

DROP TEST PERACETIC ACID (0-1000 ppm)

COMPONENTS:

2 x 4030 Pipet, Calibrated (0.5 & 1.0 mL) w/ cap, plastic
 1 x 4078 Pipet, Graduated (3 mL w/ 0.5 mL div), plastic
 1 x 5015 Instruction
 1 x 9198 Sample Tube, Graduated (25 mL) w/ cap, plastic
 1 x R-0925-C PAA Reagent #1, 2 oz
 1 x R-0926-A PAA Reagent #2, .75 oz, DB
 1 x R-0927-C PAA Reagent #3, 2 oz
 1 x R-0928-C PAA Reagent #4, 2 oz, DB
 1 x R-0929-C PAA 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: When dispensing reagents from dropper bottles, **always** hold bottle in a vertical position.

NOTE: This test determines peracetic acid concentrations in systems treated with products that contain only peracetic acid (up to 20%) and hydrogen peroxide (up to 30%) as the active ingredients. The Product Factor (PF), calculated below, represents the peracetic acid in the treatment product and is used to determine the appropriate sample size for the test and to calculate the peracetic acid concentration in the system. The percentages of peracetic acid and hydrogen peroxide needed to calculate the PF may be found on the treatment product label, SDS, or Certificate of Analysis.

Treatment Product Used _____

Percent Peracetic Acid = _____

Percent Hydrogen Peroxide = _____

Instr. #5015

Calculate A:

$$A = \frac{\text{Percent Peracetic Acid}}{38} = \frac{\quad}{38} = \underline{\quad}$$

Calculate B:

$$B = \frac{\text{Percent Hydrogen Peroxide}}{17} = \frac{\quad}{17} = \underline{\quad}$$

Calculate PF:

$$PF = \frac{A}{A+B} = \frac{\quad}{\quad + \quad} = \underline{\quad}$$

Peracetic Acid Test

- Select sample size from the chart below that corresponds to the peracetic acid treatment range and calculated Product Factor (PF):

Product Factor	Treatment Range			
	0-10 ppm	10-100 ppm	100-300 ppm	300-1000 ppm
up to 0.15	25 mL	2.5 mL	1.0 mL	—
0.15 - 0.3	25 mL	5.0 mL	2.5 mL	1.0 mL
0.3 - 0.5	—	10 mL	2.5 mL	1.0 mL

- Rinse and fill 25 mL sample tube (#9198) to selected sample size with water to be tested.

NOTE: For 1 mL and 2.5 mL samples, use 3.0 mL pipet (#4078) to collect and add desired sample to a clean, dry 25 mL sample tube.

- Using a 1.0 mL pipet (#4030), add 0.5 mL R-0925 PAA Reagent #1. Swirl to mix.
- Add 5 drops R-0926 PAA Reagent #2. Swirl to mix. Sample will turn a straw to yellow color if product is present.

(OVER)

5. Using a separate 1.0 mL pipet, add 0.5 mL R-0927 PAA Reagent #3. Swirl to mix. WAIT 15 SECONDS.
6. Add 5 drops R-0928 PAA Reagent #4. Swirl to mix. Sample will turn deep blue.
7. Add R-0929 PAA Titrating Solution dropwise, swirling to mix thoroughly and counting after each drop, until color just changes from blue to colorless.
8. Using the equation below, calculate peracetic acid concentration:

$$\text{PAA} = \text{Drops R-0929} \times \left(\frac{100}{\text{Sample Size}} \times \text{PF} \right)$$

Record as parts per million (ppm) peracetic acid (w/v).

NOTE: To convert peracetic acid (w/v) to (w/w), multiply ppm peracetic acid (w/v) by the specific gravity of the treatment product found on the product's label, SDS, or Certificate of Analysis.

