

# **NICKEL TEST OUTFIT**

### MODEL P-54 • CODE 7802

QUANTITY	CONTENTS	CODE
60 mL	*Hydrochloric Acid, 2.5N	*6251PS-H
60 mL	*Ammonium Hydroxide, Conc.	*6537-H
120 mL	Sodium Citrate, 10%	6253-J
60 mL	*Dimethylglyoxime, 1%	*6254-H
30 g	*Ammonium Persulfate Reagent	*6566-G
30 mL	*Silver Nitrate, 0.0141N	*6346-G
120 mL	Deionized Water	5115PT-J
1	Test Tube, 5-10-12.9-15-20-25 mL w/cap	0608
1	Graduated Cylinder, 10 mL, glass	0416
2	Test Tubes, 5 mL, glass w/caps	0230
3	Pipets, 1 mL, plastic	0354
1	Pipet, plain, plastic	0352
1	Spoon, 0.1g	0699
1	Nickel Comparator, 0.5 - 10.0 ppm	7803

**WARNING:** Reagents marked with a \* are considered to be potential health hazards. To view or print a Material Safety Data Sheet (MSDS) for these reagents see MSDS CD or www.lamotte.com. To obtain a printed copy, contact LaMotte by e-mail, phone or fax.

NOTE: This outfit has been designed for determining nickel in effluents where organic matter is absent and the interfering ions cobalt, iron, copper, manganese and chromium are each below 15 ppm.

### **USE OF THE OCTET COMPARATOR**



The Octet Comparator contains eight permanent color standards. A test sample is inserted into the openings in the top of the comparator. The sample can then be compared to four color standards at once, and the value read off the comparator. For optimum color comparison, the comparator should be positioned between the operator and a light source, so that the light enters through the special light-diffusing screen in the back of the comparator. Avoid viewing the comparator against direct sunlight or an irregularly lighted background.

#### **PROCEDURE**

- 1. Fill 10 mL graduated cylinder (0416) to 10 mL line with sample water. Transfer to test tube (0608).
- 2. Use a 1 mL pipet (0354) to add 1 mL of \*Hydrochloric Acid (6251PS). Cap and mix.
- 3. Use the 0.1g spoon (0699) to add 2 measures of \*Ammonium Persulfate (6566). Add 2 drops of \*Silver Nitrate, 0.0141N (6346). Cap and mix until all of the Ammonium Persulfate has dissolved. The solution will be slightly cloudy at this point.
- 4. Use the graduated cylinder to measure 5 mL of Sodium Citrate, 10% (6253). Add to solution.
- 5. Use a second 1 mL pipet to add 1 mL of \*Ammonium Hydroxide (6537). Cap and mix. Dilute to 25 mL with Deionized Water (5115).
- Use a third 1 mL pipet to add 1 mL of \*Dimethylglyoxime (6254). Cap and mix. Wait 20 minutes.
- 7. Fill a test tube (0230) to 5 mL line with treated sample. Insert test tube into Nickel Comparator (7803). Match sample color to a color standard. Record as ppm nickel.

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