Molybdate Test Kit

MO-2 (1419301)

DOC326.98.00030

Test preparation

CAUTION: ⚠ Review the Safety Data Sheets (MSDS/SDS) for the chemicals that are used. Use the recommended personal protective equipment.

- Put the color disc on the center pin in the color comparator box (numbers to the front).
- Use sunlight or a lamp as a light source to find the color match with the color comparator box.
- Rinse the tubes with sample before the test. Rinse the tubes with deionized water after the test.
- If the color match is between two segments, use the value that is in the middle of the two segments.
- If the color disc becomes wet internally, pull apart the flat plastic sides to open the color disc. Remove the thin inner disc. Dry all parts with a soft cloth. Assemble when fully dry.
- Undissolved reagent does not have an effect on test accuracy.
- Use the filtration procedure for samples that contain turbidity.
- To verify the test accuracy, use a standard solution as the sample.
- To record the test result as mg/L MoO_4^{2-}, multiply the test result by 1.67.
- To record the test result as mg/L Na_2MoO_4, multiply the test result by 2.25.

Replacement items

Description	Unit	Item no.
MolyVer 1 Reagent Powder Pillows, 25 mL	100/pkg	1414669
MolyVer 2 Reagent Powder Pillows, 25 mL	100/pkg	1414869
MolyVer 3 Reagent Powder Pillows, 25 mL	100/pkg	1417869
Bottle, square, glass, 29 mL	6/pkg	43906
Color disc, molybdate molybdenum, 0–40 mg/L	each	9263400
Color comparator box	each	173200
Filter paper, 2–3 micron, pleated, 12.5 cm	100/pkg	189457
Funnel, poly, 65 mm	each	108367
Glass viewing tubes, 18 mm	6/pkg	173006

Replacement items (continued)

Description	Unit	Item no.
Long-path adapter	each	2412200
Stoppers for 18-mm glass tubes and AccuVac Ampuls	6/pkg	173106

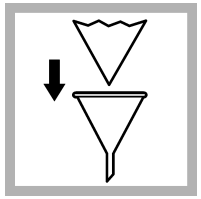
Optional items

Description	Unit	Item no.
Molybdenum Standard Solution, 10 mg/L as Mo^{6+}	100 mL	1418742
Sulfamic Acid Powder Pillows	100/pkg	105599
Water, deionized	500 mL	27249

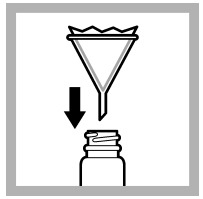
Interferences

Substance	Interference level
Aluminum	More than 50 mg/L
Chromium	More than 1000 mg/L
Copper	Samples that contain 10 mg/L or more of copper will show a positive interference that increases over time. Read these samples as soon as possible after the 3-minute reaction period.
Iron	More than 50 mg/L
Nickel	More than 50 mg/L
Nitrite	Nitrite causes high results. Add one Sulfamic Acid Powder Pillow to the sample before the reagents are added to remove 700 mg/L nitrite as N.

Filtration procedure for turbid samples

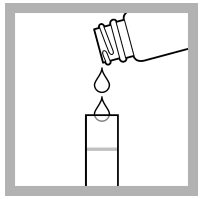


1. Put the filter paper in the funnel.



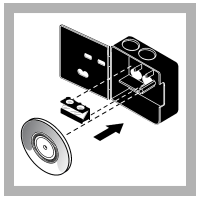
2. Put the funnel on the bottle.

3. Pour the sample into the funnel.

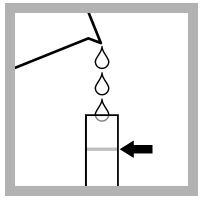


4. Use the filtered sample in the test procedure.

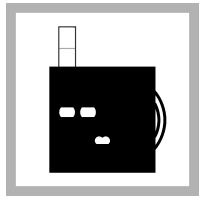
Test procedure—Molybdenum (0–8 mg/L Mo^{6+})



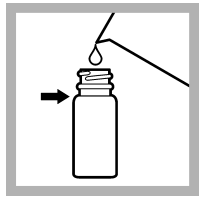
1. Install the long-path adapter in the color comparator box.



2. Fill a tube to the top line with sample.



3. Put the tube into the left opening of the color comparator box.



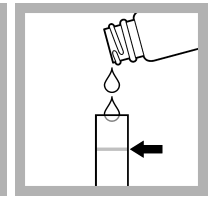
4. Fill a bottle to the shoulder with sample.

5. Add one MolyVer 1 Reagent Powder Pillow. Swirl to mix.

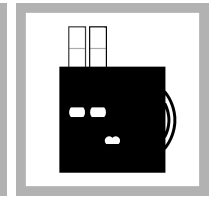
6. Add one MolyVer 2 Reagent Powder Pillow. Swirl to mix.

7. Add one MolyVer 3 Reagent Powder Pillow. Swirl to mix.

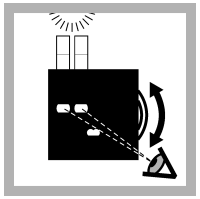
8. Wait 3 minutes. A yellow color develops.



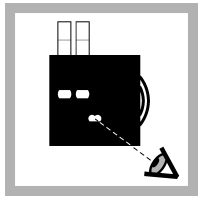
9. Fill a second tube to the top line with the prepared sample.



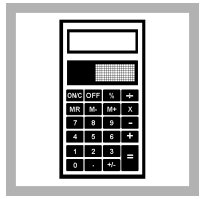
10. Put the second tube into the color comparator box.



11. Hold the color comparator box below a light source. Turn the color disc to find the color match.

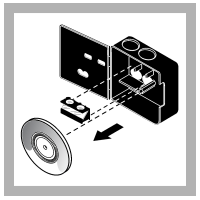


12. Read the value in the scale window.

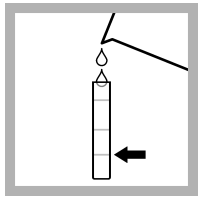


13. Divide the value by 5 to get the test result in mg/L.

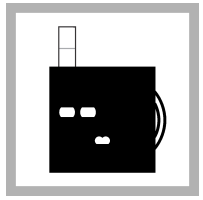
Test procedure—Molybdenum (0–40 mg/L Mo^{6+})



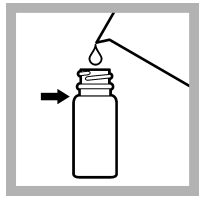
1. If installed, remove the long-path adapter.



2. Fill a tube to the first line (5 mL) with sample.



3. Put the tube into the left opening of the color comparator box.



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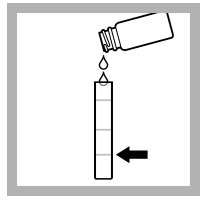
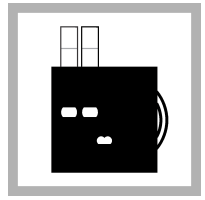
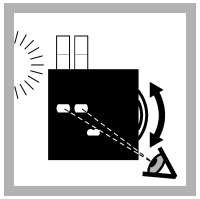
8. Wait 3 minutes. A yellow color develops.



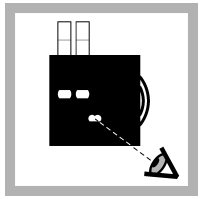
9. Fill a second tube to the first line (5 mL) with the prepared sample.



10. Put the second tube into the color comparator box.



11. Hold the color comparator box in front of a light source. Turn the color disc to find the color match.



12. Read the result in mg/L in the scale window.