPD	ST 226-30-16 38
Oxygen	OSHA CSI										DET TB or DRI	DT 800-28081 or DT 810-31B
Ozone	OSHA CSI		0.1								DET TB	DT 800-33181 or DT 800-21001 or DT 810-18L
Ozone	OSHA ID-214		0.1		90		500		3		IC	CF/CST 225-9014 63 ST Special C/HLD 225-1 106 order ∑
Paecilomyces species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Paecilomyces species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
PAHs (polynuclear aromatic hydrocarbons by GC-MS, *see specific compounds)*	ASTM D 6209				350 m³ (max)		225 L/min		1-24		GC-MS	PUF 226-131 45 FLT 225-1821 116
PAHs (polynuclear aromatic hydrocarbons by GC, *see specific compounds)*	NIOSH 5515	1464			480		2000		4		GC-FID	F/CST 225-1713 94 ST 226-30-04 38 C/HLD 225-1 106
PAHs (polynuclear aromatic hydrocarbons by HPLC, *see specific compounds)*	NIOSH 5506	1464			480		2000		4		HPLC-UV	F/CST 225-1713 94 ST 226-30-04 38 C/HLD 225-1 106
Palladium (elements by ICP HNO_3 digestion)	NIOSH 7303				0.1-3.300		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Palladium *(see dust, total nuisance)*	OSHA CSI											
Pancreatin	OSHA CSI				480		2000		4		IRA	F/CST 225-1713 94 C/HLD 225-1 106
Papain	OSHA CSI				60,000		1000 L/min		1		GC-FID	FLT 225-7-07 98
Paper fiber (cellulose) (particulates, respirable)	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Paper fiber (cellulose) (particulates, total)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
PAPI	OSHA CSI				15		1000		15 min		HPLC-UV	FLT 225-7 ‡ 98 CST 225-3LF 99 C/HLD 225-1 106
Paraffin wax fume	OSHA PV2047				100		1000		100 min		GC-FID	F/CST 225-706 98 C/HLD 225-1 106
Paraquat	NIOSH 5003		0.1 mg/m³		480		1000		8		HPLC-UV	FLT 225-17-01 94 CST 225-2LF 99 C/HLD 225-1 106

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References and abbreviations are found on pages 212-213.

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	CLG/STEL	Rate (ml/min) TWA Flow/Sampling Rate	CLG/STEL	Time TWA (hrs)	CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Paraquat (respirable dust)	OSHA CSI		0.5 mg/m³		960		4000		4		HPLC-UV	FLT 225-17-01 94 CST 225-2LF 99 C/HLD 225-1 106
Parathion	OSHA 62	1398	0.1 mg/m³		480		1000		8		GC-FPD	ST 226-30-16 38
Parathion (organophosphorus pesticides)	NIOSH 5600		0.05 mg/m³		240		1000		4		GC-FPD	ST 226-58 39
Particulates not otherwise regulated (total dust)	OSHA CSI		15 mg/m³		720		1500		8		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Particulates not otherwise regulated, respirable	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Particulates not otherwise regulated, respirable fraction	OSHA CSI		5 mg/m³		varies		varies		varies		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-105 105 CST 225-3LF 99
Particulates, inorganic (bioaerosols)					15-150		15000		1-10 min		varies	STC 225-9820 103
Particulates, respirable	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Particulates, total *(see specific compounds)*	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
PCBs (42% Cl) *(see polychlorobiphenyls)*	NIOSH 5503											
PCBs (54% Cl) *(see polychlorobiphenyls)*	NIOSH 5503											
PCBs (polychlorinated biphenyls)	**EPA TO-4A**	**1670**					**200-280 L/min**		**24 hrs**		**varies**	**PUF 226-131 45 FLT 225-1821 45**
Penicillium species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Penicillium species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Pentaborane	OSHA CSI		0.005		480	15	1000	1000	8	15	ICP	IT 225-22 65 IMP 225-36-2 65
Pentac (bis [pentachloro-2,4-cyclopentadien-1-yl])	OSHA CSI				120		1000		2		HPLC-UV	FLT 225-9 88 CST 225-3LF 99 IMP 225-36-1 65 IT 225-22 65 C/HLD 225-1 106
Pentachlorobenzene	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
Pentachlorobenzene (polychlorobenzenes)	NIOSH 5517				12		25		8		GC-ECD	FLT 225-17-03 94 CST Special order ST 226-30-04 38
Pentachloroethane	NIOSH 2517				10		20		8		GC-ECD	ST 226-59-04 39
Pentachloroethane	OSHA CSI				10		20		8		GC-ECD	ST 226-59-04 39
Pentachloronaphthalene	OSHA CSI		0.5 mg/m³		90		1000		1.5		GC-ECD	ST 226-30-16 38
Pentachlorophenol	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
Pentachlorophenol	NIOSH 5512		0.5 mg/m³		480		1000		8		HPLC-UV	CST 225-3LF 99 SCN 225-26 107 IMP 225-36-2 65 IT 225-22 65 FLT 225-5 88
Pentachlorophenol	OSHA 39		0.5 mg/m³		48		200		4		HPLC-UV	ST 226-97 40
2,3-Pentadione	OSHA 1016				10	3	50	200 (min)	200	15	GC-FID	ST 226-183 41
Pentaerythritol (particulates, respirable)	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Pentaerythritol (particulates, total)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Pentaerythritol (respirable dust)	OSHA CSI		5 mg/m³		varies		varies		varies		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-105 105 CST 225-3LF 99
Pentaerythritol (total dust)	OSHA CSI		15 mg/m³		960		2000		8		GR	F/CST 225-803 93 C/HLD 225-1 106
Pentamethyldiethylenetriamine	OSHA CSI				480		1000		8		GC-NPD	IMP 225-36-1 65 IT 225-22 65
Pentamidine isethionate	NIOSH 5032				960		2000		8		HPLC-FD	CST 225-4 99 FLT 225-5-37-P 93 C/HLD 225-1 106
Pentane	OSHA 07	1140	1000		2	0.75	20	50	1.6	15	GC-FID	ST 226-01 38
n-Pentane (hydrocarbons, BP 36 to 216 C)	NIOSH 1500		120	610	4	4	10-200	10-200	varies	varies	GC-FID	ST 226-01 38
2-Pentanone (ketones I)	NIOSH 2555				1-10		10-200		varies		GC-FID	ST NA SKC
2-Pentanone (methyl propyl ketone)	OSHA 07	1139	200		10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
2-Pentanone (methyl propyl ketone) (ketones I)	NIOSH 1300		150		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
1-Pentene	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Peracetic acid	NON 57 π					15		1000 *		15	MAS/HPLC-UV	CF/CST 225-9030 63 ST 226-193 or ST 226-199 39
Perchloric acid	OSHA ID 115SG				120		500		4		CLR	IMP 225-36-2 65 IT 225-22 65
Perchloroethylene	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49** **CPC 224-26CPC-10 49**
Perchloroethylene (tetrachloroethylene)	OSHA 1001		100	200 (C)	12	0.75	50	50	4	5	GC-FID	ST 226-01 38
Perchloroethylene (tetrachloroethylene)	OSHA 1001		100	200 (C)			13.06		8	5	GC-FID	PS 575-002 69
Perchloroethylene (tetrachloroethylene) (hydrocarbons, halogenated)	NIOSH 1003		LFC		3		10-200		varies		GC-FID	ST 226-01 38
Perchloroethylene (tetrachloroethylene) (portable GC)	NIOSH 3704		LFC		1		20-5000		varies		P GC	SB 232-01 53
Perchloryl fluoride	OSHA CSI		3		240	15	1000	1000	4	15	ISE	IMP 225-36-2 65 IT 225-22 65
Perlite (< 1% Quartz) *(see dust, total & respirable nuisance)*												
cis-Permethrin	ASTM D 4861				240-7200		1000-5000		4-24		HPLC-UV	PUF 226-92 44
trans-Permethrin	ASTM D 4861				240-7200		1000-5000		4-24		HPLC-UV	PUF 226-92 44
Peroxyacetic acid (peracetic acid) & Hydrogen peroxide	NON 57					15		1000 *		15	MAS/HPLC-UV	CF/CST 225-9030 63 ST 226-193 or ST 226-199 39
Pesticides	**EPA IP-8**	**1675**					**1000-5000**		**4-24**		**GC-ECD**	**PUF 226-92 or PUF 226-124 44**
Pesticides	**EPA TO-10A**	**1675**					**1000-5000**		**4-24**		**GC-ECD**	**PUF 226-92 or PUF 226-124 44**

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References and abbreviations are found on pages 212-213.

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Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	Vol. (liter) CLG/STEL	Rate (ml/min) TWA Flow/Sampling Rate	Rate (ml/min) CLG/STEL	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Pesticides, carbamate	ASTM D 4861				240-7200		1000-5000		4-24		HPLC-UV	PUF 226-92 44
Pesticides, organochlorine	ASTM D 4861	1253			240-7200		1000-5000		4-24		varies	PUF 226-92 or PUF 226-124 44
Pesticides, organochlorine	**EPA TO-4A**	**1670**					**200-280 L/min**		**24 hrs**		**varies**	**PUF 226-131 45 FLT 225-1821 45**
Pesticides, organonitrogen *(see specific compounds)*	NIOSH 5601				240		1000		4		HPLC-UV	ST 226-58 or ST 226-30-16 38
Pesticides, organophosphorus	ASTM D 4861	1253			240-7200		1000-5000		4-24		varies	PUF 226-92 or PUF 226-124 44
Pesticides, pyrethrin	ASTM D 4861				240- 7200		1000-5000		4-24		HPLC-UV	PUF 226-92 44
Pesticides, triazine	ASTM D 4861				240-7200		1000-5000		4-24		HPLC-UV or GC-ECD	PUF 226-92 44
Petroleum distillate (naphthas)	NIOSH 1550		350 mg/m³	1800 mg/m³	3.6	1.5	20	100	3	15	GC-FID	ST 226-01 38
Petroleum distillate fractions (PDF)	OSHA 48		500		3		20		2.5		GC-FID	ST 226-01 38
Petroleum ether (benzin) (naphthas)	NIOSH 1550		350 mg/m³	1800 mg/m³	3	1.5	20(50)	100	2.5(1)	15	GC-FID	ST 226-01 38
Petroleum naphtha (naphthas)	NIOSH 1550		350 mg/m³	1800 mg/m³	3	1.5	20(50)	100	2.5(1)	15	GC-FID	ST 226-01 38
Peziza species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Peziza species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Phenanthrene	OSHA 58				960		2000		8		GR & HPLC-FD, or GR & HPLC-UV	FLT 225-7 98 C/HLD 225-1 106 CST 225-2LF 99
Phenanthrene (polynuclear aromatic hydrocarbons by GC-MS)	ASTM D 6209				350 m³ (max)		225 L/min		1-24		GC-MS	PUF 226-131 45 FLT 225-1821 116
Phenanthrene (polynuclear aromatic hydrocarbons by GC)	NIOSH 5515				480		2000		4		GC-FID	F/CST 225-1713 94 C/HLD 225-1 106 ST 226-30-04 38
Phenanthrene (polynuclear aromatic hydrocarbons by HPLC)	NIOSH 5506				480		2000		4		HPLC-UV	F/CST 225-1713 94 C/HLD 225-1 106 ST 226-30-04 38
Phenol	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 CPC 224-26CPC-10 49 TH 224-26-02 49**
Phenol	OSHA 32	1019	5		24		100		4		HPLC-UV	ST 226-95 40
Phenol (cresols)	NIOSH 2546		5	15.6 (15 min)	24	3	100	200	4	15	GC-FID	ST 226-95 40
Phenol	**EPA TO-8**	**1668**			**< 80**		**100-1000**				**HPLC-UV**	**IMP 225-36-1 (2) 65 IT 225-22 65**
Phenolics (screening)	NIOSH 2549				5		20		4		GC-MS	ST 226-330 42
Phenothiazine	OSHA PV2048				100		1000		1		GC-NPD	F/CST 225-706 98 C/HLD 225-1 106
2-Phenoxyethanol	OSHA CSI				10		200		50 min		GC-FID	ST 226-01 38
2-Phenoxyethyl acrylate	OSHA CSI				24		100		4		GC-FID	ST 226-22 38
1-Pheny-1-cyclohexene	OSHA CSI				10		200		50 min		GC-FID	ST 226-01 38
Phenyl ether	NIOSH 1617		1		48		100		8		GC-FID	ST 226-01 38
Phenyl ether	OSHA 07	1138	1		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Phenyl ether	OSHA PV2022		1		20		200		100 min		GC-FID	ST 226-95 40
Phenyl ether-biphenyl mix	NIOSH 2013		1		24		50		8		GC-FID	ST 226-10 38
Phenyl ether-biphenyl mix	OSHA CSI		1		10		20(50)		8(3.3)		GC-FID	ST 226-95 40
Phenyl glycidyl ether	NIOSH 1619			1 (15 min)		80		1000		80	GC-FID	ST 226-01 38
Phenyl glycidyl ether	OSHA 07	1137	10		48		100		8		GC-FID	ST 226-01 38
Phenyl hydrazine	NIOSH 3518			0.14 (120 min)		120		1000		120	VAS	IMP 225-36-2 65 IT 225-22 65
Phenyl hydrazine	OSHA CSI		5		100	15	1000	1000	100 min	15	CLR	IMP 225-36-2 65 IT 225-22 65
Phenyl mercaptan	OSHA PV2075				20		200		100 min		GC-FID	CF/CST 225-9007 63 C/HLD 225-1 106
N-Phenyl-1-naphthylamine	OSHA 96				240		2000		4		HPLC-FD	FLT 225-703 ‡ 98 C/HLD 225-1 106 CST 225-309 99
N-Phenyl-2-naphthylamine	OSHA 96				240		1000		4		HPLC-FD	FLT 225-703 ‡ 98 C/HLD 225-1 106 CST 225-309 99
N-Phenyl-2-naphthylamine	OSHA CSI										W	W 225-2401A 147
4-Phenylcyclohexene	OSHA CSI				10		200		50 min		GC-FID	ST 226-01 38
m-Phenylenediamine	OSHA 87	1231			100		1000		100 min		HPLC-UV	CF/CST 225-9004 63 C/HLD 225-1 106
o-Phenylenediamine	OSHA 87	1231			100		1000		100 min		HPLC-UV	CF/CST 225-9004 63 C/HLD 225-1 106
p-Phenylenediamine	OSHA 87	1231	0.1 mg/m³		100		1000		100 min		HPLC-UV	CF/CST 225-9004 63 C/HLD 225-1 106
Phenyloxirane *(see styrene oxide)*	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-35 38
o-Phenylphenol	ASTM D 4861				240-7200		1000-5000		4-24		HPLC-UV	PUF 226-92 44
o-Phenylphenol	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-35 38
Phoma species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Phoma species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Phorate	ASTM D 4861				240-7200		1000-5000		4-24		GC-NPD	PUF 226-92 44
Phorate (organophosphorus pesticides)	NIOSH 5600		0.05 mg/m³	0.2 mg/m³	240		1000		4		GC-FPD	ST 226-58 39
Phorate (Thimet)	OSHA CSI				480	15	1000	1000	8	15	GC-FPD	ST 226-30-16 38
Phosdrin (mevinphos)	OSHA CSI		0.1 mg/m³		480	15	1000	1000	8	15	GC-FPD	ST 226-30-16 38
Phosdrin (mevinphos) (organophosphorus pesticides)	NIOSH 5600		0.01	0.03	120	15	1000	1000	2	15	GC-FPD	ST 226-58 39
Phosgene	OSHA 61		0.1		240		1000		4		GC-NPD	ST 226-117 40
Phosgene	**EPA TO-6**	**1669**			**< 50**		**100-1000**				**HPLC-UV**	**IMP 225-36-1 65 IT 225-22 65**
Phosgene & chloroformates	NON 40				24		50		8		GC-FPD	ST 226-153 41
Phosmet (Imidan)	OSHA CSI				120		1000		2		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Phosphine	NIOSH 6002		0.3	1	12	3	100	200	8	15	UV-VAS	ST 226-165A †† 41
Phosphine	OSHA 1003	1698	0.3		240	30	1000	2000	4	15	ICP-AES	CF/CST 225-9018 †† 63 C/HLD 225-1 106
Phosphoric acid	NIOSH 7908		1 mg/m³	3 mg/m³	960	30	2000	2000	8	15	IC-cd	CF/CST 225-9033 C/HLD 225-1 106

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References and abbreviations are found on pages 212-213.

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	Vol. (liter) CLG/STEL Sample Time or Air Volume	Rate (ml/min) TWA Flow/Sampling Rate	Rate (ml/min) CLG/STEL Flow/Sampling Rate	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Phosphoric acid	OSHA ID 111	1466	1 mg/m³		960	30	2000	2000	8	15	IC	F/CST 225-3-01 89 C/HLD 225-1 106
Phosphoric acid	OSHA ID 165SG		1 mg/m³		960	30	2000	2000	8	15	IC	ST 226-10-03 38
o-Phosphoric acid	NIOSH 7903	1016	1 mg/m³	3 mg/m³	48	3	200	200	4	15	IC	ST 226-10-03 38
m-Phosphoric acid (acids, inorganic)	NIOSH 7903	1016	1 mg/m³	3 mg/m³	48	3	200	200	4	15	IC	ST 226-10-03 38
Phosphorous (elements by ICP HNO_3 digestion)	NIOSH 7303		0.1 mg/m³		250-500,000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Phosphorus	NIOSH 7905		0.1 mg/m³		12		200		1		GC-FPD	ST 226-35-03 39
Phosphorus (elements by ICP Aqua Regia ashing)	NIOSH 7301		0.1 mg/m³		25-2000		1000-4000		varies		ICP-AES	F/CST 225-3-01 or 106 C/HLD 225-1 F/CST 225-803 ¥ 93
Phosphorus (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1455	0.1 mg/m³		25-200		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Phosphorus (elements on wipes)	NIOSH 9102				wipe						ICP-AES	W 225-2414 147 TMP 225-2415 147 TMP 225-2403 or
Phosphorus (yellow)	OSHA CSI		0.1 mg/m³		96		200		8		GC-FPD	ST 226-35-03 39
Phosphorus oxychloride	OSHA CSI				240		1000		4		IC	IMP 225-36-2 65 IT 225-22 65
Phosphorus pentachloride	OSHA CSI		1 mg/m³		48		200		4		CLR	F/CST 225-803 93 IMP 225-36-2 65 IT 225-22 65 SCN 225-26 107
Phosphorus pentasulfide	OSHA ID 128SG		1 mg/m³		960	30	2000	2000	8	15	IC	F/CST 225-802 93 C/HLD 225-1 106
Phosphorus pentoxide	OSHA ID 111				480		1000		8		IC	F/CST 225-3-01 89 C/HLD 225-1 106
Phosphorus trichloride	NIOSH 6402		0.2	0.5	24		200		2		VAS	IMP 225-36-2 65 IT 225-22 65
Phosphorus trichloride	OSHA CSI		0.5		96	3	200	200	8	15	CLR	IMP 225-36-2 65 IT 225-22 65
Phosvel	OSHA CSI				480		1000		8		GC-FPD	ST 226-30-16 38
Phthalates *(see specific compounds)*												
Phthalic acid	OSHA CSI				10		200		50 min		HPLC	ST 226-01 38
Phthalic anhydride	OSHA 90		2		75		1000		1.25		HPLC-UV	FLT 225-7 ‡ 98 CST 225-3LF 99 C/HLD 225-1 106
m-Phthalodinitrile	OSHA CSI				20		200		100 min		GC-NPD	ST 226-01 38
Picloram (tordon) (total dust)	OSHA PV2049		15 mg/m³		60		1000		1		GR	F/CST 225-803 93 C/HLD 225-1 106
Picloram (tordon) (respirable dust)	OSHA CSI		5 mg/m³		varies		varies		varies		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-105 105 CST 225-3LF 99
Picric acid	OSHA CSI		0.1 mg/m³		180		1500		2		HPLC-UV	F/CST 225-3-01 89 C/HLD 225-1 106
Pindone	OSHA CSI		0.1 mg/m³		180		1000		3		HPLC-UV	FLT 225-17-01 94 CST 225-2LF 99 ST 226-35-03 39 C/HLD 225-1 106
alpha-Pinene	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-01 38
beta-Pinene	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-01 38
alpha-Pinene (terpenes)	NIOSH 1552				24		50		8		GC-FID	ST 226-01 38
beta-Pinene (terpenes)	NIOSH 1552				24		50		8		GC-FID	ST 226-01 38
Piperazine dihydrochloride	OSHA CSI				96		200		8		GC-NPD	F/CST 225-709 98 C/HLD 225-1 106
Piperidine	OSHA CSI				6		200		30 min		GC-FID	ST 226-01 38
Piperonyl butoxide	OSHA PV2110				30		1000		30 min		HPLC-UV	ST 226-30-16 38
Pipron	OSHA CSI				90		1000		1.5		GC-ECD	F/CST 225-706 98 C/HLD 225-1 106 IMP 225-36-1 65 IT 225-22 65
Pirimiphos methyl	OSHA PV2071				120		1000		2		GC-ECD	ST 226-30-16 38
Pithomyces species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Pithomyces species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Plaster of Paris (particulates, respirable)	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Plaster of Paris (particulates, total)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Plaster of Paris *(see dust, respirable nuisance)*	OSHA CSI											
Platinum	OSHA ID 130SG				90		1000		1.5		AA	F/CST 225-3-01 89 C/HLD 225-1 106
Platinum (elements by ICP HNO_3 digestion)	NIOSH 7303				200-25,000,000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Platinum (as Pt), metal	OSHA CSI				960		2000		8		AA-GF	F/CST 225-3-01 89 C/HLD 225-1 106
Platinum (as Pt), metal	OSHA ID 121				960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Platinum (as Pt), soluble salts	OSHA ID 121		2 µg/m³		960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
PM2.5	EPA IP-10A	1663					9 L/min		24		GR	CI 225-370 123 FLT 225-1709 94 FLT 225-2708 94
PM2.5	EPA IP-10A	1663					10 L/min		24		GR	PEM 761-203B 120 FLT 2251709 94
Polycyclic aromatic hydrocarbons (PAHs)	EPA IP-7				30,000		20				GC-FID, -MS, HPLC	PUF 226-131 45 FLT 225-1821 45
Polycyclic aromatic hydrocarbons (PAHs)	EPA TO-13A	1672					220		24		GC-MS	PUF 226-131 45 FLT 225-1821 45
PNAs (polynuclear aromatic hydrocarbons by GC, *see specific compounds*)	NIOSH 5515	1464			480		2000		4		GC-FID	F/CST 225-1713 94 ST 226-30-04 38 C/HLD 225-1 106
PNAs by HPLC *(see specific compounds)*	NIOSH 5506	1464			480		2000		4		HPLC-UV	F/CST 225-1713 94 ST 226-30-04 38 C/HLD 225-1 106
PNAs selected	OSHA 58				960		2000		8		GR & HPLC-FD, or GR & HPLC-UV	FLT 225-7 98 CST 225-2LF 99 C/HLD 225-1 106
Pollen (in air)					15-150		15000		1-10 min		varies	STC 225-9820 103
Pollen (in air)	NON 48				62.5-375		12500 +		5-30		varies	BS 225-9595 128 VT 225-9598A◊ 128
Polychlorinated biphenyls	ASTM D 4861	1252			240-7200		1000-5000		4-24		varies	PUF 226-92 or PUF 226-124 44
Polychlorinated biphenyls	NIOSH 5503		0.001 mg/m³ (10 hr)		48		100(200)		8(4)		GC-ECD	FLT 225-16 98 CST 225-32 106 ST 226-39 39

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	Vol. (liter) CLG/STEL Sample Time or Air Volume	Rate (ml/min) TWA Flow/Sampling Rate	Rate (ml/min) CLG/STEL Flow/Sampling Rate	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Polychlorinated biphenyls	OSHA CSI				60		1000		1		GC-ECD	ST 226-30-16 38
Polychlorobenzenes *(see specific compounds)*	NIOSH 5517		varies		varies		varies		8		GC-ECD	FLT 225-17-03 94 ST 226-30-04 38 CST Special order C/HLD 225-1 106
Polychlorobiphenyls (42% Cl)	NIOSH 5503		0.001 mg/m³ (10 hr)		48		100(200)		8(4)		GC-ECD	FLT 225-16 98 CST 225-32 106 ST 226-39 39
Polychlorobiphenyls (54% Cl)	NIOSH 5503		0.001 mg/m³ (10 hr)		48		100(200)		8(4)		GC-ECD	FLT 225-16 98 CST 225-32 106 ST 226-39 39
Polycyclic aromatic compounds (PACs), total	NIOSH 5800				960	30	2000	2000	8	15	FLUOR	F/CST 225-1713 94 ST 226-30-04 38 C/HLD 225-1 106
Polyfunctional aziridine	OSHA CSI				100		1000		100 min		GC-FID	ST 226-57 39
Polynuclear aromatic hydrocarbons (polynuclear aromatic hydrocarbons by GC-MS)	ASTM D 6209		varies		350 m³ (max)		225 L/min		4-24		GC-MS	PUF 226-131 45 FLT 225-1821 116
Polynuclear aromatic hydrocarbons by HPLC *(see specific compounds)*	NIOSH 5506	1464	varies		480		2000		4		HPLC-UV	F/CST 225-1713 94 ST 226-30-04 38 C/HLD 225-1 106
Polynuclear aromatic hydrocarbons(polynuclear aromatic hydrocarbons by GC, *see specific compounds*)	NIOSH 5515	1464	varies		480		2000		4		GC-FID	F/CST 225-1713 94 ST 226-30-04 38 C/HLD 225-1 106
Portland cement (particulates, respirable)	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Portland cement (particulates, total)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Portland cement (respirable dust)	OSHA ID 142		5 mg/m³		varies		varies		varies		GR & XRD	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-105 105 CST 225-3LF 99
Portland cement (total dust)	OSHA ID 142		15 mg/m³		960		2000		8		GR & XRD	F/CST 225-803 93 C/HLD 225-1 106
Portland cement (total dust)	OSHA ID 207		15 mg/m³		240		1000		4		XRD	F/CST 225-803 93 C/HLD 225-1 106
Potassium (elements by ICP Aqua Regia ashing)	NIOSH 7301				5-1000		1000-4000		varies		ICP-AES	F/CST 225-3-01 or F/CST 225-803 ¥ 93 C/HLD 225-1 106
Potassium (elements by ICP $HNO_3/HClO_4$ ashing)	NIOSH 7300	1455			5-1000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Potassium & compounds	OSHA ID 121				960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Potassium chromate (CR(VI))	OSHA ID215(V2)	1439	0.005 mg/m³		960		2000		8		IC-UV	F/CST 225-802 Ω 93 C/HLD 225-1 106
Potassium cyanide (cyanides)	NIOSH 7904		5 mg/m³ (10 min)		15		1000		15		ISE	FLT 225-2705 Δ 94 CST 225-2LF 99 IMP 225-36-2 65 IT 225-22 65 C/HLD 225-1 106
Potassium hydroxide (alkaline dust)	NIOSH 7401				960		2000		8		TITRA	F/CST 225-1715 94 C/HLD 225-1 106
Potassium hydroxide (as K)	OSHA ID 121	1199			10		2000		5		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Pramitol	OSHA CSI				100		1000		100 min		HPLC-UV	ST 226-30-16 38
Progesterone	OSHA PV2001				60		1000		1		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Propane	OSHA CSI		1000		5		100		50 min		GC-FID	ST NA SKC
1,2,3-Propanetriol trinitrate	OSHA 43				15		1000		15 min		HPLC-UV	ST 226-35-03 39
n-Propanol	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49** **CPC 224-26CPC-10 49**
Propargyl alcohol	OSHA 97				6		50		2		GC-ECD	ST 226-178 41
Propazine	ASTM D 4861				240-7200		1000-5000		4-24		GC-NPD	PUF 226-92 44
Propham (organonitrogen pesticides)	NIOSH 5601				240		1000		4		HPLC-UV	ST 226-58 or ST 226-30-16 38
Propionaldehyde	ASTM D 5197				varies		500-1200		5 min-24 hrs		HPLC-UV	ST 226-120 ○ or ST 226-119 40
Propionaldehyde (aldehydes, screening)	NIOSH 2539				5		20		4		GC-FID & GC-MS	ST 226-118 40
Propionic acid	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-15 38
Propionitrile	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49** **CPC 224-26CPC-10 49**
Propoxur (Baygon)	ASTM D 4861				240-7200		1000-5000		4-24		HPLC-UV	PUF 226-92 44
Propoxur (Baygon)	OSHA PV2007				60		1000		1		HPLC-UV	ST 226-30-16 38
Propoxur (organonitrogen pesticides)	NIOSH 5601		0.5 mg/m³		240		1000		4		HPLC-UV	ST 226-58 or ST 226-30-16 38
2-Propoxyethanol	OSHA CSI				6		200		30 min		GC-FID	ST 226-01 38
Propyl acetate	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49** **CPC 224-26CPC-10 49**
n-Propyl acetate	OSHA 07	1136	200		10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
n-Propyl acetate (esters I)	NIOSH 1450		200	250	1-10	1-10	10-200	10-200	varies	varies	GC-FID	ST 226-01 38
Propyl alcohol	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49** **CPC 224-26CPC-10 49**
Propyl alcohol	OSHA 07		200		10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
n-Propyl alcohol (alcohols combined)	NIOSH 1405		200	250 (skin)	1-10	1-10	10-200	10-200	varies	varies	GC-FID	ST 226-01 38
n-Propyl alcohol (alcohols II)	NIOSH 1401		200	250	10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
n-Propyl benzene	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49** **CPC 224-26CPC-10 49**
Propyl bromide	OSHA CSI				12		100		2		GC-FID	ST 226-01 38
n-Propyl nitrate	OSHA 07		25	40	48		100		8		GC-FID	ST 226-81A 39
Propyl paraben	OSHA CSI										HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Propylene dichloride (1,2-dichloro propane)	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
Propylene dichloride (1,2-dichloro propane)	NIOSH 1013		LFC		3		20		2.5		GC-ECN	ST 226-81A 39
Propylene dichloride (1,2-dichloro propane)	OSHA 07		75		10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
Propylene glycol	NIOSH 5523	1403			60		1000		1		GC-FID	ST 226-57 39
Propylene glycol	OSHA PV2051				60	15	1000	1000	1	15	GC-FID	ST 226-57 39

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Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	Vol. (liter) CLG/STEL Sample Time or Air Volume	Rate (ml/min) TWA Flow/Sampling Rate	Rate (ml/min) CLG/STEL Flow/Sampling Rate	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
1,2-Propylene glycol dinitrate	OSHA CSI				15		1000		15 min		HPLC	ST 226-35-03 39
Propylene glycol monomethyl ether	OSHA CSI				10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
Propylene glycol monomethyl ether (glycol ethers)	NIOSH 2554				3-25		100-200		varies		GC-FID	ST 226-81A 39
Propylene glycol monomethyl ether acetate	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Propylene glycol monomethyl ether acetate (glycol ethers)	NIOSH 2554				3-25		100-200		varies		GC-FID	ST 226-81A 39
Propylene oxide (1, 2-epoxypropane)	NIOSH 1612		LFC		5		20		4.2		GC-FID	ST 226-01 38
Propylene oxide (1, 2-epoxypropane)	OSHA 88	1325	100		5	5	100	1000	50 min	5	GC-FID	ST 226-81A 39
Propyleneimine	OSHA CSI		2		48		200		4		HPLC-UV	IMP 225-36-2 65 IT 225-22 65
Pyrene	OSHA 58				960		2000		8		GR & HPLC-FD, or GR & HPLC-UV	FLT 225-7 98 CST 225-2LF 99 C/HLD 225-1 106
Pyrene (polynuclear aromatic hydrocarbons by GC-MS)	ASTM D 6209				350 m^3 (max)		225 L/min		1-24		GC-MS	PUF 226-131 45 FLT 225-1821 116
Pyrene (polynuclear aromatic hydrocarbons by GC)	NIOSH 5515				480		2000		4		GC-FID	F/CST 225-1713 94 ST 226-30-04 38 C/HLD 225-1 106
Pyrene (polynuclear aromatic hydrocarbons by HPLC)	NIOSH 5506				480		2000		4		HPLC-FD	F/CST 225-1713 94 ST 226-30-04 38 C/HLD 225-1 106
Pyrethrin pesticides *(see specific compounds)*	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
Pyrethrum	ASTM D 4861				240-7200		1000-5000		4-24		HPLC-UV	PUF 226-92 44
Pyrethrum	NIOSH 5008		5 mg/m^3		100		1000		2		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106 SP 225-27 107
Pyrethrum	OSHA 70	1400	5 mg/m^3		60		1000		1		GC-ECD	ST 226-30-16 38
Pyridine	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49** **CPC 224-26CPC-10 49**
Pyridine	NIOSH 1613		5		48		100		8		GC-FID	ST 226-01 38
Pyridine	OSHA 07	1180	5		48		100		8		GC-FID	ST 226-01 38
Pyridine	OSHA PV2295		5		10		100		100 min		GC-FID	ST 226-95 40
1-(2-Pyridyl)piperazine	OSHA CSI										W	W 225-2401A 147
Pyrimethamine	OSHA CSI				10		1000		100 min		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Quartz (respirable) in coal dust, (silica in coal mine dust)	NIOSH 7603		0.05 mg/m^3		300-1000		2500		varies		IR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Quartz (silica, crystalline [respirable]) by XRD	NIOSH 7500	1370	0.05 mg/m^3		400-1000		2500		varies		XRD	F/CST 225-803 93 CYC 225-01-02 115 C/HLD 225-1 106
Quartz (silica, crystalline by IR)	NIOSH 7602		0.05 mg/m^3		400-800		2500		varies		IR	F/CST 225-803 93 C/HLD 225-1 106 CYC 225-01-02 115
Quartz (silica, crystalline by VAS)	NIOSH 7601	1041	0.05 mg/m^3		400-800		2500		varies		VAS	F/CST 225-803 93 C/HLD 225-1 106 CYC 225-01-02 115
Quinone	OSHA CSI		0.1		24		100		4		HPLC-UV	ST 226-30-04 38
Rabon	OSHA CSI				480		1000		8		GC-ECD	ST 226-30-16 38
Radon progeny (on dust, in mines)	NON 56				5		2000		5 min		DRI	FLT 225-702 98 CST 225-1107 106
Ramrod (propachlor)	OSHA CSI				120		1000		2		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Resmethrin	ASTM D 4861				240-7200		1000-5000		4-24		HPLC-UV	PUF 226-92 44
Resmethrin	OSHA PV2052				60		1000		1		HPLC-UV	ST 226-30-16 38
Resorcinol	NIOSH 5701		10		120		500		4		GC-FID	ST 226-57 39
Rhizopus species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Rhizopus species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Rhodamine B	OSHA PV2072				240		1000		4		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Rhodium metal fume & dust (as Rh)	OSHA CSI		0.1 mg/m^3		960		2000		8		AA-GF	F/CST 225-3-01 89 C/HLD 225-1 106
Rhodium soluble salts (as Rh)	OSHA CSI		1 $\mu g/m^3$		960		2000		8		AA-GF	F/CST 225-3-01 89 C/HLD 225-1 106
Rhodotorula species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Rhodotorula species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Ribavirin	NIOSH 5027				480		1000		8		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Ronnel	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-92 44
Ronnel	OSHA PV2054		15 mg/m^3		60		1000		1		GC-FPD	ST 226-30-16 38
Ronnel (organophosphorus pesticides)	NIOSH 5600		10 mg/m^3		60		1000		1		GC-FPD	ST 226-58 39
Rosaniline	OSHA CSI				bulk						HPLC	
Rotenone	NIOSH 5007		5 mg/m^3		120		1000		2		HPLC-UV	FLT 225-17-01 94 CST 225-2LF 99 C/HLD 225-1 106
Rotenone (commercial)	OSHA CSI		5 mg/m^3		240		2000		2		HPLC-UV	FLT 225-17-01 94 CST 225-2LF 99 C/HLD 225-1 106
Rouge (particulates, respirable)	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Rouge (particulates, total)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Rouge (respirable dust)	OSHA CSI		5 mg/m^3		varies		varies		varies		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-105 105 CST 225-3LF 99
Rouge (total dust)	OSHA CSI		15 mg/m^3		960		2000		8		GR	F/CST 225-803 93 C/HLD 225-1 106
Roundup	OSHA CSI				90		1000		1.5		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Rozol	OSHA CSI				120		1000		2		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Rubber solvent (naphthas)	NIOSH 1550		350 mg/m^3	1800 mg/m^3	10	1.5	20(50)	100	8(3.3)	15	GC-FID	ST 226-01 38
Rubidium	OSHA CSI				480		1000		8		AA-GF	F/CST 225-709 98 C/HLD 225-1 106 IMP 225-36-2 65 IT 225-22 65

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Safrotin	OSHA PV2050				60		1000		1		GC-ECD	F/CST 225-709 98 C/HLD 225-1 106
Saphrophyte (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Saphrophyte (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Sarin	OSHA CSI				480		1000		8		GC-FPD	ST 226-30-16 38
Scopolamine methyl nitrate	OSHA PV2144				120		1000		2		HPLC-UV	F/CST 225-709 or F/CST 225-706 98 C/HLD 225-1 106
Scopulariopsis species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Scopulariopsis species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Selenium	OSHA ID 121		0.2 mg/m³		960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Selenium (elements by ICP Aqua Regia ashing)	NIOSH 7301		0.2 mg/m³		13-2000		1000-4000		varies		ICP-AES	F/CST 225-3-01 or F/CST 225-803 93 C/HLD 225-1 106
Selenium (elements by ICP HNO_3 digestion)	NIOSH 7303		0.2 mg/m³		8-250,000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Selenium (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1455	0.2 mg/m³		13-2000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Selenium (elements on wipes)	NIOSH 9102				wipe						ICP-AES	W 225-2414 147 TMP 225-2403 or TMP 225-2415 147
Selenium compounds (as Se)	OSHA CSI		0.2 mg/m³		960		2000		8		AA-GF	F/CST 225-3-01 89 C/HLD 225-1 106
Sevin *(see carbaryl)*												
Sevoflurane	OSHA CSI				3		50		1		GC-FID	ST 226-81A 39
Silica (quartz, non-respirable) *(see dust, total nuisance)*	OSHA CSI											
Silica (quartz) in coal dust (quartz in coal mine dust by IR)	NIOSH 7603		0.05 mg/m³		300-1000		2500		varies		IR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Silica, amorphous	OSHA CSI		20 mppcf		960		2000		8		GR	F/CST 225-803 93 C/HLD 225-1 106
Silica, amorphous (respirable)	NIOSH 7501		6 mg/m³		50-400		2500		varies		XRD	F/CST 225-803 93 C/HLD 225-1 106 CYC 225-01-02 115
Silica, crystalline (respirable) by XRD	NIOSH 7500	1370	0.05 mg/m³		400-1000		2500		varies		XRD	F/CST 225-803 93 CYC 225-01-02 115 C/HLD 225-1 106
Silica, crystalline by IR	NIOSH 7602		0.05 mg/m³		400-800		2500		varies		IR	F/CST 225-803 93 C/HLD 225-1 106 CYC 225-01-02 115
Silica, crystalline by VAS	NIOSH 7601	1041	0.05 mg/m³		400-800		2500		varies		VAS	F/CST 225-803 93 C/HLD 225-1 106 CYC 225-01-02 115
Silica, crystalline cristobalite (respirable dust)	OSHA ID 142		[(10 mg/m³)/(%SiO_2+2)]/2		varies		varies		varies		GR & XRD	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-105 105 CST 225-3LF 99
Silica, crystalline quartz (respirable dust)	OSHA ID 142	1003	(10 mg/m³)/(%SiO_2+2)		varies		varies		varies		GR & XRD	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-105 105 CST 225-3LF 99
Silica, crystalline tridymite (respirable dust)	OSHA ID 142		[(10 mg/m³)/(%SiO_2+2)]/2		varies		varies		varies		GR & XRD	F/CST 225-803 93 CYC 225-105 105 C/HLD 225-1 106
Silica, crystalline tripoli (respirable dust)	OSHA ID 142		(10 mg/m³)/(%SiO_2+2)		varies		varies		varies		GR & XRD	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-105 105 CST 225-3LF 99
Silica, fused (respirable dust)	OSHA ID 142				varies		varies		varies		GR & XRD	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-105 105 CST 225-3LF 99
Silicon	OSHA CSI		15 mg/m³		960		2000		8		GR	F/CST 225-803 93 C/HLD 225-1 106
Silicon (particulates, respirable)	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Silicon (particulates, total)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Silicon (respirable dust)	OSHA CSI		5 mg/m³		varies		varies		varies		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-105 105 CST 225-3LF 99
Silicon carbide (particulates, respirable)	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Silicon carbide (particulates, total)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Silicon carbide (respirable dust)	OSHA CSI		5 mg/m³		varies		varies		varies		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-105 105 CST 225-3LF 99
Silicon carbide (total dust)	OSHA CSI		15 mg/m³		960		2000		8		GR	F/CST 225-803 93 C/HLD 225-1 106
Silicon tetrahydride (silane)	OSHA CSI				480		1000		8		AA-GF	IMP 225-36-2 65 IT 225-22 65
Silver (elements by ICP Aqua Regia ashing)	NIOSH 7301				250-2000		1000-4000		varies		ICP-AES	F/CST 225-3-01 or F/CST 225-803 ¥ 93 C/HLD 225-1 106
Silver (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1455	0.01 mg/m³ (metal, sol)		250-2000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Silver (elements on wipes)	NIOSH 9102				wipe						ICP-AES	W 225-2414 147 TMP 225-2415 147
Silver, metal & soluble compounds (as Ag)	OSHA ID 121	1198	0.01 mg/m³		960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Silver, metal & soluble compounds (ICP analysis of metal/metalloid particulates from solder operations)	OSHA ID 206	1279	0.01 mg/m³		960		2000		8		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Silvex	OSHA CSI										W	W 225-2401A 147
Simazine	ASTM D 4861				240-7200		1000-5000		4-24		HPLC-UV	PUF 226-92 44
Simazine	NIOSH 5602				480		1000		8		GC-ECD	ST 226-58 39
Simazine	OSHA CSI				120		1000		2		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Soapstone (respirable dust)	OSHA CSI		20 mppcf		varies		varies		varies		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-105 105 CST 225-3LF 99
Soapstone (total dust)	OSHA CSI		20 mppcf		960		2000		8		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	Vol. (liter) CLG/STEL Sample Time or Air Volume	Rate (ml/min) TWA Flow/Sampling Rate	Rate (ml/min) CLG/STEL Flow/Sampling Rate	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Sodium azide	OSHA ID 211				5		1000		5		IC-UV	ST 226-55 39 FLT 225-5-37-P 93 CST 225-2LF 99 SPC 225-23 107 C/HLD 225-1 106
Sodium bisulfite	OSHA ID 121	1203			960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Sodium carbonate *(see dust, respirable nuisance)*	OSHA CSI											
Sodium fluoride (fluorides)	NIOSH 7902		2.5 mg/m³		480	30	1000	2000	8	15	ISE	CF/CST 225-9001 63 C/HLD 225-1 106
Sodium fluoride (fluorides)	NIOSH 7906		2.5 mg/m³		960	30	2000	2000	8	15	IC-CD	CF/CST 225-9031 63 C/HLD 225-1 106
Sodium fluoroacetate	OSHA CSI		0.05 mg/m³		960	30	2000	2000	8	15	AA	F/CST 225-3-01 89 C/HLD 225-1 106
Sodium hexafluoroaluminate (fluorides)	NIOSH 7902		2.5 mg/m³		480	30	1000	2000	8	15	ISE	CF/CST 225-9001 63 C/HLD 225-1 106
Sodium hexafluoroaluminate (fluorides)	NIOSH 7906		2.5 mg/m³		960		2000		8		IC-CD	CF/CST 225-9031 63 C/HLD 225-1 106
Sodium hydroxide	OSHA ID 121	1042	2 mg/m³		960	30	2000	2000	8	15	AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Sodium hydroxide (alkaline dust)	NIOSH 7401			2 mg/m³ (15 min)	360		1500		4		TITRA	F/CST 225-1715 94 C/HLD 225-1 106
Sodium metabisulfite	OSHA ID 121				960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Sodium metasilicate	OSHA CSI										NVM	F/CST 225-3-01 89 C/HLD 225-1 106
Sodium nitrate	OSHA CSI				960		2000		8		AA or IC	F/CST 225-3-01 89 C/HLD 225-1 106
Sodium nitrite	OSHA CSI				960		2000		8		AA or IC	F/CST 225-3-01 89 C/HLD 225-1 106
Sodium o-phenyl phenate	OSHA CSI				10		20(50)		8(3.3)		GC-FID	F/CST 225-706 98 ST 226-35 38 C/HLD 225-1 106
Sodium polyacrylate *(see super absorbent polymer)*												
Solanesol (environmental tobacco smoke, respirable particles)	ASTM D 6271				150-3600		2500		1-24		HPLC-UV	FLT 225-2705 94 CST 225-3LF 99 CYC 225-01-02 115 C/HLD 225-1 106
Solder fume (ICP analysis of metal/metalloid particulates from solder operations)	OSHA ID 206				480		2000		4		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Soot *(see elemental carbon)*	NIOSH 5040										TOA-FID	
Spores (bacterial, fungal) (in air)					15-150		15000		1-10 min		varies	STC 225-9820 103
Spores (bacterial, fungal) (in air)	NON 48				62.5-375		12500 +		5-30		varies	BS 225-9595 128 VT 225-9598A◊ 128
Sporothrix species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Sporothrix species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Stachybotrys chartarum (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Stachybotrys chartarum (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Stachybotrys species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Stachybotrys species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Stannous-2-ethyl hexanoate (tin, organic compounds [as Sn])	OSHA CSI				480		1000		8		AA-GF	ST 226-30-16 38
Starch (particulates, respirable)	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Starch (particulates, total)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Starch *(see dust, total and respirable nuisance)*												
Stoddard solvent	OSHA 48		500		3		200		15 min		GC-FID	ST 226-01 38
Stoddard solvent (naphthas)	NIOSH 1550		350 mg/m³	1800 mg/m³	10	1.5	20(50)	100	8(3.3)	15	GC-FID	ST 226-01 38
Strontium	OSHA CSI				480		1000		8		AA	F/CST 225-3-01 89 C/HLD 225-1 106
Strontium (elements by ICP Aqua Regia ashing)	NIOSH 7301				10-1000		1000-4000		varies		ICP-AES	F/CST 225-3-01 or 225-803 ¥ 93 C/HLD 225-1 106
Strontium (elements by ICP HNO_3 digestion)	NIOSH 7303				300-100,000,000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Strontium (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1455	0.5 mg/m³		10-1000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Strontium (elements on wipes)	NIOSH 9102				wipe						ICP-AES	W 225-2414 147 TMP 225-2403 or TMP 225-2415 147
Strychnine	NIOSH 5016		0.15 mg/m³ (10 hr)		180		1500		2		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Strychnine	OSHA CSI		0.15 mg/m³		1000		3000		5.5		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Styrene	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
Styrene (phenylethylene)	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
Styrene (phenylethylene)	NON 54				10	3	20	200	8	15	GC-FID	ST 226-81A 39
Styrene (phenylethylene)	OSHA 09		100	200 (C)	10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
Styrene (phenylethylene)	OSHA 1014		100	200 (C)			13.55	13.55	8	15	HPLC-UV	PS 575-006 69
Styrene (phenylethylene)	OSHA 89	1368	100	200 (C)	12	0.75	50	50	4	15	GC-FID	ST 226-73 39
Styrene (phenylethylene) (hydrocarbons, aromatic)	NIOSH 1501		50	100	1-14	1-14	10-1000	10-1000	varies	varies	GC-FID	ST 226-01 38
Styrene oxide	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-35 38
Subtilisins (proteolytic enzymes)	OSHA CSI										Bulk	
Sucrose (particulates, respirable)	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Sucrose (particulates, total)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Sucrose *(see dust, total or dust, respirable nuisance)*	OSHA CSI											
Sudan I	OSHA CSI				90		1000		2		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Sudan III	OSHA CSI				90		1000		1.5		HPLC	F/CST 225-709 98 C/HLD 225-1 106
Sulfamethazine	OSHA CSI				100		1000		1.5		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Sulfamic acid	OSHA CSI				100		1000		100 min		IC	F/CST 225-709 98 C/HLD 225-1 106

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References and abbreviations are found on pages 212-213.

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	Vol. (liter) CLG/STEL Sample Time or Air Volume	Rate (ml/min) TWA Flow/Sampling Rate	Rate (ml/min) CLG/STEL Flow/Sampling Rate	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
m-Sulfobenzoic acid	OSHA CSI				180		1000		3		HPLC-UV	F/CST 225-3-01 89 C/HLD 225-1 106
Sulfur *(see dust, total & respirable nuisance)*												
Sulfur dioxide	NIOSH 6004	1331	2	5	180	15	1000	1000	3	15	IC	CF/CST 225-9005 63 C/HLD 225-1 106
Sulfur dioxide	OSHA 1011		5 ppm		12	7.5	50	500	4	15	IC	ST 226-177 41
Sulfur dioxide	OSHA ID 104		5		60	15	1000	1000	1	15	IC	F/CST 225-3-01 89 IMP 225-36-2 65 IT 225-22 65
Sulfur dioxide	OSHA ID 200	1461	5		12	1.5	100	100	2	15	IC	ST 226-80 39
Sulfur dioxide (using prefilter)	OSHA ID 200	1622	5		12	1.5	100	100	2	15	IC	ST 226-80 39 FLT 225-2708 94 CST 225-3-23 99 C/HLD 225-1 106
Sulfur hexafluoride by portable GC	NIOSH 6602	1023	1000		varies		20-100		varies		P GC-ECD	SB 232-03 or SB 231-03 52
Sulfur monochloride	OSHA CSI			1		5		1000		5	IC	IMP 225-36-2 65 IT 225-22 65
Sulfur tetrafluoride	OSHA ID 110					5		1000		5	ISE	IMP 225-36-2 65 IT 225-22 65
Sulfuric acid	NIOSH 7908		0.2 mg/m³		960		2000		8		IC	PPI 225-381 116 FLT 225-1827 88 IS 225-388 116 SP 225-27 107
Sulfuric acid	NIOSH 7908		1 mg/m³		960		2000		8		IC-CD	CF/CST 225-9031 C/HLD 225-1 106
Sulfuric acid	OSHA ID 113	1465	1 mg/m³		480		2000		4		IC	F/CST 225-3-01 89 C/HLD 225-1 106
Sulfuric acid	OSHA ID 113		0.2 mg/m³		480		2000		4		IC	PPI 225-381 116 FLT 225-5 88 IS 225-388 116 SP 225-27 107
Sulfuric acid	OSHA ID 165SG		1 mg/m³		96		200		8		IC	ST 226-10-03 38
Sulfuric acid (acids, inorganic)	NIOSH 7903	1016	1 mg/m³		48		200		4		IC	ST 226-10-03 38
Sulfuric acid mist	ASTM D 4856	1431			40		1000		40 min		IC	F/CST 225-3-01 89 C/HLD 225-1 106
Sulfuryl fluoride	NIOSH 6012		5	10	10		20		8		IC-CD	ST 226-16 38
Sulfuryl fluoride	OSHA CSI		5		24	1.5	100	100	4	15	IC	ST 226-16 38
Sulprofos	OSHA PV2037				240		1000		4		GC-FPD	ST 226-30-16 38
Sulprofos (organophosphorus pesticides)	NIOSH 5600		1 mg/m³		240		1000		4		GC-FPD	ST 226-58 39
Super absorbent polymers	NIOSH 5035				960		2000		8		ICP-AES or AA	F/CST 225-802 93 C/HLD 225-1 106
Syncephalastrum species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Syncephalastrum species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Systox *(see demeton)*												
2,4,5-T	OSHA CSI		10 mg/m³		200		3000		1		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Talc (containing asbestos) *(see asbestos)*	OSHA ID 160											
Talc (respirable, with no asbestos)	OSHA CSI		20 mppcf		varies		varies		varies		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-105 105 CST 225-3LF 99
Tannin	OSHA CSI				60		1000		1		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Tantalum (metal, oxide dusts)	OSHA CSI		5 mg/m³		960		2000		8		GR	F/CST 225-803 93 C/HLD 225-1 106
2,4-TDI (toluene diisocyanate)	ASTM D 5932				15		1000		15		HPLC-UV-FD	CF/CST 225-9022 63 C/HLD 225-1 106
2,4-TDI (toluene diisocyanate)	NIOSH 5522		LFC		360	20	1000	2000	6	10	HPLC-FD	IMP 225-36-1 65 IT 225-22 65
2,4-TDI (toluene diisocyanate)	OSHA 42	1458		0.02 (C)	240	15	1000	1000	4	15	HPLC-UV or HPLC-FD	CF/CST 225-9002 or CF/ 225-9013 63 C/HLD 225-1 106 CST
2,6-TDI (toluene diisocyanate)	ASTM D 5932				15		1000		15		HPLC-UV-FD	CF/CST 225-9022 63 C/HLD 225-1 106
2,6-TDI (toluene diisocyanate)	NIOSH 5522		LFC		360	20	1000	2000	6	10	HPLC-FD	IMP 225-36-1 65 IT 225-22 65
2,6-TDI (toluene diisocyanate)	OSHA 42	1458				15		2000		15	HPLC-UV or HPLC-FD	CF/CST 225-9002 or CF/ 225-9013 63 C/HLD 225-1 106 CST
2, 4-TDI (toluene diisocyanate) (isocyanates, total)	NIOSH 5525		LFC		1-500		1000-2000		varies		HPLC-UV	FLT 225-7 ‡ 98 CST 225-4 99 SP 225-27 or IOM 225-76A 112 FLT 225-702 ‡ 98
2, 6-TDI (toluene diisocyanate) (isocyanates, total)	NIOSH 5525		LFC		1-500		1000-2000		varies		HPLC-UV	FLT 225-7 ‡ 98 CST 225-4 99 SP 225-27 or IOM 225-76A 112 FLT 225-702 ‡ 98
2,4-TDI (Toluene diisocyanate) (isocyanates)	OR-OSHA 1010		0.02	0.005	45	5	1000	1000	45 min	5	HPLC	IMP 225-36-1 65 IT 225-22 65 CF/CST 225-9029 63
2,6-TDI (Toluene diisocyanate) (isocyanates)	OR-OSHA 1010		0.02	0.005	45	5	1000	1000	45 min	5	HPLC	IMP 225-36-1 65 IT 225-22 65 CF/CST 225-9029 63
TEDP	OSHA CSI		0.2 mg/m³		480		1000		8		GC-FPD	ST 226-30-16 38
Tellurium	OSHA ID 121		0.1 mg/m³		960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Tellurium	OSHA ID 132SG	1215	0.1 mg/m³		100-1000		1500-2000		varies		AA-GF	F/CST 225-3-01 89 C/HLD 225-1 106
Tellurium (elements by ICP Aqua Regia ashing)	NIOSH 7301		0.1 mg/m³		25-2000		1000-4000		varies		ICP-AES	F/CST 225-3-01 or F/CST 225-803 ¥ 93 C/HLD 225-1 106
Tellurium (elements by ICP HNO_3 digestion)	NIOSH 7303		0.1 mg/m³		125-500,000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Tellurium (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1455	0.1 mg/m³		25-2000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Tellurium (elements on wipes)	NIOSH 9102				wipe						ICP-AES	W 225-2414 147 TMP 225-2403 or TMP 225-2415 147
Tellurium hexafluoride (as Te)	OSHA CSI		0.02		480		1000		8		AA	ST 226-01 38 F/CST 225-3-01 89
Temephos (respirable dust)	OSHA PV2056		5 mg/m³		varies		varies		varies		GC-FPD	F/CST 225-706 98 C/HLD 225-1 106
Temephos (total dust)	OSHA CSI		15 mg/m³		480		1000		8		GC-FPD	ST 226-30-16 38
TEPP	OSHA CSI		0.05 mg/m³		480		1000		8		GC-FPD	ST 226-30-16 38
Terbufos	OSHA CSI				480		1000		8		GC-FPD	ST 226-30-16 38
Terbufos (organophosphorus pesticides)	NIOSH 5600				240		1000		4		GC-FPD	ST 226-58 39
Terbuthiuron	ASTM D 4861				240-7200		1000-5000		4-24		HPLC-UV	PUF 226-92 44
Tergitol NP-33	OSHA CSI				100		1000		1.6		HPLC-UV	ST 226-57 39

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	CLG/STEL	Rate (ml/min) TWA Flow/Sampling Rate	CLG/STEL	Time TWA (hrs)	CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Terpenes (screening)	NIOSH 2549				5		20		4		GC-MS	ST 226-330 42
Terpenes *(see specific compounds)*	NIOSH 1552	1463			24		50		8		GC-FID	ST 226-01 38
o-Terphenyl	NIOSH 5021			0.5		30		2000		15	GC-FID	F/CST 225-1713 94 C/HLD 225-1 106
o-Terphenyl *(see terphenyls)*	OSHA CSI											
Terphenyls	OSHA CSI			1 (C)		8.5		1700		5	HPLC-FD	F/CST 225-709 98 C/HLD 225-1 106
Terpineol	OSHA CSI				10		200		50 min		GC-FID	ST 226-01 38
Testosterone	OSHA PV2001				60		1000		1		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Tetrabromobisphenol A	OSHA CSI				100		1000		100 min		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
1,1,2,2-Tetrabromoethane	NIOSH 2003				96		200		8		GC-FID	ST 226-10 38
Tetrabutyltin (organotin compounds as Sn)	NIOSH 5504		0.1 mg/m³		480		1000		8		HPLC & AA-GF	ST 226-30 38 F/CST 225-709 98 C/HLD 225-1 106
1,1,2,2-Tetrachloro-1,2-difluoroethane	NIOSH 1016		500		2		20		1.5		GC-FID	ST 226-01 38
1,1,2,2-Tetrachloro-1,2-difluoroethane	OSHA 07	1182	500		2		50		40 min		GC-FID	ST 226-01 38
1,1,1,2-Tetrachloro-2,2-difluoroethane	NIOSH 1016		500		2		20		1.5		GC-FID	ST 226-01 38
1,1,1,2-Tetrachloro-2,2-difluoroethane	OSHA 07	1181	500		2		50		40 min		GC-FID	ST 226-01 38
1,2,3,4-Tetrachlorobenzene	ASTM D 4861				240-7200		1000-5000		4-24		GC-ECD	PUF 226-124 44
1,2,3,5-Tetrachlorobenzene	OSHA CSI				12		100		2		GC-ECD	FLT 225-17-03 94 CST Special order ST 226-30-04 38 225-1 106
1,2,4,5-Tetrachlorobenzene (polychlorobenzenes)	NIOSH 5517				12		25		8		GC-ECD	FLT 225-17-03 94 CST Special order ST 226-30-04 38 C/HLD 225-1 106
2,3,7,8-Tetrachlorodibenzo-p-dioxin	OSHA CSI				30		1000		0.5		NVM	IMP 225-36-1 65 IT 225-22 65
2,3,7,8-Tetrachlorodibenzofuran	OSHA CSI				30		1000		0.5		NVM	IMP 225-36-1 65 IT 225-22 65
1,1,1,2-Tetrachloroethane	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
1,1,2,2-Tetrachloroethane	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
1,1,2,2-Tetrachloroethane	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
1,1,2,2-Tetrachloroethane	NIOSH 1019		1		24		50		8		GC-FID	ST 226-81A 39
1,1,2,2-Tetrachloroethane	NIOSH 2562		1		3-30		10-200		varies		GC-FID	ST NA SKC
1,1,2,2-Tetrachloroethane	OSHA 07		5		30		200		2.5		GC-FID	ST 226-81A 39
Tetrachloroethylene	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49**
Tetrachloroethylene (hydrocarbons, halogenated)	NIOSH 1003		LFC		3		10-200		varies		GC-FID	ST 226-01 38
Tetrachloroethylene (perchloroethylene)	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
Tetrachloroethylene (perchloroethylene)	OSHA 07		100	200	24		50		8		GC-FID	ST 226-01 38
Tetrachloroethylene (perchloroethylene)	OSHA 1001	1747	100	200 (C)	12	0.75	50	50	4	5	GC-FID	ST 226-01 38
Tetrachloroethylene (perchloroethylene)	OSHA 1001	1747	100	200 (C)			13.06		8	5	GC-FID	PS 575-002 69
Tetrachloroethylene (perchloroethylene) (portable GC)	NIOSH 3704		LFC		1		20-5000		varies		P GC	SB 232-01 53
Tetrachloronaphthalene	OSHA CSI		2 mg/m³		90		1000		1.5		GC-FID	ST 226-30-16 38
2,3,4,6-Tetrachlorophenol	OSHA 45				48		200		4		HPLC-UV	ST 226-97 40
Tetraethyl lead (as Pb)	NIOSH 2533		0.075 mg/m³		120		1000		2		GC-PID	ST 226-30-04 38
Tetraethyl lead (as Pb)	OSHA CSI		75 µg/m³		480		1000		8		AA	ST 226-01 38 F/CST 225-706 98 C/HLD 225-1 106
Tetraethyl pyrophosphate	NIOSH 2504		0.05 mg/m³		24		50		8		GC-FPD	ST NA SKC
Tetraethyl tin	OSHA 110		0.1 mg/m³		48	3	200	200	4	15	GC-FID	ST 226-95 40
Tetraethylene glycol	NIOSH 5523				60		1000		1		GC-FID	ST 226-57 39
Tetraethylene glycol diacrylate	OSHA CSI				10		20(50)		8(3.3)		HPLC-UV	ST 226-95 40
Tetraethylene glycol dimethacrylate	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-95 40
Tetraethylenepentamine	OSHA CSI					15		1000		15	HPLC-UV	FLT 225-7 ‡ 98 CST 225-2LF 99 C/HLD 225-1 106
Tetrahydrofuran	NIOSH 1609		200	250	9	1.5	20(50)	100	7(3)	15	GC-FID	ST 226-01 38
Tetrahydrofuran	OSHA 07	1064	200		10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
Tetrahydrofurfuryl acrylate	OSHA PV2131		1 mg/m³		48		200		4		GC-FID	ST 226-110 40
Tetrakis(hydroxymethyl)phosphonium chloride	NIOSH 5046				1-480		1000-1700		varies		HPLC-UV	CF/CST 225-9003 63
Tetramethyl lead (as Pb)	NIOSH 2534		75 µg/m³		96		200		8		GC-PID	ST 226-30-06 38
Tetramethyl lead (as Pb)	OSHA CSI		75 µg/m³		480		1000		8		AA	F/CST 225-709 98 ST 226-01 38 C/HLD 225-1 106
Tetramethyl succinonitrile	OSHA 07	1183	0.5		10		20		8		GC-FID	ST 226-01 38
Tetramethyl thiouram disulfide *(see thiram)*												
Tetramethyl thiourea	NIOSH 3505				96		200		8		VAS	IMP 225-36-1 65 IT 225-22 65
Tetramethyl tin	OSHA PV2057		0.1 mg/m³		20		200		100 min		GC-FID	ST 226-01 38
1,2,3,4-Tetramethylbenzene	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-01 38
1,2,3,5-Tetramethylbenzene	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-01 38
1,2,4,5-Tetramethylbenzene	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Tetramethyldiaminobenzophenone	OSHA CSI				180		1000		3		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
N,N,N',N'-Tetramethylethylenediamine	OSHA CSI				480		1000		8		GC-NPD	IMP 225-36-1 65 IT 225-22 65
Tetranitromethane	NIOSH 3513		1		240		1000		4		GC-NPD	IMP 225-36-1 65 IT 225-22 65
Tetranitromethane	OSHA CSI		1		240		1000		4		GC-NPD	IMP 225-36-1 65 IT 225-22 65

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

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Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	Vol. (liter) CLG/STEL Sample Time or Air Volume	Rate (ml/min) TWA Flow/Sampling Rate	Rate (ml/min) CLG/STEL Flow/Sampling Rate	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Tetrasodium pyrophosphate	OSHA ID 111				960		2000		8		GR & IC	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Tetrasodium pyrophosphate	OSHA ID 121				960		2000		8		AA or AES	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Tetryl (2,4,6-trinitrophenyl-methylnitramine)	OSHA CSI		1.5 mg/m³		90		1500		1		CLR	F/CST 225-3-01 89 C/HLD 225-1 106
Thalium (elements by ICP Aqua Regia ashing)	NIOSH 7301		0.1 mg/m³ (skin, sol)		25-2000		1000-4000		varies		ICP-AES	F/CST 225-3-01 or F/CST 225-803 ¥ 93 C/HLD 225-1 106
Thallium (elements by ICP HNO_3 digestion)	NIOSH 7303		0.1 mg/m³ (skin, sol)		35-500,000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Thallium (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1455	0.1 mg/m³ (skin, sol)		25-2000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Thallium (elements on wipes)	NIOSH 9102				wipe						ICP-AES	W 225-2414 147 TMP 225-2403 or TMP 225-2415 147
Thallium (soluble compounds) (as Tl)	OSHA ID 121	1202	0.1 mg/m³		960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Thimet (phorate)	OSHA CSI				480	15	1000	1000	8	15	GC-FPD	ST 226-30-16 38
Thiobencarb (organonitrogen pesticides)	NIOSH 5601				240		1000		4		HPLC-UV	ST 226-58 or ST 226-30-16 38
4,4'-Thiobis(6-tert-butyl-m-cresol) (respirable dust)	OSHA CSI		5 mg/m³		varies		varies		varies		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106 CYC 225-105 105
4,4'-Thiobis(6-tert-butyl-m-cresol) (total dust)	OSHA CSI		15 mg/m³		60		1000		1		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Thioglycolic acid	OSHA CSI				120		1000		2		HPLC-UV	IMP 225-36-1 65 IT 225-22 65
Thionyl chloride	OSHA CSI					15		1000		15	IC	IMP 225-36-2 65 IT 225-22 65
Thiophanate	OSHA CSI				180		1000		3		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Thiophanate-methyl	OSHA PV2058				240		1000		4		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Thiophanate-methyl in air	NIOSH 5606				20-480		10-1000		varies		HPLC-UV	ST 226-58 39
Thiophene	OSHA CSI				48		100		8		GC-FPD	ST 226-01 38
Thiourea	OSHA PV2059				480		2000		4		HPLC-UV	F/CST 225-706 98 C/HLD 225-1 106
Thiram	NIOSH 5005		5 mg/m³		120		1000		2		HPLC-UV	FLT 225-17-01 94 CST 225-2LF 99 C/HLD 225-1 106
Thorium	OSHA CSI				960		2000		8		N ACT	F/CST 225-3-01 89 C/HLD 225-1 106
L-Thyroxine	OSHA PV2117				240		1000		4		HPLC-UV	F/CST 225-709 98 C/HLD 225-1 106
Tin (elements by ICP Aqua Regia ashing)	NIOSH 7301		2 mg/m³		5-1000		1000-4000		varies		ICP-AES	F/CST 225-3-01 or F/CST 225-803 ¥ 93 C/HLD 225-1 106
Tin (elements by ICP HNO_3 digestion)	NIOSH 7303		2 mg/m³		1-25000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Tin (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1455	2 mg/m³		5-1000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Tin (ICP analysis of metal/metalloid particulates from solder operations)	OSHA ID 206		2 mg/m³		480		2000		4		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Tin (inorganic compounds, except oxides) (as Sn)	OSHA ID 121	1201	2 mg/m³		960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Tin (organic compounds, *see specific compounds*) (as Sn)	OSHA CSI											
Tin (organic compounds) (as Sn) (organotin compounds)	NIOSH 5504		0.1 mg/m³		480		1000		8		HPLC & AA-GF	ST 226-30 38 F/CST 225-706 98 C/HLD 225-1 106
Tin oxide ((Stannous Oxide) as Sn)	OSHA ID 121	1200	0.1 mg/m³		960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Titanium (elements by ICP Aqua Regia ashing)	NIOSH 7301				5-1000		1000-4000		varies		ICP-AES	F/CST 225-3-01 or F/CST 225-803 ¥ 93 C/HLD 225-1 106
Titanium (elements by ICP HNO_3 digestion)	NIOSH 7303				0.1-10,000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Titanium (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1455			5-100		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Titanium *(see titanium dioxide)*	OSHA CSI											
Titanium dioxide (particulates, respirable)	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Titanium dioxide (particulates, total)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Titanium dioxide (total dust)	OSHA CSI		15 mg/m³		960		2000		8		GR	F/CST 225-803 93 C/HLD 225-1 106
TNT (2,4,6-trinitrotoluene)	OSHA 44		1.5 mg/m³		60		1000		1		GC-TEA-EAP	ST 226-56 39
o-Tolidine	OSHA 71	1236			100		1000		100 min		GC-ECD	CF/CST 225-9004 63 C/HLD 225-1 106
o-Tolidine based dyes	OSHA CSI				480		1000		8		HPLC-UV	FLT 225-17A 94 CST 225-3LF 99 C/HLD 225-1 106
o-Tolidine dyes (dyes, benzidine)	NIOSH 5013		LFC		480		1000		8		HPLC-UV	FLT 225-17A 94 CST 225-3LF 99 C/HLD 225-1 106
m-Tolualdehyde	ASTM D 5197				varies		500-1200		5 min-24 hrs		HPLC-UV	ST 226-120 O or ST 226-119 40
o-Tolualdehyde	ASTM D 5197				varies		500-1200		5 min-24 hrs		HPLC-UV	ST 226-120 O or ST 226-119 40
p-Tolualdehyde	ASTM D 5197				varies		500-1200		5 min-24 hrs		HPLC-UV	ST 226-120 O or ST 226-119 40
o-Toluamide	OSHA CSI		5 mg/m³		240		1000		4		HPLC	F/CST 225-709 98 C/HLD 225-1 106
Toluene	**EPA TO-17**	**1689**			**1 & 4**		**16.7 & 66.7**				**TD, GC**	**ST 226-300 Series 42 TH 224-26-02 49** **CPC 224-26CPC-10 49**
Toluene	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
Toluene	OSHA 07		200	300	10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
Toluene	OSHA 111	1748	200	300 (C)	12	0.5	50	50	4	10	GC-FID	ST 226-81A 39 ST 226-01 38
Toluene (hydrocarbons, aromatic)	NIOSH 1501		100	150	1-8	1-8	10-200	10-200	varies	varies	GC-FID	ST 226-01 38
2,4-Toluene diisocyanate	ASTM D 5836	1432			15		1000		15		HPLC-UV or HPLC-FD	CF/CST 225-9002 63 C/HLD 225-1 106
2,4-Toluene diisocyanate	ASTM D 5932				15		1000		15		HPLC-UV-FD	CF/CST 225-9022 63 C/HLD 225-1 106

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA	Vol. (liter) CLG/STEL	Rate (ml/min) TWA	Rate (ml/min) CLG/STEL	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
					Sample Time or Air Volume		Flow/Sampling Rate					
2,4-Toluene diisocyanate	OSHA 42	1458		0.02 (C)	240	15	1000	1000	4	15	HPLC-UV or HPLC-FD	CF/CST 225-9002 or 106 CF/ CST 225-9013 63 C/HLD 225-1
2,6-Toluene diisocyanate	ASTM D 5836	1432			15		1000		15		HPLC-UV or HPLC-FD	CF/CST 225-9002 63 C/HLD 225-1 106
2,6-Toluene diisocyanate	ASTM D 5932				15		1000		15		HPLC-UV-FD	CF/CST 225-9022 63 C/HLD 225-1 106
2,6-Toluene diisocyanate	OSHA 42	1458			240		1000		4		HPLC-UV or HPLC-FD	CF/CST 225-9002 or 106 CF/ CST 225-9013 63 C/HLD 225-1
2,4-Toluene diisocyanate (isocyanates, total)	NIOSH 5525		LFC		1-500		1000-2000		varies		HPLC-UV	FLT 225-7 ‡ 98 CST 225-4 99 SP 225-27 or IOM 225-76A 112 FLT 225-702 ‡ 98
2,6-Toluene diisocyanate (isocyanates, total)	NIOSH 5525		LFC		1-500		1000-2000		varies		HPLC-UV	FLT 225-7 ‡ 98 CST 225-4 99 SP 225-27 or IOM 225-76A 112 FLT 225-702 ‡ 98
2,4-Toluene diisocyanate (isocyanates)	NIOSH 5521		LFC		480	10	1000	1000	8	10	HPLC-ELCHM & HPLC-UV	IMP 225-36-1 65 IT 225-22 65
2,4-Toluene diisocyanate (isocyanates)	OR-OSHA 1010		0.02	0.005	45	5	1000	1000	45 min	5	HPLC	IMP 225-36-1 65 IT 225-22 65 CF/CST 225-9029 63
2,6-Toluene diisocyanate (isocyanates)	NIOSH 5521		LFC		480		1000		8		HPLC-ELCHM & HPLC-UV	IMP 225-36-1 65 IT 225-22 65
2,6-Toluene diisocyanate (isocyanates)	OR-OSHA 1010		0.02	0.005	45	5	1000	1000	45 min	5	HPLC	IMP 225-36-1 65 IT 225-22 65 CF/CST 225-9029 63
p-Toluene sulfonic acid	NIOSH 5043				960	45	2000	3000	8	15	HPLC-UV	FLT 225-16 98 CST 225-32 106
p-Toluene sulfonic acid	OSHA CSI				120		1000		2		HPLC-UV	IMP 225-36-1 65 IT 225-22 65
Toluene-2,4-diamine	OSHA 65	1237		0.02 (C)	100		1000		100 min		GC-ECD	CF/CST 225-9004 63 C/HLD 225-1 106
2,4-Toluenediamine	NIOSH 5516		LFC		480		1000		8		HPLC-UV	IMP 225-36-1 65 IT 225-22 65
2,4-Toluenediamine	OSHA 65	1237		0.02 (C)	100		1000		100 min		GC-ECD	CF/CST 225-9004 63 C/HLD 225-1 106
2,6-Toluenediamine	NIOSH 5516		LFC		480		1000		8		HPLC-UV	IMP 225-36-1 65 IT 225-22 65
2,6-Toluenediamine	OSHA 65	1237			100		1000		100 min		GC-ECD	CF/CST 225-9004 63 C/HLD 225-1 106
2,6-Toluenediamine	OSHA 65	1237			100		1000		100 min		GC-ECD	CF/CST 225-9004 63 C/HLD 225-1 106
m-Toluidine	OSHA 73	1230			100		1000		100 min		GC-ECD	CF/CST 225-9004 63 C/HLD 225-1 106
o-Toluidine	NIOSH 2017		LFC		24		200		2		GC-FID	CF/CST 225-9004 63 ST 226-15 38
o-Toluidine	OSHA 73	1230	5		100		1000		100 min		GC-ECD	CF/CST 225-9004 63 C/HLD 225-1 106
p-Toluidine	OSHA 73	1230			100		1000		100 min		GC-ECD	CF/CST 225-9004 63 C/HLD 225-1 106
o-Toluidine (amines, aromatic)	NIOSH 2002	1057	LFC		48		100		8		GC-FID or GC-NSD	ST 226-10 38
o-Toluidine based dyes	OSHA CSI				480		1000		8		HPLC-UV	FLT 225-17-04 94 CST 225-3LF 99 C/HLD 225-1 106
Torak	OSHA CSI										W	W 225-2401A 147
Torula species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Torula species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Toxaphene *(see Chlorinated camphene)*												
Tremolite *(see asbestos fibers)*	NIOSH 7400											
Tremolite fibers *(see asbestos)*	OSHA ID 160											
Trially isocyanurate	OSHA CSI				10		20(50)		8(3.3)		GC-NPD	ST 226-01 38
Triazine pesticides	ASTM D 4861				960		2000		8		GC-ECD	PUF 226-92 44
Tributyl phosphate	NIOSH 5034		0.2		90		1500		1		GC-FPD	F/CST 225-3-01 89 C/HLD 225-1 106
Tributyl phosphate	OSHA CSI		5 mg/m³		90		1500		1		GC-FPD	F/CST 225-3-01 89 C/HLD 225-1 106
Tributyl phosphorotrithioate	OSHA CSI				480		1000		8		GC-FID	IMP 225-36-1 65 IT 225-22 65
Tributyl phosphorotrithioate	OSHA CSI				480		1000		8		GC-FPD	IMP 225-36-1 65 IT 225-22 65
Tributyltin benzoate {tin, organic compounds (as Sn)}	OSHA ID 222SG				200		2000		100 min		AA-GF	F/CST 225-803 93 C/HLD 225-1 106
Tributyltin chloride (organotin compounds as Sn)	NIOSH 5504		0.1 mg/m³		480		1000		8		HPLC & AA-GF	ST 226-30 38 F/CST 225-709 98 C/HLD 225-1 106
Tributyltin fluoride {tin, organic compounds (as Sn)}	OSHA ID 223SG				200		2000		100 min		AA-GF	F/CST 225-803 93 C/HLD 225-1 106
Tributyltin neodecanoate *(see tin, organic compounds)*												
Trichlorfon	OSHA CSI				390		1000		6.5		GC-FPD	ST 226-30-16 38
1,1,2-Trichloro-1,2,2-trifluoroethane	OSHA 113		1000		1		50		20 min		GC-FID	ST NA SKC
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NIOSH 1020	1061	1000	1250	2.4	0.3	20	20	2	15	GC-FID	ST 226-01 38
1,1,1-Trichloro-2,2,2-trifluoroethane	OSHA CSI				3		20		2.5		GC-FID	ST 226-01 38
Trichloroacetic acid	OSHA PV2017				10		200		50		HPLC-UV	ST 226-10 38
1,2,3-Trichlorobenzene	ASTM D 4861				240-7200		1000- 5000		4 to 24		GC-ECD	PUF 226-124 44
1,2,3-Trichlorobenzene	OSHA CSI				12		50		4		GC-ECD	FLT 225-17-03 94 CST Special order ST 226-30-04 38 C/HLD 225-1 106
1,2,4-Trichlorobenzene	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
1,2,4-Trichlorobenzene	OSHA CSI					5		1000		5	GC-ECD	FLT 225-17-03 94 CST Special order ST 226-30-04 38 C/HLD 225-1 106
1,2,4-Trichlorobenzene (polychlorobenzenes)	NIOSH 5517			5	12	3	25	200	8	15	GC-ECD	FLT 225-17-03 94 CST Special order ST 226-30-04 38 C/HLD 225-1 106
1,1,2-Trichloroethane	EPA TO-17	1689			1 & 4		16.7 & 66.7				TD, GC	ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49
1,1,2-Trichloroethane	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

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Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA	Vol. (liter) CLG/STEL	Rate (ml/min) TWA	Rate (ml/min) CLG/STEL	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
					Sample Time or Air Volume		Flow/Sampling Rate					
1,1,2-Trichloroethane	OSHA 11	1071	10		10		200		1		GC-FID	ST 226-01 38
1,1,2-Trichloroethane (hydrocarbons, halogenated)	NIOSH 1003		10 (skin)		10		10-200		varies		GC-FID	ST 226-01 38
1,1,1-Trichloroethane (methyl chloroform)	EPA TO-17	1689			1 & 4		16.7 & 66.7				TD, GC	ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49
1,1,1-Trichloroethane (methyl chloroform) (hydrocarbons, halogenated)	NIOSH 1003			350	3			10-200		varies	GC-FID	ST 226-01 38
Trichloroethylene	EPA TO-17	1689			1 & 4		16.7 & 66.7				TD, GC	ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49
Trichloroethylene	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
Trichloroethylene	NIOSH 1022		25	2 (1 hr)	10	2	20(50)	200	8(3.3)	10	GC-FID	ST 226-01 38
Trichloroethylene	OSHA 07	1184	100	200 (C)	10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
Trichloroethylene	OSHA 1001	1747	100	200 (C)	12	0.75	50	50	4	5	GC-FID	ST 226-01 38
Trichloroethylene	OSHA 1001	1747	100	200 (C)			14.24		8	5	GC-FID	PS 575-002 69
Trichloroethylene (hydrocarbons, halogenated)	NIOSH 1003				10		10-200		varies		GC-FID	ST 226-01 38
Trichloroethylene by portable GC	NIOSH 3701	1030	25	2 (1 hr)	varies	varies	20-50	varies	varies	varies	P GC-PID	SB 232 Series 53
Trichlorofluoromethane (fluorotrichloromethane)	NIOSH 1006			1000		5		20		240	GC-FID	ST 226-09 38
Trichloronaphthalene	OSHA CSI		5 mg/m³		90		1000		1.5		GC-ECD	ST 226-30-16 38
Trichloronitromethane	NON 51		0.1		144		100		24		GC-MSD	ST 226-175 41
2,4,5-Trichlorophenol	ASTM D 4861				240-7200		1000- 5000		4 to 24		GC-ECD	PUF 226-92 44
2,4,5-Trichlorophenoxyacetic acid *(see 2,4,5-T)*												
1,2,3-Trichloropropane	OSHA 07	1185	50		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
1,2,3-Trichloropropane (hydrocarbons, halogenated)	NIOSH 1003		10 (skin)		0.6-60		10-200		varies		GC-FID	ST 226-01 38
2,3,6-Trichlorotoluene	OSHA CSI				10		20(50)		8(3.3)		GC-FID	ST 226-01 38
Trichoderma species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Trichoderma species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Tricyclohexyltin hydroxide (organotin compounds as Sn)	NIOSH 5504		0.1 mg/m³		480		1000		8		HPLC & AA-GF	ST 226-30 38 F/CST 225-709 98 C/HLD 225-1 106
Tridymite (silica, crystalline (respirable)) by XRD	NIOSH 7500	1370	0.05 mg/m³		400-1000		2500		varies		XRD	F/CST 225-803 93 CYC 225-01-02 115 C/HLD 225-1 106
Tridymite (Silica, crystalline by IR)	NIOSH 7602		0.05 mg/m³		400-800		2500		varies		IR	F/CST 225-803 93 C/HLD 225-1 106 CYC 225-01-02 115
Triethanolamine (TEA)	OSHA PV2141				120		1000		2		GC-FID	F/CST 225-709 98 C/HLD 225-1 106
Triethanolamine (TEA) (aminoethanol compounds II)	NIOSH 3509				240		1000		4		IC	IMP 225-36-1 65 IT 225-22 65
Triethylamine	OSHA PV2060		25		5	3	100	200	50 min	15	GC-FID	ST 226-98 40
Triethylene glycol	NIOSH 5523				60		1000		1		GC-FID	ST 226-57 39
Triethylenetetramine (TETA)	OSHA 60	1286			10		100		100 min		HPLC-UV	ST 226-30-18 38
Trifluorobromomethane	NIOSH 1017		1000		1		20		50 min		GC-FID	ST 226-01 38 ST 226-09 38
2,2,2-Trifluoroethanol	OSHA CSI				5		20		4		GC-FID	ST 226-01 38
Trifluoromonobromomethane	OSHA 07		1000		1		20		50 min		GC-FID	ST 226-01 38 ST 226-09 38
Trifluoromonobromomethane (trifluorobromomethane)	NIOSH 1017		1000		1		20		50 min		GC-FID	ST 226-01 38 ST 226-09 38
Trifluralin	ASTM D 4861				240-7200		1000- 5000		4 to 24		GC-ECD	PUF 226-92 44
Trifluralin	OSHA CSI				48		100		8		HPLC-UV	ST 226-56 39
1,3,5-Triglycidyl isocyanurate	OSHA PV2055				60		1000		1		GC-ECD	CF/CST 225-9027 63 C/HLD 225-1 106
Trimellitic anhydride (TMA)	NIOSH 5036		0.005 (10 hr)		960		2000		8		GC-FID	F/CST 225-802 93 C/HLD 225-1 106
Trimellitic anhydride (TMA)	OSHA 98				480		2000		4		HPLC-UV	CF/CST 225-9010 †† 63 C/HLD 225-1 106
2,2,4-Trimethyl-1,3-pentanediol diisobutyrate	OSHA PV2002				10		100		100 min		GC-FID	ST 226-110 40
Trimethylamine	OSHA CSI				10	1.5	100	100	100 min	15	GC-NPD	ST 226-98 40
1,2,3-Trimethylbenzene	OSHA PV2091				10		100		100 min		GC-FID	ST 226-01 38
1,2,4-Trimethylbenzene	EPA TO-17	1689			1 & 4		16.7 & 66.7				TD, GC	ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49
1,2,4-Trimethylbenzene	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
1,2,4-Trimethylbenzene	OSHA PV2091				10		100		100 min		GC-FID	ST 226-01 38
1,3,5-Trimethylbenzene (mesitylene)	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
1,3,5-Trimethylbenzene (mesitylene)	OSHA PV2091				10		100		100 min		GC-FID	ST 226-01 38
3,5,5-Trimethylcyclohex-2-enone (isophorone)	EPA TO-17	1689			1 & 4		16.7 & 66.7				TD, GC	ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49
Trimethylolethane trinitrate	OSHA CSI				15		1000		15 min		HPLC-UV	ST 226-35-03 39
Trimethylolpropane triacrylate	OSHA CSI				10		20(50)		8(3.3)		HPLC-UV	ST 226-95 40
Trimethyltin dichloride	NIOSH 5526		0.1 mg/m³		60	60	250	1000	4	60	GC-FPD	ST 226-30-16 38
2,4,7-Trinitro-9-fluorenone	OSHA CSI				480		1000		8		HPLC-UV	FLT 225-17A 94 CST 225-3LF 99 C/HLD 225-1 106
2,4,7-Trinitrofluoren-9-one	NIOSH 5018				480		3000		2.7		HPLC-UV	FLT 225-17-04 94 CST 225-3LF 99 C/HLD 225-1 106
2,4,6-Trinitrotoluene (TNT)	OSHA 44		1.5 mg/m³		60		1000		1		GC-TEA-EAP	ST 226-56 39
Triorthocresyl phosphate	NIOSH 5037		0.1 mg/m³		90		1000		1.5		GC-FPD	F/CST 225-3-01 89 C/HLD 225-1 106
Triphenyl phosphate	NIOSH 5038		3 mg/m³		240		1000		4		GC-FPD	F/CST 225-3-01 89 C/HLD 225-1 106
Triphenyl tin chloride (as Sn)	NIOSH 5527		0.1 mg/m³ (skin)		100-2000		1000-4000		varies		HPLC & ICP-AES	FLT 225-5-37-P 93 C/HLD 225-1 106
Triphenylamine	OSHA CSI				240		1000		4		HPLC-UV	IMP 225-36-2 65 IT 225-22 65

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	Vol. (liter) CLG/STEL Sample Time or Air Volume	Rate (ml/min) TWA Flow/Sampling Rate	Rate (ml/min) CLG/STEL Flow/Sampling Rate	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Triphenyltin fluoride (tin, organic compounds [as Sn])	OSHA CSI		0.1 mg/m³		960		2000		8		AA-GF	F/CST 225-709 98 C/HLD 225-1 106
Triphenyltin hydroxide (tin, organic compounds (as Sn))	OSHA ID 225SG		0.1 mg/m³		200		2000		100 min		AA-GF	F/CST 225-709 98 C/HLD 225-1 106
Tripropylene glycol diacrylate	OSHA CSI				10		20(50)		8(3.3)		HPLC-UV	ST 226-95 40
Tripropylene glycol diacrylate (TPGDA)	NON 39				480		1000		8		GC-FID	ST 226-56 39
Trydymite (silica, crystalline by VAS)	NIOSH 7601	1041	0.05 mg/m³		400-800		2500		varies		VAS	F/CST 225-803 93 C/HLD 225-1 106 CYC 225-01-02 115
Trypsin	OSHA CSI				480		2000		4		IRA	F/CST 225-1713 94 C/HLD 225-1 106
Tuberculosis (mycobacterium tuberculosis), airborne	NIOSH 0900				1920		4000		8		PCR	FLT 225-2705 94 SP 225-27 107 CST 225-3LF 99 C/HLD 225-1 106
Tungsten (elements by ICP Aqua Regia ashing)	NIOSH 7301		5 mg/m³	10 mg/m³	50-1000	50-1000	1000-4000	1000-4000	varies	varies	ICP-AES	F/CST 225-3-01 or F/CST 225-803 ¥ 93 C/HLD 225-1 106
Tungsten (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1455	5 mg/m³	10 mg/m³	5-1000	5-1000	1000-4000	1000-4000	varies	varies	ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Tungsten & compounds (insoluble) (as W)	OSHA ID 213				480	30	2000	2000	4	15	ICP	F/CST 225-3-01 89 C/HLD 225-1 106
Tungsten & compounds (soluble) (as W)	OSHA ID 213				480	30	2000	2000	4	15	ICP	F/CST 225-3-01 89 C/HLD 225-1 106
Tungsten insoluble	NIOSH 7074		5 mg/m³	10 mg/m³	480		1000		8		AA-F	F/CST 225-3-01 89 C/HLD 225-1 106
Tungsten soluble	NIOSH 7074		1 mg/m³	3 mg/m³	480		1000		8		AA-F	F/CST 225-3-01 89 C/HLD 225-1 106
Turpentine	NIOSH 1551		100		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
n-Undecane	EPA TO-17	1689			1 & 4		16.7 & 66.7				TD, GC	ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49
n-Undecane (hydrocarbons, BP 36 to 216 C)	NIOSH 1500		2		2		10 - 50		varies		GC-FID	ST 226-01 38
Uranium (as U) soluble compounds	OSHA CSI		0.05 mg/m³		960		2000		8		DPCSP	F/CST 225-803 93 C/HLD 225-1 106
Uranium (insoluble compounds)	OSHA CSI		0.25 mg/m³		960	30	2000	2000	8	15	ICP	F/CST 225-3-01 89 C/HLD 225-1 106
Uranium (soluble compounds)	OSHA ID 170SG		0.05 mg/m³		240		2000		2		POL	F/CST 225-803 93 C/HLD 225-1 106
Urea pesticides	ASTM D 4861				240-7200		1000-5000		4 to 24		GC-ECD	PUF 226-92 44
n-Valeraldehyde	ASTM D 5197				varies		500-1200		5 min to 24 hrs		HPLC-UV	ST 226-120 ◊ or ST 226-119 40
n-Valeraldehyde	NIOSH 2536		50		10		20		8		GC-FID	ST 226-118 40
n-Valeraldehyde	OSHA 85				3		50		1		HPLC-UV	CF/CST 225-9020 63 C/HLD 225-1 106
n-Valeraldehyde (aldehydes, screening)	NIOSH 2539		50		5		20		4		GC-FID & GC-MS	ST 226-118 40
Vanadium (elements by ICP HNO_3 digestion)	NIOSH 7303			0.05 mg/m³		2.5-500,000		1000-4000		varies	ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Vanadium (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1455		0.05 mg/m³		5-2000		1000-4000		varies	ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Vanadium (elements by ICP Aqua Regia ashing)	NIOSH 7301			0.05 mg/m³		5-2000		1000-4000		varies	ICP-AES	F/CST 225-3-01 or F/CST 225-803 ¥ 93 C/HLD 225-1 106
Vanadium (elements on wipes)	NIOSH 9102				wipe						ICP-AES	W 225-2414 147 TMP 225-2415 147
Vanadium fume (as V_2O_5)	OSHA ID 125G ¶		0.05 mg/m³	0.1	480	20	2000	1000	4	20	ICP-AES	F/CST 225-3-01 or F/CST 225-3100 or F/CST 225-803 or F/CST 225-8215 93 C/HLD 225-1 106
Vanadium oxides	NIOSH 7504			0.05 mg/m³ (15 min)	600		2600		4		XRD	F/CST 225-803 93 C/HLD 225-1 106 CYC 225-01-02 115
Vanadium pentoxide (V_2O_5) *(see vanadium oxides)*	NIOSH 7504											
Vanadium pentoxide (V_2O_5) (confirmation of)	OSHA ID 185		0.05 mg/m³	0.05 mg/m³	varies		varies		varies		XRD	F/CST 225-803 93 CYC 225-105 105 C/HLD 225-1 106
Vanadium respirable dust (as V_2O_5)	OSHA ID 125G ¶			0.5 mg/m³		varies		varies		varies	ICP-AES	F/CST 225-3-01 or F/CST 225-3100 or F/CST 225-803 or F/CST 225-8215 93 C/HLD 225-1 106
Vanadium trioxide *(see vanadium oxides)*	NIOSH 7504											
Vegetable oil mist *(see dust, respirable & total nuisance)*	OSHA CSI											
Verniculite *(see dust, total & respirable nuisance)*												
Verticillium species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Verticillium species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Vinyl acetate	NON 21				24		50		8		GC	ST 226-68 39
Vinyl acetate	OSHA 51				24	3	100	200	4	15	GC-FID	ST NA SKC
Vinyl bromide	NIOSH 1009		LFC		10		20(50)		8(3.3)		GC-FID	ST 226-09 38
Vinyl bromide	OSHA 08	1074			5		20		4		GC-FID	ST 226-01 38
Vinyl chloride	ASTM D 4766	1434			24		100 or 50		4 or 8		GC-FID	ST 226-16 38
Vinyl chloride	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
Vinyl chloride	NIOSH 1007		LFC		5		50		1.6		GC-FID	ST 226-01 38
Vinyl cyclohexene dioxide	OSHA PV2083				10		20(50)		8(3.3)		GC-FID	ST 226-30 38
Vinyl toluene (methyl styrene)	EPA TO-17	1689			1 & 4		16.7 & 66.7				TD, GC	ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49
Vinyl toluene	OSHA 07		100		10		20(50)		8(3.3)		GC-FID	ST 226-01 38
N-Vinyl-2-pyrrolidinone	OSHA PV2106				10		100		100 min		GC-FID	ST 226-01 38
Vinylidene chloride	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
Vinylidene chloride	NIOSH 1015		LFC		5		20		4		GC-FID	ST 226-01 38
Vinylidene chloride	OSHA 19				3	3	200	200	15 min	15	GC-FID	ST 226-01 38
Viruses (in air)	NON 48				62.5-375		12500 +		5-30		varies	BS 225-9595 128 VT 225-9598A◊ 128
VM&P naphtha	OSHA 48				3	3	20	200	2.5	15	GC-FID	ST 226-01 38
VM&P naphtha (naphthas)	NIOSH 1550		350 mg/m³	1800 mg/m³	10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
VOCs (volatile organic compounds) (canister)	EPA IP-1A	1676					varies		varies		GC-MS	CAN 228 Series PK 228 Series
VOCs (volatile organic compounds) (canister)	EPA TO-14A	1676					varies		varies		GC-MS	CAN 228 Series PK 228 Series

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References and abbreviations are found on pages 212-213.

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	Vol. (liter) CLG/STEL Sample Time or Air Volume	Rate (ml/min) TWA Flow/Sampling Rate	Rate (ml/min) CLG/STEL Flow/Sampling Rate	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
VOCs (volatile organic compounds) (canister)	EPA TO-15	1676					varies		varies		GC-MS	CAN 228 Series PK 228 Series
VOCs (volatile organic compounds) (sample bag)	EPA 0040	1665					250-1000		1-2		GC-MS	VAC 231-939 61 SB 232-939 61
VOCs (volatile organic compounds) (sorbent tube)	EPA IP-1B	1689					1		1		TD, GC	ST Refer to Method
VOCs (volatile organic compounds) (sorbent tube)	EPA TO-17	1689			1 & 4		16.7 & 66.7				TD, GC	ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49
VOST (volatile organic sampling train)	EPA 0031								20 min		TD, GC-MS	ST 226-134 £ 41 ST Special Order
Volatile organic compounds (screening)	NIOSH 2549				5		20		4		GC-MS	ST 226-330 42
Vydate (oxamyl)	OSHA CSI				60		1000		1		HPLC	ST 226-30-16 38
Wallemia species (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Wallemia species (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Warfarin	NIOSH 5002		0.1 mg/m³		360		1500		4		HPLC-UV	FLT 225-17-01 94 CST 225-2LF 99 C/HLD 225-1 106
Welding fumes (total particulate)	OSHA ID 125G ¶				480		2000		4		ICP-AES	F/CST 225-3-01 or F/CST 225-3100 or F/CST 225-803 or F/CST 225-8215 93 C/HLD 225-1 106
Wemicide CW 104	OSHA CSI				480		1000		8		HPLC-UV	ST 226-30-16 38
Wollastonite *(see dust, total and respirable nuisance)*	OSHA CSI											
Wood alcohol (methanol)	NIOSH 2000		200	250	5	3	20	200	4	15	GC-FID	ST 226-51 39
Wood dust (except western red cedar)	OSHA CSI				960	30	2000	2000	8	30	GR	F/CST 225-803 93 C/HLD 225-1 106
Wood dust (western red cedar)	OSHA CSI		2.5 mg/m³		960		2000		8		GR	F/CST 225-803 93 C/HLD 225-1 106
Wood dust, hardwood	OSHA CSI		15 mg/m³		960		2000		8		GR	F/CST 225-803 93 C/HLD 225-1 106
Wood dust, softwood	OSHA CSI		15 mg/m³		960		2000		8		GR	F/CST 225-803 93 C/HLD 225-1 106
Wood spirit (methanol)	NIOSH 2000		200	250	5	3	20	200	4	15	GC-FID	ST 226-51 39
m-Xylene	EPA TO-17	1689			1 & 4		16.7 & 66.7				TD, GC	ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49
m-Xylene	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
m-Xylene	OSHA 1002	1746	100				13.82		8		GC-FID	PS 575-002 69
o-Xylene	EPA TO-17	1689			1 & 4		16.7 & 66.7				TD, GC	ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49
o-Xylene	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
o-Xylene	OSHA 1002	1746	100				14.24		8		GC-FID	PS 575-002 69
p-Xylene	EPA TO-17	1689			1 & 4		16.7 & 66.7				TD, GC	ST 226-300 Series 42 TH 224-26-02 49 CPC 224-26CPC-10 49
p-Xylene	ASTM D 5466				6		varies		varies		GC-MS	CAN 228 Series PK 228 Series
p-Xylene	OSHA 1002	1746	100				13.94		8		GC-FID	PS 575-002 69
m-Xylene (hydrocarbons, aromatic)	NIOSH 1501		100		2-23		10-200		varies		GC-FID	ST 226-01 38
o-Xylene (hydrocarbons, aromatic)	NIOSH 1501		100	150	2-23	2-23	10-200	10-200	varies	varies	GC-FID	ST 226-01 38
p-Xylene (hydrocarbons, aromatic)	NIOSH 1501		100		2-23		10-200		varies		GC-FID	ST 226-01 38
Xylene (o-, m-, & p-isomers)	OSHA 07	1186	100		10	3	20(50)	200	8(3.3)	15	GC-FID	ST 226-01 38
Xylene (o-, m-, & p-isomers)	OSHA 1002	1746	100		12		50		4		GC-FID	ST 226-01 38
m-Xylenediamine (mXDA)	OSHA 105	1405				15		1000		15	HPLC-UV	CF/CST 225-9004 63 C/HLD 225-1 106
p-Xylenediamine (pXDA)	OSHA 105	1405				15		1000		15	HPLC-UV	CF/CST 225-9004 63 C/HLD 225-1 106
Xylidine	OSHA CSI		5		24		50		8		GC-FID	ST 226-10 38
2,4-Xylidine (amines, aromatic)	NIOSH 2002	1056	2		10		20(50)		8(3.3)		GC-FID or GC-NSD	ST 226-10 38
Yeast (fungi, molds, spores)	OSHA CSI				120		1000		2		varies	F/CST 225-3-01 89 C/HLD 225-1 106
Yeast (fungi, molds, spores)	OSHA CSI				141.5		28,300		5 min		varies	BI 225-9611 126
Yttrium	OSHA ID 121		1 mg/m³		960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Yttrium (elements by ICP HNO_3 digestion)	NIOSH 7303				0.1-50,000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Yttrium (elements by ICP Aqua Regia ashing)	NIOSH 7301				5-1000		1000-4000		varies		ICP-AES	F/CST 225-3-01 or F/CST 225-803 ¥ 93 C/HLD 225-1 106
Yttrium (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1455			5-1000		1000-4000		varies		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Yttrium (elements on wipes)	NIOSH 9102				wipe						ICP-AES	W 225-2414 147 TMP 225-2403 or TMP 225-2415 147
Zectran	OSHA CSI										W	W 225-2401A 147
Zinc	OSHA ID 121	1204			960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Zinc	OSHA ID 125G ¶				480		2000		4		ICP-AES	F/CST 225-3-01 or F/CST 225-3100 or F/CST 225-803 or F/CST 225-8215 93 C/HLD 225-1 106
Zinc (elements by ICP Aqua Regia ashing)	NIOSH 7301				5-200		1000-4000		varies		ICP-AES	F/CST 225-3-01 or F/CST 225-803 ¥ 93 C/HLD 225-1 106
Zinc (elements by ICP HNO_3 digestion)	NIOSH 7303		5 mg/m³ (ZnO)	15 mg/m³ (ZnO)	0.5-10,000	0.5-10,000	1000-4000	1000-4000	varies	varies	ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Zinc (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1455	5 mg/m³ (ZnO)	10 mg/m³ (ZnO)	5-200	5-200	1000-4000	1000-4000	varies	varies	ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Zinc (elements on wipes)	NIOSH 9102				wipe						ICP-AES	W 225-2414 147 TMP 225-2403 or TMP 225-2415 147
Zinc & compounds (as Zn)	NIOSH 7030		5 mg/m³ (ZnO)	15 mg/m³ (ZnO)	240	30	1000	2000	4	15	AA-F	F/CST 225-3-01 89 C/HLD 225-1 106
Zinc bromide *(see dust, total and nuisance)*												
Zinc chloride fume	OSHA ID 121	1207	1 mg/m³		960	30	2000	2000	8	15	AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.

Chemical Hazard	Agency Reference	Chem F File	SAMPLING ∞ Agency Standard TWA (ppm)	Agency Standard CLG/STEL (ppm)	Vol. (liter) TWA Sample Time or Air Volume	Vol. (liter) CLG/STEL Sample Time or Air Volume	Rate (ml/min) TWA Flow/Sampling Rate	Rate (ml/min) CLG/STEL Flow/Sampling Rate	Time TWA (hrs)	Time CLG/STEL (min)	Analytical Method	SKC Collecting Equipment & Page Number
Zinc chloride fume	OSHA ID 125G¶		1 mg/m³		480	30	2000	2000	4	15	ICP-AES	F/CST 225-3-01 93 or F/CST 225-3100 93 or F/CST 225-803 93 or F/CST 225-8215 93 or C/HLD 225-1 106
Zinc chromate (CR(VI))	OSHA ID 215 (V2)	1439	0.005 mg/m³		960		2000		8		IC-UV	F/CST 225-802 Ω 93 C/HLD 225-1 106
Zinc chromates (as CrO_3)	OSHA ID 215 (V2)	1439	0.005 mg/m³		960		2000			15	IC-UV	F/CST 225-802 Ω 93 C/HLD 225-1 106
Zinc dibutyldithiocarbamate	OSHA PV2065				180		1000		3		HPLC-UV	ST 226-30-16 38
Zinc oxide	NIOSH 7502		5 mg/m³	15 mg/m³ (15 min)	240	30	1000	2000	4	15	XRD	FLT 225-2705 93 CST 225-3-23 99
Zinc oxide (elements by ICP HNO_3 digestion)	NIOSH 7303		5 mg/m³	15 mg/m³	0.5-10,000	0.5-10,000	1000-4000	1000-4000	varies	varies	ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Zinc oxide (particulates, respirable)	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Zinc oxide (particulates, total)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Zinc oxide dust *(see dust, total & respirable)*	OSHA CSI											
Zinc oxide fume	OSHA ID 121		5 mg/m³		960	30	2000	2000	8	15	AA or AES	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Zinc oxide fume	OSHA ID 125G¶		5 mg/m³		480	30	2000	2000	4	15	ICP-AES	F/CST 225-3-01 89 or F/CST 225-3100 93 or F/CST 225-803 93 or F/CST 225-8215 93 or C/HLD 225-1 106
Zinc oxide fume	OSHA ID 143		5 mg/m³		960	30	2000	2000	8	15	XRD	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Zinc oxide fume (ICP analysis of metal/metalloid particulates from solder operations)	OSHA ID 206		5 mg/m³		480		2000		4		ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Zinc stearate (particulates, respirable)	NIOSH 0600	1038			375		2500		2.5		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CYC 225-01-02 115 CST 225-3LF 99
Zinc stearate (particulates, total)	NIOSH 0500	1035			120		2000		1		GR	FLT 225-5-37-P 93 C/HLD 225-1 106 CST 225-2LF 99
Zinc stearate (respirable dust)	OSHA CSI		5 mg/m³		912		1900		8		GR	F/CST 225-803 93 C/HLD 225-1 106
Zinc stearate (total dust)	OSHA ID 121		15 mg/m³		960		2000		8		AA or AES	F/CST 225-3-01 89 C/HLD 225-1 106
Zinc stearate (total dust)	OSHA ID 125G¶		15 mg/m³		480		2000		4		ICP-AES	F/CST 225-3-01 89 or F/CST 225-3100 93 or F/CST 225-803 93 or F/CST 225-8215 93 or C/HLD 225-1 106
Zineb	OSHA 107				500		2000		250 min		HPLC-UV	F/CST 225-3-01 89 C/HLD 225-1 106
Ziram	OSHA PV2073				120		1000		2		HPLC-UV	ST 226-30-16 38
Zirconium (elements by ICP Aqua Regia ashing)	NIOSH 7301		5 mg/m³	10 mg/m³	5-200	5-200	1000-4000	1000-4000	varies	varies	ICP-AES	F/CST 225-3-01 89 or F/CST 225-803 ¥ 93 C/HLD 225-1 106
Zirconium (elements by ICP HNO_3/$HClO_4$ ashing)	NIOSH 7300	1455	5 mg/m³	10 mg/m³	5-200	5-200	1000-4000	1000-4000	varies	varies	ICP-AES	F/CST 225-3-01 89 C/HLD 225-1 106
Zirconium (elements on wipes)	NIOSH 9102				wipe						ICP-AES	W 225-2414 147 TMP 225-2403 or TMP 225-2415 147
Zirconium compounds (as Zr)	OSHA ID 121		5 mg/m³		960	30	2000	2000	8	15	AA or AES	F/CST 225-803 93 C/HLD 225-1 106

Symbols and Notes

∞ ..... *The sampling parameters shown are suggestions based on the ranges of volume, flow, and time specified in the methods. It is the responsibility of the analyst performing the sampling and analysis to adjust parameters so that the required detection limits can be obtained. It is the responsibility of the user to research published methods to determine validation level and suitability for unique applications.*

C ..... *Ceiling Value*

CSI ..... *OSHA Chemical Sampling Information*

EL ..... *Excursion Limit*

LFC ..... *NIOSH standard: Lowest Feasible Concentration*

LOQ ..... *Limit of Quantitation*

NA SKC ..... *Not available from SKC*

NON ..... *Non-agency reference*

NVM ..... *No validated method*

OEL ..... *U.S. Army Occupational Exposure Limit*

OR-OSHA ..... *Oregon OSHA method and target concentrations*

PV ..... *Provisional Method*

Special order ..... *Because of limited shelf-life, certain sampling media are available only as special order items.*

** ..... *Optional, use filter if particulates are present*

‡ ..... *Filter or tube must be chemically treated before sampling.*

♠ ..... *Modified procedure or sampler*

◊ ..... *Other collection liquids may be more suited to target microorganisms.*

¥ ..... *This method does not digest PVC filters (Cat. No. 225-803) completely.*

Δ ..... *1.0-micron PTFE filter is a NIOSH recommended substitute filter for the 0.8-micron PVC filter originally recommended in NIOSH Method 7904.*

Σ ..... *Use an oxidizer tube if sulfur dioxide is present.*

+ ..... *Sonic flow*

o ..... *Use sorbent tube Cat. No. 226-120 when sampling in atmospheres containing ozone.*

†† ..... *Special order/limited shelf-life; contact SKC*

▼ ..... *The MOPIP Derivatizing Solution, Cat. No. 225-9050, is needed to analyze for monomer/oligimer aerosol.*

Ω ..... *For sampling in Chromium plating operations, PVC filters (225-802) require special treatment after receipt at the laboratory. Alternatively quartz fiber filters (225-1827) treated with NaOH may be used. Refer to the method for details.*

π ..... *SKC recommends the AirChek XR5000 Sampling Pump when using a silica gel sorbent tube along with the coated filter at flows above 500 ml/min.*

§ ..... *If using PTFE Filter 225-27-07 as specified in NIOSH 5524 for Metalworking Fluids, follow the procedure in NIOSH DRAFT APPENDIX for NIOSH METHOD 5524 (http://www.skcinc.com/instructions/38030.pdf) to mitigate problems with weight instability and subsequent high blanks following extraction.* ***Failure to follow the procedure in the NIOSH Draft Appendix will result in invalid samples.***

● ..... *NIOSH Method 5524 analysis requires a Filter Funnel which is available from Case Custom Environmental Equipment, Erlanger, KY, Telephone 859-250-8558.*

£ ..... *Collect six samples at 20 minutes each. Use two Cat. No. 226-134 per sample.*

¶ ..... *MCE filters are specified in the methd but PVC filters can be used for sample collection and analysis by ICP. Refer to the method for details*

Agency standards for OSHA listings represent the OSHA PELs reported in the 29 CFR 1910.1000 Part 1910, Section 1000.

References and abbreviations are found on pages 212-213.