

Taylor's Chelant Test Kit

INTRODUCTION

Chelants have many applications in industrial water testing because of their ability to **tie up metal ions in solution**. In water treatment programs for boilers or ultrapure water systems, for instance, EDTA (ethylenediaminetetraacetic acid) or NTA (nitrilotriacetic acid) can be used in combination with other sequestering agents to prevent scaling caused by calcium, magnesium, iron, and other metals.

The field-friendly, drop-count titration test in K-1544 will allow you to quickly and accurately determine total (complexed and uncomplexed) chelant.

Turbid samples should be filtered prior to performing the test to remove suspended solids such as oxides. A funnel and filter paper are included in the kit for this purpose. Separately, we offer a syringe filtration system (#9803) and 2.5 µm filter discs (#6257) to speed up the process.

Extremely high hardness can cause interference with this chelant test, making it inappropriate for use in cooling towers. Other chelants will cause positive interference.

CHELANT KIT

K-1544

Drop test for **total** EDTA; 1 drop = 2 or 5 ppm EDTA

USER BENEFITS

- Titrations do not require the ability to match colors, only the ability to see the **permanent color change** at the end-point of the reaction.
- Test kit **comes complete** with all necessary reagents and equipment.
- This test kit is practical for both **on- and off-site** testing.
- **Waterproof instructions** are printed on plastic-impregnated paper that resists fading and tearing.
- **Picture guides** to color transitions in the test reassure new users.
- Custom-molded, durable plastic cases provide **safe storage** for all drop tests.
- **Proven chemistries** are based on *Standard Methods for the Examination of Water and Wastewater*, APHA, Washington, DC, and/or *American Society for Testing and Materials*, ASTM, Philadelphia, PA. Some methods use proprietary chemistry developed by Taylor Technologies.



The K-1544 will perform 144 tests at 20 ppm EDTA.

ALSO AVAILABLE

- A wide array of single- and multiparameter kits featuring color-matching and/or drop-count tests.
- Taylor's TTI® Colorimeter (M-3000); test 30+ parameters commonly encountered in commercial and industrial settings and transfer results to a PC database.
- Myron L Company portable instruments and calibration solutions (sold separately in reagent packs).
- Testing supplies and kit replacement parts (e.g., burets, flasks, test tubes, and test cells).
- Toll-free technical assistance at **800-TEST KIT**.







the most trusted name in water testing

Taylor Technologies, Inc.
410-472-4340
800-TEST KIT (837-8548)
www.taylortechnologies.com

ISO 9001:2008 Certified

REPRESENTATIVE TEST PROCEDURE

Reproduced from K-1544 instruction:

DROP TEST		Instr. #5035
FREE CHELANT (1 drop = 2 ppm EDTA)		
<p>COMPONENTS:</p> <ul style="list-style-type: none">1 x 4027 Funnel, 58 mm, plastic1 x 5035 Instruction1 x 6009 Filter Paper, 9.0 cm, #610, 100/box1 x 9198LB Sample Tube, Graduated (25 mL) w/ cap & light blue dot, plastic1 x R-0619LB-C Hardness Buffer, 2 oz w/ light blue cap1 x R-0620LB-I Hardness Indicator Powder, 10 g w/ light blue dot1 x R-0755-C Magnesium Chloride Reagent, 2 oz, DB <p>TO ORDER REPLACEMENT PARTS AND REAGENTS CALL TOLL-FREE 800-TEST KIT (800-837-8548).</p> <p>PROCEDURE:</p> <p>CAREFULLY READ AND FOLLOW PRECAUTIONS ON REAGENT LABELS. KEEP REAGENTS AWAY FROM CHILDREN.</p> <p>NOTE: When dispensing reagents from dropper bottles, always hold bottle in a vertical position.</p> <p>Free Chelant Test</p> <ol style="list-style-type: none">1. Filter water to be tested to clarify.2. Rinse and fill 25 mL sample tube (#9198LB) to 25 mL mark with water to be tested (Fig. 1).3. Add 5 drops R-0619LB Hardness Buffer. Swirl to mix.4. Add 1 level dipper R-0620LB Hardness Indicator Powder. Swirl until dissolved. Sample will turn blue (Fig. 2) if chelant is present.	<ol style="list-style-type: none">5. Add R-0755 Magnesium Chloride Reagent dropwise, swirling and counting after each drop, until color changes from blue to red (Fig. 3).6. Multiply drops of R-0755 Magnesium Chloride Reagent by 2. Record as parts per million (ppm) free chelant as EDTA disodium dihydrate (ethylenediaminetetraacetic acid disodium salt dihydrate).	 <p>Fig. 1</p>  <p>Fig. 2</p>  <p>Fig. 3</p>
		<small>31 Loveton Circle, Sparks, MD 21152 U.S.A. 800-TEST KIT (837-8548) • 410-472-4340</small>
		<small>7/16</small>