

Total Phosphorus (TP) Test Procedure - LR

► Required Equipment

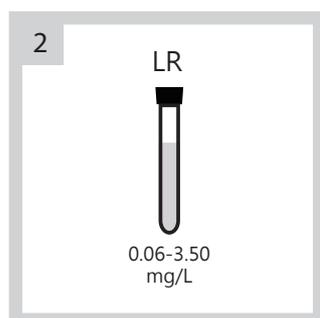
1. CR 25, Reactor
2. WD 100, Multiparameter Colorimeter
3. Hach, Total Phosphorus Reagent Set
4. Pipette and Pipette Tip
5. Micro Funnel

► Inspection Before Test

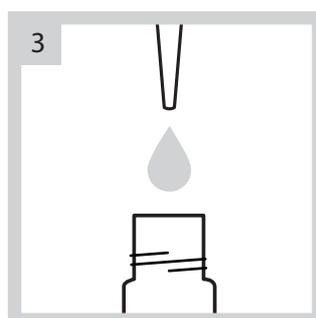
1. Clean the glassware with 6.0 N (1:1) Hydrochloric Acid, then fully rinse with pure water.
2. Do NOT use detergent that contains phosphate to clean the sample bottles or containers to prevent phosphate contamination.
3. Start analysis after increasing sample to room temperature.



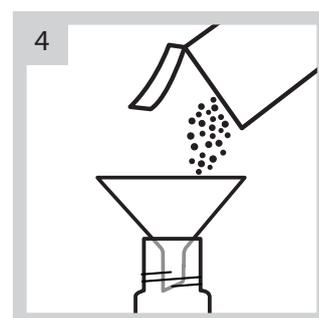
1
Turn on CR 25 reactor then start TP program to preheat to 150°C.



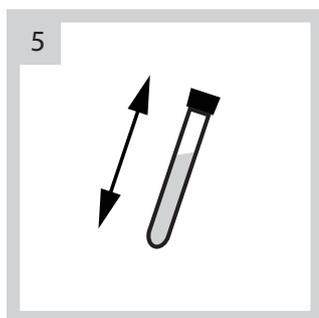
2
Select the appropriate concentration of reagent according to the phosphate concentration of sample.



3
Add 5 ml sample to one reagent vial.



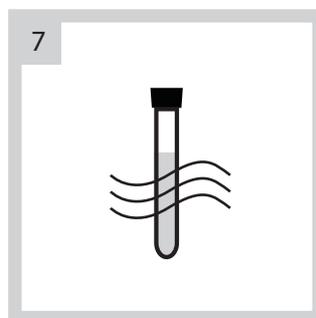
4
Add one pack of Potassium Persulfate powder pillow to the vial.



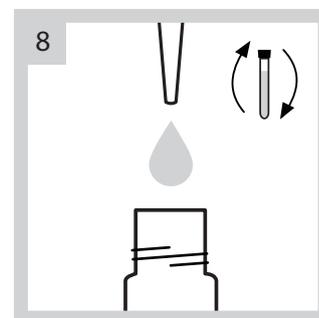
5
Close the vial and shake thoroughly to dissolve the powder.



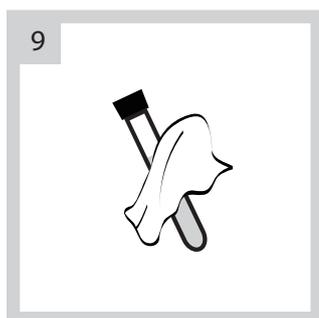
6
Put the vials into CR 25 reactor then start to countdown from 30 mins at 150°C.



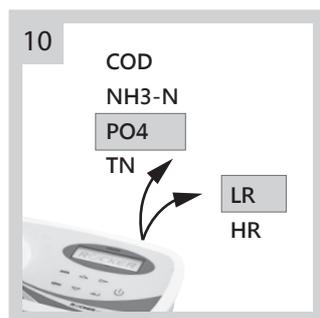
7
Remove the vial after digestion and cool vial down to room temperature.



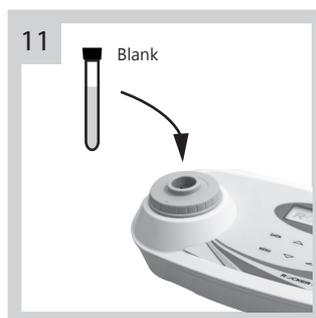
8
Add 2 ml of 1.54N Sodium Hydroxide Standard Solution to the vial. Close the vial and invert to mix.



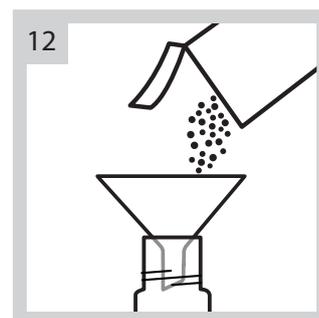
9
Clean the vial.



10
Turn on WD 100 colorimeter, then select test item and concentration range.

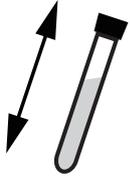


11
Insert the vial into WD 100 colorimeter to start a zero calibration.



12
Add one pack of PhosVer 3 powder pillow to the vial.

13



Close the vial and shake vigorously for more than 30 seconds.

14



Stand for a 2-min reaction.
• Measure the sample in 8 mins after 2-min reaction

15



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

16

PO_4^{3-}
VALUE

Get TP concentration.