# Instr. #5190A

# COLOR COMPARISON TEST FREE POLYMER (0–10 ppm)

# **COMPONENTS:**

2 x 4030 Pipet, Calibrated (0.5 & 1.0 mL) w/ cap, plastic Instruction (Turbidity Standards)

1 x 5190A Instruction

1 x 6249 Filter Disc Holder, 25 mm, Millipore™

1 x 6257 Filter Discs, 25 mm diameter, 2.5 μm, Whatman™, 100/box

1 x 6260 Syringe, 30 mL, plastic

1 x 9198 Sample Tube, Graduated (25 mL) w/ cap, plastic

1 x R-0830-C Free Polymer Reagent #1, 2 oz 1 x R-0831-C Free Polymer Reagent #2, 2 oz

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: It is important to adhere to the timed waiting periods for accurate results.

NOTE: Positive interferences: Cationic surfactants, Polyphosphates at all levels.

Negative interferences: Alkalinity >300 ppm CaCO $_3$ ; Anionic surfactants at all levels; Azoles >10 ppm; Fluoride >20 ppm; Glutaraldehyde >50 ppm; Hardness >700 ppm; Iron >10 ppm; Molybdenum >10 ppm; Orthophosphate >100 ppm; Phosphonate (ATMP, HEDP, PBTC) >100 ppm; Silica >100 ppm; Sulfate >100 ppm; TDS >1500 ppm; Zinc >100 ppm.

### **Free Polymer Test**

- 1. Draw water to be tested into 30 mL syringe (#6260) to 30 mL mark.
- 2. Remove cap from bottom of a clean, dry sample tube (#9198).

- 3. Following the instructions below, filter water into sample tube. Do not empty or disassemble syringe filtration system. Retain for later use, if needed.
  - a. Open filter holder (#6249) and place 1 filter disc (#6257) into filter holder. Screw filter holder together.
  - b. Screw filter holder onto syringe being careful not to push on plunger.
  - c. Slowly depress plunger to filter water into sample tube to 25 mL mark.
- 4. Using a 1.0 mL pipet (#4030), add 2.5 mL R-0830 Free Polymer Reagent #1. Swirl to mix.
- 5. Using a second 1.0 mL pipet (#4030), add 2.5 mL R-0831 Free Polymer Reagent #2. Swirl to mix.
- 6. Place sample tube on center dot of turbidity standards (#5190) and WAIT 5 MINUTES.
- 7. At exactly 5 minutes match the turbidity in the test sample with closest dot on turbidity standards (#5190) by looking down through solution. (Arrows denote interpolated values between standards.) Record results as parts per million (ppm) free polymer as polyacrylic acid (PAA).

NOTE: Clean and thoroughly rinse all apparatus (sample tubes, syringe, filter holder, test cell, and pipets) with distilled, deionized, or tap water between tests. Pipets should be disassembled and all parts thoroughly rinsed.

Syringe and filter holder should be cleaned as follows: Unscrew filter holder from syringe. Open filter holder and discard filter disc. Draw up deionized, distilled, or tap water in syringe. Screw filter holder together and replace on syringe. Depress plunger to clean and rinse. Repeat as necessary.

