QUAT KIT

DROP COUNT, 1 DROP = 2, 5, 10 ppm

CODE 7057-01

QUANTITY	CONTENTS	CODE
15 mL	*Phenolphthalein Indicator, 0.5%	*2258-E
15 mL	*Sulfuric Acid, 0.5 N	*6090-E
60 mL	Quat Titrating Solution	3996-H
30 mL	Toluidine Blue O Indicator	3995-G
60 mL	*EDTA Solution	*7117-H
1	Test Tube, 5-10-15-20-25 mL, plastic, w/cap	0715
1	Quat/Polyquat Endpoint Color Chart	3613-CC

*WARNING: Reagents marked with an * are considered to be potential health hazards. To view or print a Safety Data Sheet (SDS) for these reagents go to www.lamotte.com. Search for the four digit reagent code number listed on the reagent label, in the contents list or in the test procedures. Omit any letter that follows or precedes the four digit code number. For example, if the code is 4450WT-H, search 4450. To obtain a printed copy, contact LaMotte by email, phone or fax.

Emergency information for all LaMotte reagents is available from Chem-Tel: (US, 1-800-255-3924) (International, call collect, 813-248-0585).

To order individual reagents or test kit components, use the specified code number.

PROCEDURE

1. Rinse test tube (0715) with sample water. Fill with desired sample size selected from the table.

Sample Size	Equivalence (ppm Per Drop)
25 mL	1 drop = 2 ppm
10 mL	1 drop = 5 ppm
5 mL	1 drop = 10 ppm

2. Add 5 drops *EDTA Solution (7117). Swirl to mix.

   NOTE: If the hardness of the sample is greater than 500 ppm, add 5 more drops of EDTA Solution.

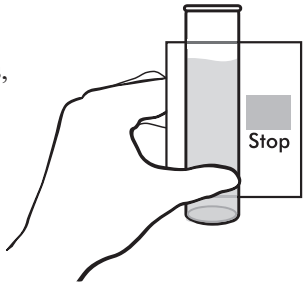
3. Add 2 drops of *Phenolphthalein Indicator, 0.5% (2258). Swirl to mix. If colorless, proceed to Step 4. If pink, add *Sulfuric Acid, 0.5N (6090) dropwise, until the pink color disappears.

4. Add Toluidine Blue O Indicator (3995) as follows:

25 mL sample	**add 8 drops**
10 mL sample	**add 3 drops**
5 mL sample	**add 2 drops**

Swirl to mix. Sample should turn light blue.

5. While swirling test tube, add Quat Titrating Solution (3996) one drop at a time, until color changes from blue to purple. Hold bottle vertically. For best results, when the color change is first detected, use the Endpoint Color Chart (3613-CC) as shown to match the color of the solution exactly to the endpoint. Continue adding Quat Titrating solution one drop at a time until color matches endpoint. Count the number of drops added.



6. Calculate result in ppm.

25 mL sample: subtract three (3) from number of drops used in Step 5. Multiply by 2.

10 mL sample: subtract one (1) from number drops used in Step 5. Multiply by 5.

5 mL sample: subtract one (1) from number drops used in step 5. Multiply by 10.

Record as ppm Quat.

NOTE: The quat equivalence is based on n-alkyldimethylbenzyl ammonium chloride, molecular weight 360. If a quat of different molecular weight is tested, multiply the equivalence by:

$$\textbf{equivalence} \times \frac{\textbf{molecular weight}}{\textbf{360}}$$

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