

# Total Phosphorus (TP) Test Procedure - HR

## ► Required Equipment

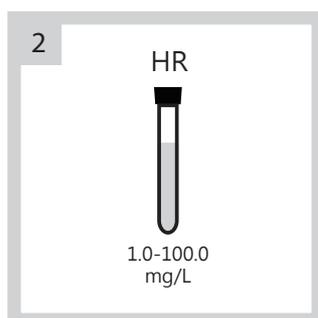
1. CR 25, Reactor
2. WD 100, Multiparameter Colorimeter
3. Hach, Total Phosphorus Reagent Set
4. Pipette and Pipette Tip
5. Micro Funnel

## ► Inspection Before Test

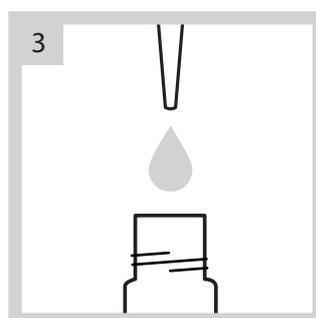
1. Clean the glassware with 6.0 N (1:1) Hydrochloric Acid, then fully rinse with pure water.
2. Do NOT use detergent that contains phosphate to clean the sample bottles or containers to prevent phosphate contamination.
3. Start analysis after increasing sample to room temperature.



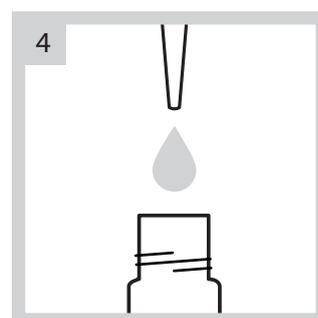
Turn on CR 25 reactor then start TP program to preheat to 150°C.



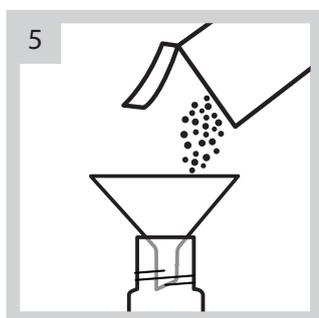
Select the appropriate concentration of reagent according to the phosphate concentration of sample.



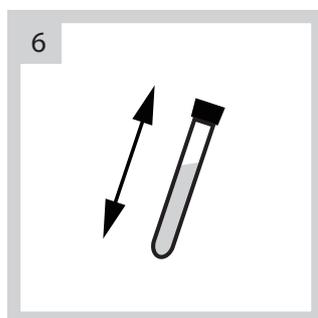
Add 5 ml pure water to one reagent vial as the blank sample.



Add 5 ml sample to one reagent vial as the test sample.



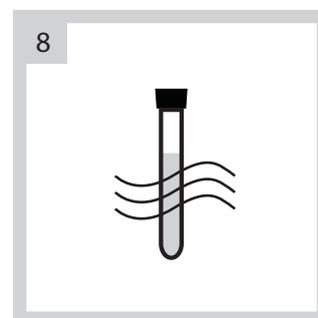
Add one pack of Potassium Persulfate powder pillow to each vial.



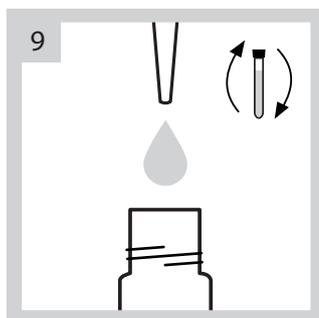
Close the vials and shake thoroughly to dissolve the powder.



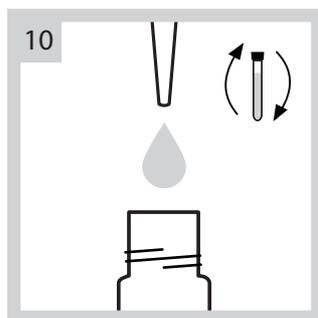
Put the vials into CR 25 reactor then start to countdown from 30 mins at 150°C.



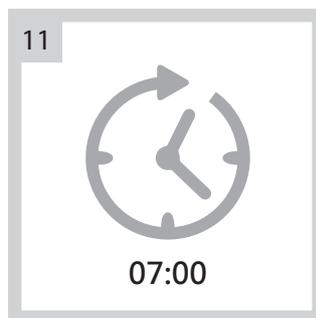
Remove the vials after digestion and cool vials down to room temperature.



Add 2 ml of 1.54N Sodium Hydroxide Standard Solution to each vial. Close the vials and invert to mix.

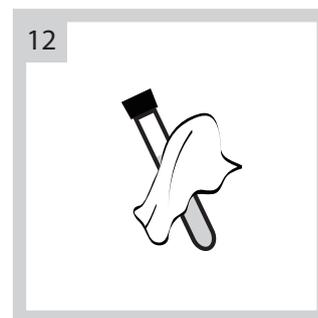


Add 0.5 ml Molybdovanadate reagent to each vial. Close the vials and invert to mix.

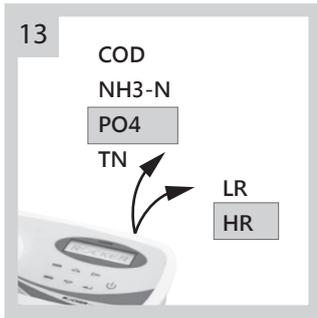


Stand for a 7-min reaction.

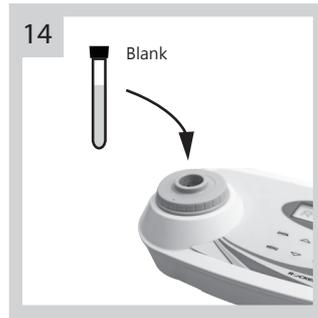
• Measure the sample between 7 - 9 mins after adding Molybdovanadate reagent



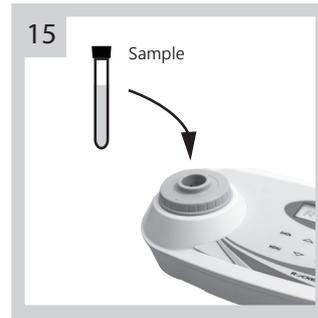
Clean the vial.



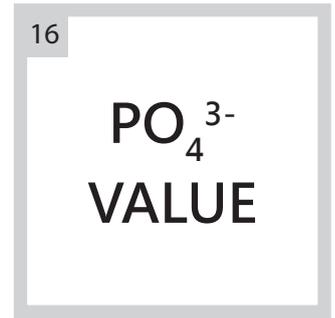
Turn on WD 100 colorimeter, then select test item and concentration range.



Insert the blank sample vial into WD 100 colorimeter to start a zero calibration.



Insert the sample vial into WD 100 colorimeter to start a test.



Get TP concentration.