This instruction manual is furnished with LaMotte Octet Comparator Test Kits to outline in general terms the proper technique for the use and handling of the Octet Comparator and Bi-Color Reader. Individual instructions supplied with each chemical test kit specify actual test procedures.

**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.

**THE BI-COLOR READER • CODE 2151**

Natural color or turbidity in a test sample may affect the color developed in a test reaction. The LaMotte Bi-Color Reader, used in conjunction with the Octet Comparator, compensates for this color variation. The comparator standards are viewed against test sample blanks, so that any color variation due to natural color or turbidity will be uniformly exhibited by the color standards and the test sample. Even if the color variation is pronounced, the accuracy of the test result will be maintained.
PROCEDURE

1. Place the Bi-Color Reader (2151) on table with the open side facing the operator.

2. Slide the Octet Comparator between the arms of the Bi-Color Reader, with the labels facing the operator.

3. Fill three test tubes to the line with sample water. Follow the individual test kit instructions to react one tube. The other two tubes will be used as blanks.

4. Insert the treated sample into the left-hand opening in the top of the Octet Comparator.

5. Insert the Distilled Water Ampoule (2748) into the opening in the Bi-Color Reader directly behind the reacted sample.

6. Insert the two test tubes with the unreacted samples into the openings in the Bi-Color Reader on either side of the Distilled Water Ampoule.

7. Slide the Octet Comparator until the bottom of the upper row of standards is level with the top of the Bi-Color Reader. Hold the comparator so natural light shines through the test tubes, and compare the reacted sample to the first and second color standards in the upper row of the Octet Comparator. If the color matches a standard, record the result. If the color does not match a standard, continue.
8. Slide the Octet Comparator until the bottom of the lower row of standards is level with the top of the Bi-Color Reader. Hold the comparator so natural light shines through the test tubes, and compare the reacted sample to the first and second color standards in the lower row of the Octet Comparator. If the color matches a standard, record the result. If the color does not match a standard, continue.

9. To compare the reacted sample to the color standards on the right side of the Octet Comparator, move the reacted sample to the opening in the right-hand side of the Octet Comparator. Move the Distilled Water Ampoule (2748) and the blank samples to the right side of the Bi-Color Reader, so that the ampoule is directly behind the reacted sample and the blanks are on either side of the ampoule. Compare the color of the reaction to the color standards as above.

**TEST EQUIPMENT CARE & MAINTENANCE**

This equipment has been designed to give years of dependable service. The following suggestions are offered so that you may obtain maximum performance from this equipment:

1. Carefully follow all instructions.
2. Carefully wash and rinse all apparatus used in the test procedure.
3. Tighten reagent container caps immediately after use. Do not interchange caps.
4. Avoid prolonged exposure of all test components to direct sunlight.
5. Avoid extreme high temperatures and protect all test components from freezing.
6. Anticipate your requirements for replacement reagents.
7. Keep the reagents out of reach of young children.