

MOLYBDENUM-HIGH RANGE

THIOGLYCOLATE METHOD • CODE 3699-02-SC

QUANTITY	CONTENTS	CODE
2 x 30 mL	*Mo Buffer	*3997-G
2 x 30 mL	*Molybdenum Oxidizing Reagent	*6485-G
2.5g	*Molybdenum Indicator Powder	*6486-S
1	Spoon, 0.05g, plastic	0696
2	Pipets, 1.0 mL, plastic w/cap	0372

*WARNING: Reagents marked with an * are considered hazardous substances. To view or print a Material Safety Data Sheet (MSDS) for these reagents see MSDS CD or our web site. To obtain a printed copy, contact us by e-mail, phone or fax.

Molybdenum occurs naturally in the earth's crust as molybdenite and wolfenite, and is an important element in many biochemical reactions, including nitrogen fixation. In industrial processes, such as the operation of boilers and cooling towers, molybdenum, in the form of sodium molybdate, is used as a corrosion inhibitor.

APPLICATIONS: Boiler and cooling water.

RANGE: 0.0–50.0 ppm Molybdenum

METHOD: Calcium thioglycolate reacts with molybdenum to give a yellow color with an intensity proportional to the amount of molybdenum present.

SAMPLE HANDLING & PRESERVATION: Molybdenum samples may be stored in either plastic or glass containers.

INTERFERENCES: Nickel levels less than 50 ppm do not interfere; aluminum levels less than 10 ppm do not interfere; chromate at higher concentrations interferes due to the intense yellow color. Ferrous iron levels below 50 ppm do not interfere, but low levels of ferric iron will cause a large blank. Highly buffered samples may exceed the capacity of the system possibly producing inaccurate results.

PROCEDURE

1. Press and hold **ON** button until colorimeter turns on.
2. Press **ENTER** to start.
3. Press **ENTER** to select TESTING MENU.
4. Select ALL TESTS (or another sequence containing 61 Moly-HR) from TESTING MENU.
5. Scroll to and select 61 Moly-HR from menu.
6. Fill clean tube (0290) to 10 mL line with sample water.
7. Insert tube into chamber, close lid and select SCAN BLANK.
8. Remove tube from colorimeter. Use a 1.0 mL pipet (0372) to add 1.0 mL of *Mo Buffer (3997). Cap and mix.
9. Use a second 1.0 mL pipet (0372) to add 1.0 mL of *Molybdenum Oxidizing Reagent (6485). Cap and mix.
10. Use 0.05 g spoon (0696) to add one measure of Molybdenum Indicator Powder (6486). Cap and mix until powder dissolves. Solution will turn yellow if molybdenum is present.
11. Insert tube into chamber, close lid and select SCAN SAMPLE. Record result.
12. Press **OFF** button to turn colorimeter off or press **EXIT** button to exit to a previous menu or make another menu selection.