

Cr⁶⁺-D Chromium (Hexavalent) (Low Range)

Color development: None → Light red → Red purple

Cell : PACKTEST Square Cup

Method : Diphenylcarbazide Absorptiometry Coupled with Collecting on Membrane Filter

Wavelength : 542 nm, 580 nm, 670 nm

Range : 0.003 — 0.100 mg/L(ppm)

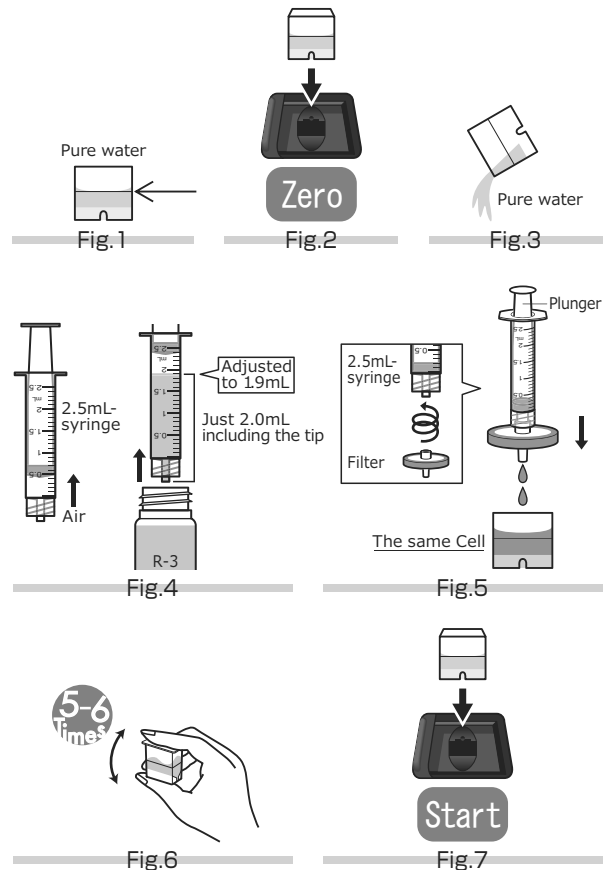
Reagent : DPR—Cr⁶⁺D R-1 (Pack) , R-2 (Liquid) , R-3 (Liquid)

Reaction time : 0 min.

Usage : Read the instruction supplied with "DPR Reagent: Chromium(Hexavalent)(Low Range)".

Procedure

1. Press **[Cr⁶⁺-D]**.
2. Press **[OK]** to switch to the photometry window.
3. Perform procedures ① - ⑥ of the usage supplied with the DPR Reagent: Chromium(Hexavalent) (Low Range) (model: DPR-Cr⁶⁺D).
4. Fill the Cell with pure water (or tap water) so that the water level exceeds the mark line (1.5 mL). (Fig.1)
5. Put the Cell in the cell box and press **[Zero]**. (Fig.2)
6. Take out the Cell and completely discard the water in the Cell. If water droplets exist on the inner wall, remove them by absorbing them with tissue paper or the like. (Fig.3)
7. Suck about 0.5 mL of air into the 2.5 mL syringe, suck the R-3 reagent in succession, and adjust the liquid level to the scale mark of 1.9 mL. (Fig.4)
8. Attach the filter to the 2.5 mL syringe, and extrude the R-3 reagent one drop by one drop to collect the whole amount in the Cell. When you have extruded almost half the R-3 reagent from the syringe, pull back the pushing rod to the uppermost portion (scale mark of 2.5 mL). Then, slowly extrude the remaining R-3 reagent one drop by one drop. The collection completes when the pushing rod reaches the lowermost part and the remaining R-3 reagent has been completely extruded. (Fig.5)
9. Attach the cap of the Cell, shake the Cell 5 to 6 times while strongly holding it, and then remove the cap.(If the cap is kept attached, the solution leaks out.)(Fig.6)
10. Set the Cell in the cell box again and press **[Start]**. (Fig.7)
11. The concentration will be automatically displayed.



CAUTION

1. In this method, the concentration of hexavalent chromium is obtained from the absorbance of the solution that has been obtained by using DPR Reagent: Chromium (Hexavalent) (Low Range). For notes on the operation, refer to the instruction supplied with the reagent.
2. The pH of the sample as of after adding R-1 reagent is 1, that of the sample as of after adding R-2 reagent is 2, and that of the solution is 3 to 4. If the pH of the sample is not within the range from 2 to 9, neutralize the sample with dilute sulfuric acid or dilute sodium hydroxide solution, etc.
3. As the sample as of after adding reagent is strongly acidic, wear PPE during measurement and gently proceed with the operation procedures. Note that if the connection of the screw part between each syringe and filter is loose, the solution could leak out.
4. Perform measurement with the sample temperature set to 15 to 30°C .

Influence of coexisting substance

Refer to the instruction supplied with "DPR Reagent: Chromium(Hexavalent)(Low Range)".

Information on reagent

Refer to the instruction supplied with "DPR Reagent: Chromium(Hexavalent)(Low Range)".

The pH of the solution is 3 to 4.