Ni-D　Nickel (DPM)

Color development: None → Light Pink → Pink
Method　　: Nioxime
Range　　: 0.3 — 10.0 mg/L(ppm)
Reagent　　: WAK-Ni (D)　Tube
Reaction time : 2 min. after drawing sample into the tube.

Cell : PACKTEST Square Cup
Wavelength : 550 nm, 535 nm, 670 nm

Procedure

1. Press【Ni-D】.
2. Press【OK】to switch to the photometry window.
3. Fill the Cell with the sample for 1.5 mL (up to line). (Fig.1)
4. Put the Cell in the cell box and press【Zero】. (Fig.2)
5. Suck the whole amount of the sample in the Cell into the tube and press【Start】at the same time. (Fig.3)
6. Shake the tube in Step 5 by overturning it to right and left for 60 times in 1 minute. (Fig.4)
7. Return the solution in the tube to the Cell in a gentle manner, set it again in the cell box. (Fig.5)
8. After 2 minutes have elapsed, the concentration will be automatically displayed.

Fig.1

Fig.2

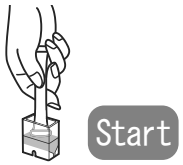

Fig.3

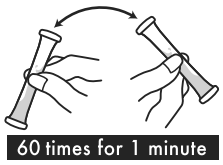

Fig.4

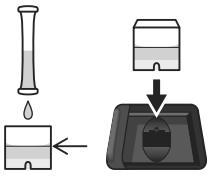
Fig.5

CAUTION

1. In this method, the concentration of ionized nickel (Ni^{2+}) in the sample is measured. If a result including turbid, deposition, and complex is required, dissolve the target substance in advance and then perform measurement.
2. The optimum pH during color development is 4. If the pH of the sample is not within the range from 4 to 9, neutralize the sample with dilute sulfuric acid or dilute sodium hydroxide solution, etc.
3. Perform measurement with the sample temperature set to 15 to 30℃ .

Influence of coexisting substance

The stored calibration curve has been created by using the standard solution. If the influence of other substance is considered, check the measurement value by comparing it with the official method or by standard addition method.
The right chart is the list of interference data for acceptable level by adding each of the single substances to the standard solution.

Seawater does not affect the measurement.

≤ 1000mg/L,: B (Ⅲ) , Ca^{2+} , Cl^- , Cr^{3+} , F^- , I^- , K^+ , Mg^{2+} , Mn^{2+} , Mo (Ⅵ) , Na^+ , NH_4^+ , NO_2^- , NO_3^- , PO_4^{3-} , SO_4^{2-} , Zn^{2+} , Phenol
≤ 500mg/L,: Ag^+ , Residual Chlorine
≤ 100mg/L,: Anionic Surfactant
≤ 50mg/L,: Ba^{2+} , Cr (Ⅵ)
≤ 20mg/L,: Al^{3+} , Co^{2+}
≤ 10mg/L,: Fe^{3+}
≤ 3mg/L,: Cu^{2+}
≤ 2mg/L,: Fe^{2+}
≤ 1mg/L,: CN^-

Information on reagent

Refer to the usage that comes with PACKTEST.
The pH of the solution is about 4.