DROP TEST

MOLYBDENUM (1 drop = 2, 5, 20, or 50 ppm)

COMPONENTS:

2 x 4030	**Pipets, Calibrated 0.5 & 1.0 mL, plastic w/cap**
1 x 4078	**Pipet, Graduated, 3 mL (0.5 mL div.), plastic**
1 x 5375	**Instruction**
2 x 9198	**Sample Tubes, Graduated, 25 mL, plastic w/cap**
1 x R-0887	**Molybdenum Standard 20 ppm**
1 x R-0890	**Molybdenum Buffer Solution**
1 x R-0891	**Molybdenum Indicator Solution**
1 x R-0892	**Molybdenum Titrating Solution, DB**

TO ORDER REPLACEMENT PARTS & REAGENTS CALL TOLL-FREE 800-837-8548.

PROCEDURE:

CAREFULLY READ AND FOLLOW PRECAUTIONS ON REAGENT LABELS.
KEEP REAGENTS AWAY FROM CHILDREN.

For 1 drop = 2 or 5 ppm Mo

1. Rinse and fill 25 mL sample tube (#9198) to mark with water to be tested.

NOTE: For 1 drop = 2 ppm, fill to 25 mL mark.
For 1 drop = 5 ppm, fill to 10 mL mark.

2. Rinse and fill second 25 mL sample tube to same mark with distilled, deionized, or molybdenum-free tap water.
3. For 25 mL sample, using separate 1.0 mL pipets (#4030), add 1.0 mL R-0890 Molybdenum Buffer Solution and 1.0 mL R-0891 Molybdenum Indicator Solution to each 25 mL sample tube. For 10 mL sample, add 0.5 mL of each reagent to each sample tube. Swirl to mix.
4. Add R-0892 Molybdenum Titrating Solution, dropwise, swirling and counting after each drop, to 25 mL sample tube containing molybdenum, until color matches 25 mL sample tube containing no molybdenum, or until no further change in color occurs. Always hold bottle in vertical position.
5. For 25 mL sample, multiply drops of R-0892 Molybdenum Titrating Solution by 2. Record as parts per million (ppm) molybdenum. For 10 mL sample, multiply drops of R-0892 Molybdenum Titrating Solution by 5. Record as ppm molybdenum.

NOTE: To convert molybdenum (Mo) readings to molybdate (MoO_4^{2-}), multiply Mo readings by 1.7; to convert to sodium molybdate dihydrate ($Na_2MoO_4 \cdot 2H_2O$), multiply by 2.52.

For 1 drop = 20 or 50 ppm Mo

1. Rinse and fill one 25 mL sample tube (#9198) to 25 mL mark with distilled, deionized, or molybdenum-free tap water.
2. Using a 3 mL pipet (#4078), place water to be tested in second 25 mL sample tube.

NOTE: For 1 drop = 20 ppm, fill pipet to 2.5 mL mark.
For 1 drop = 50 ppm, fill pipet to 1.0 mL mark.

3. Dilute to 25 mL mark with distilled, deionized, or molybdenum-free tap water.
4. Using separate 1.0 mL pipets (#4030), add 1.0 mL R-0890 Molybdenum Buffer Solution and 1.0 mL R-0891 Molybdenum Indicator Solution to each 25 mL sample tube. Swirl to mix.
5. Add R-0892 Molybdenum Titrating Solution dropwise, swirling and counting after each drop, to 25 mL sample tube containing molybdenum, until color matches 25 mL sample tube containing no molybdenum or until no further change in color occurs. Always hold bottle in vertical position.
6. For 2.5 mL sample, multiply drops of R-0892 Molybdenum Titrating Solution by 20. Record as parts per million (ppm) molybdenum. For 1.0 mL sample, multiply drops of R-0892 Molybdenum Titrating Solution by 50. Record as ppm molybdenum.

NOTE: To convert molybdenum (Mo) readings to molybdate (MoO_4^{2-}), multiply Mo readings by 1.7; to convert to sodium molybdate dihydrate ($Na_2MoO_4 \cdot 2H_2O$), multiply by 2.52.

NOTE: R-0891 Molybdenum Indicator Solution has a limited shelf-life. Occasionally check indicator performance by following procedure for 1 drop = 2 ppm using R-0887 Molybdenum Standard 20 ppm as the sample. Titration should require 10 drops to endpoint. (An alternate kit, K-1805P, is available, which replaces R-0891 with a stable, two-part reagent system.)

taylor
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