DROP TEST PHOSPHONATE EQUIVALENCE (PPM) ATMP, HEDP, PBTC (0.8); Na₅ATMP (1.0); HPA (0.6)

COMPONENTS:

1 x 5052 Instruction Test paper, pH, 2.5-4.5, colorpHast®, 100 strips 1 x 6051 Sample Tube, Graduated (25 mL) w/ cap & purple dot, plastic 1 x 9198P Hvdrochloric Acid .25N, 2 oz, DB 1 x R-0627H-4-C 1 x R-0697-C Thiosulfate N/10, 2 oz. DB 1 x R-0800-l CAS Indicator Powder, 10 g 1 x R-0803-C Phosphonate Titrating Solution, 2 oz, DB

TO ORDER REPLACEMENT PARTS AND REAGENTS CALL TOLL-FREE 800-TEST KIT (800-837-8548).

PROCEDURE:

CAREFULLY READ AND FOLLOW PRECAUTIONS ON REAGENT LABELS. **KEEP REAGENTS AWAY FROM CHILDREN.**

- NOTE: Positive interferences: Fluoride and iron at all levels Orthophosphate >5 ppm PO₄ Polyphosphate >1 ppm PO_4
- NOTE: Run a blank with fluoride-free water. Normal blank requires about 2 drops of R-0803 Phosphonate Titrating Solution to reach endpoint.
- NOTE: When dispensing reagents from dropper bottles, always hold bottle in a vertical position.

Phosphonate Test

- 1. Rinse and fill 25 mL sample tube (#9198P) to 25 mL mark with water to be tested.
- 2. Add 1 drop R-0697 Thiosulfate N/10 and 1 level dipper R-0800 CAS Indicator Powder. Swirl to mix.

- 3. Adjust pH between 3.6 and 3.9: Place 1 test strip in sample. Add 1 drop R-0627H-4 Hydrochloric Acid .25N. Swirl sample 15 seconds to mix. Remove test strip and match color with printed-color standards on test strip container. Read printed pH value. If necessary, repeat above procedure using same test strip until a pH between 3.6 and 3.9 is obtained. Sample will be pinkish orange (Fig. 1).
- 4. Add R-0803 Phosphonate Titrating Solution dropwise, swirling and counting after each drop, until color changes from pinkish orange to purple (Fig. 2).
- 5. Subtract drops of R-0803 Phosphonate Titrating Solution in blank from drops used in sample (Step 4). Multiply by appropriate conversion factor (see CONVERSION FACTORS). Record as parts per million (ppm) phosphonate.

CONVERSION FACTORS: To express phosphonate as:	Multiply drops by:
Aminotri(methylenephosphonic acid) (ATMP)	0.8
Aminotri(methylenephosphonic acid), pentasodium salt (Na ₅ ATMP)	1.0
1-Hydroxyethylidene-1, 1-diphosphonic acid (HEDP)	0.8
Hydroxyphosphonoacetic Acid (HPA)	0.6
Phosphonobutane tricarboxylic acid (PBTC)	0.8





Instr. #5052

Fig. 1

