



KYORITSU

PACKTEST

INSTRUCTIONS

# Molybdenum

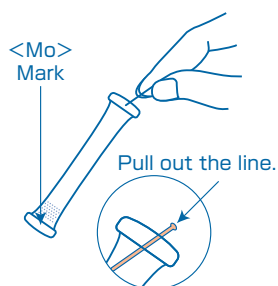
Model WAK-Mo

Catechol Visual Colorimetric Method

Main reagent: Protocatechnic Acid

Range: Mo(VI) 5 - 500 mg/L(ppm)

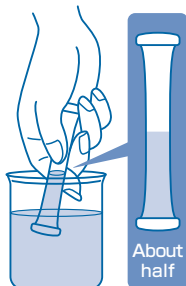
## How to Use



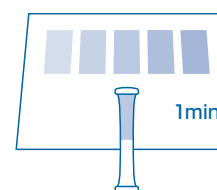
① Remove the colored line at the top of the tube to clear the aperture.



② Press tube's side wall to expel air, and hold the tube.



③ Immerse the aperture of the tube into the sample and release to fill the tube halfway. Invert the tube back and forth for 5-6 times.



④ After 1 min, compare the actual color in the tube with provided Standard Color.

## How to Read the Test

After the reaction time, compare the color of the tube with Standard Color. The nearest color indicates the concentration value of the analyte in your sample. A color between two standard colors indicates the value between them.

## Handling of PACKTEST Before and After Use

**First Aid** **Eye contact** → Immediately flush eyes with plenty of water.

**Skin contact** → Immediately flush contacted area with water.

**Ingestion** → Immediately rinse mouth.

If ingesting the content, or any symptom appears, seek medical advice immediately. Please refer to SDS for further information.

**Storage** Use PACKTEST tubes as soon as possible after opening the laminated package.

**Disposal** For business use, please follow in a manner consistent with Federal, State, and Local Regulations. Otherwise, the tube can be disposed as combustible waste.

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## PACKTEST Molybdenum

### Feature

This product utilizes the Catechol method, which forms yellow-orange-red colored chelate produced by reacting with Molybdenum(VI) ( $\text{MoO}_4^{2-}$ ). It allows to measure the coolant in radiator or other samples easily and rapidly.

### Caution

1. This product measures the Molybdic acid ( $\text{MoO}_4^{2-}$ ) ion in the sample and converts to the molybdenum value. If you prefer to get the result including suspension and chelate, please employ the pretreatment prior to use. Molybdenum dioxide cannot be measured with this product. You can calculate the value as molybdenum acid when multiplying the result by 1.7.
2. The optimum pH upon reaction will be around 7. If the pH of the sample exceeds 2–9, it needs to be neutralized with diluted Sulfuric Acid or diluted Sodium Hydroxide solution prior to use.
3. When concentration value of molybdenum standard solution is 1000mg/L, the color develops stronger and will turn dark red. When the concentration value is expected to be very high, please dilute the sample prior to measurement.
4. Keep temperature of the sample between 15–40°C.
5. Ensure that the PACKTEST tube is filled up to the half.
6. Even the reagent is not completely dissolved, it will not affect the reading.
7. When comparing to the Standard Color, please be sure to read under the daylight or equivalent light source. It may be difficult to determine the closest color under the direct sunlight, certain florescent lights, mercury lamp, or LED.
8. You can put the line back into the tube to seal. This will avoid possibility of spilling the content of the tube.

### Interference

Standard Color is prepared based on the standard solution. If there are some coexisting substances that may cause interference, please compare the result with official method or standard addition method for verification. Below is the list of interference data for acceptable level by adding each of the single substances to the standard solution.

- ≤1000mg/L :  $\text{Ag}^+$ ,  $\text{Al}^{3+}$ , B(III),  $\text{Ca}^{2+}$ ,  $\text{Cl}^-$ ,  $\text{CN}^-$ ,  $\text{F}^-$ ,  $\text{I}^-$ ,  $\text{K}^+$ ,  $\text{Mg}^{2+}$ ,  $\text{Mn}^{2+}$ ,  $\text{Na}^+$ ,  $\text{NH}_4^+$ ,  $\text{NO}_2^-$ ,  $\text{NO}_3^-$ ,  $\text{SO}_4^{2-}$ ,  $\text{Zn}^{2+}$ , Anionic Surfactant, Glucose, Residual Chlorine, Hydrazine, Phenol, Formaldehyde
- ≤500mg/L :  $\text{Ni}^{2+}$
- ≤100mg/L :  $\text{Co}^{2+}$ ,  $\text{Cr}^{3+}$
- ≤50mg/L :  $\text{Cu}^{2+}$ ,  $\text{Fe}^{2+}$ ,  $\text{Fe}^{3+}$
- ≤10mg/L : Cr(VI)
- ≤1mg/L : V(V)

Seawater does not affect the result.

If phosphate or silicate acid is present, it will form chelate complex and causing negative false reading.

## **[Caution]**

- This product is made for analyzing water quality purpose only. Do not use for any other purpose.
  - This product contains small amount of chemicals. Please read instruction manual, GHS labels, SDS, and other necessary document thoroughly prior to use.
  - Please keep this information handy for future reference.
- <Safety>
- Please wash your hands thoroughly before and after the test. Do not breathe the chemical reagents.
    - It is highly recommended to wear protective gloves, eye protection, and mask upon using this product.
    - Avoid release chemical reagents or waste solution to the environment.
- <Storage>
- Please keep this product out of reach of children. Keep it in the dry, cool, and dark place.
- <Other>
- Please check the expiration date shown on the box, and make sure to use within the date.
  - Specifications are subject to change without notice.



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