



LaMotte

1200 COLORIMETER

COPPER

MODEL 1200-CO CODE 3673-01

QUANTITY	CONTENTS	CODE
30 mL	*Copper 1	*6446-G
1	Colorimeter Tubes, w/caps	0290-6
1	Water Sample Collecting Bottle	0688
1	1200 Colorimeter for Copper	26732

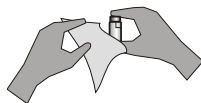
*WARNING: Reagents marked with an * are considered to be potential health hazards. To view or print a Material Safety Data Sheet (MSDS) for these reagents go to www.lamotte.com. To obtain a printed copy, contact LaMotte by e-mail, phone or fax.

INTRODUCTION

The copper content of drinking water generally falls below 0.03 parts per million, but copper levels as high as 1.0 part per million will give water a bitter taste. Waters testing as high as 1.0 part per million copper have probably been treated with a copper compound, like those used in the control of algae, or have become contaminated from untreated industrial wastes. The addition of copper sulfate to lakes causes an increase in the copper content of the sediments. Acid waters and those high in free carbon dioxide may cause the corrosion or “eating away” of copper, brass, and bronze pipes and fittings. This corrosion results in the addition of copper into the water supply.

COPPER TEST PROCEDURE - DIETHYLDITHIOCARBAMATE

Read the 1200 Colorimeter Manual before proceeding. Carefully wipe tubes dry before inserting into the colorimeter chamber.



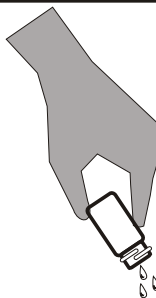
COPPER

1.



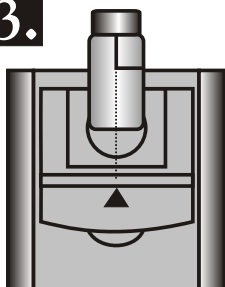
Fill the Water Sample Collecting Bottle (0688) with sample water. This will be used to dispense sample water for the tests.

2.



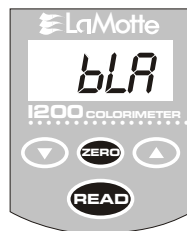
Rinse and fill a colorimeter tube (0290) to the 10 mL line with sample water. Cap and wipe dry.

3.



Insert the tube into the chamber, being sure to align the index line with the arrow on the meter. Close the lid. This tube is the blank or zero.

4.



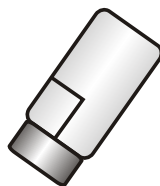
Push the **READ** button to turn the meter on. Press the **ZERO** button and hold it for 2 seconds until **bLR** is displayed. Release the button to take a blank reading (0.0 ppm).

5.



Remove tube from colorimeter. Add 5 drops of *Copper 1 (6446).

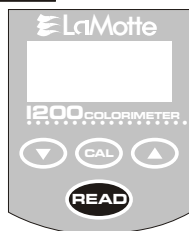
6.



Cap and invert to mix. Wipe tube dry.

7.

Align the index line with the arrow on the meter, insert tube into chamber. Close the lid. Push the **READ** button. Record results as ppm Copper.



NOTE: If test reading displays *Er-2*, repeat procedure on diluted sample, and multiply the result by the appropriate dilution factor. See 1200 Colorimeter Instruction Manual for procedure.

COPPER TEST METHOD SPECIFICATIONS

APPLICATION

Drinking, surface, and saline waters; domestic and industrial wastes.

RANGE

0 to 5.0 ppm Copper

METHOD

Cupric ions form a yellow colored chelate with diethyldithiocarbamate around pH 9-10 in proportion to the concentration of copper in the sample.

HANDLING & PRESERVATION

Copper has a tendency to be absorbed to the surface of the sample container. Samples should be analyzed as soon as possible after collection. If storage is necessary, 0.5 mL of 20% hydrochloric acid per 100 mL of sample will prevent "plating out." However, a correction must be made to bring the reaction into the optimum pH range.

INTERFERENCES

Bismuth, cobalt, mercurous, nickel and silver ions and chlorine (6 ppm or greater) interfere and must be absent.

LaMOTTE COMPANY

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PO Box 329 • Chestertown • Maryland • 21620 • USA
800-344-3100 • 410-778-3100 (Outside USA) • Fax 410-778-6394
Visit us on the web at www.lamotte.com