

**DROP TEST**  
**FREE & COMBINED CHLORINE (1 drop = 0.2 ppm)**  
**MONOPERSULFATE COMPOUND (1 drop = 0.2 ppm)**  
**(USE WITH R-0870)**

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

NOTE: This procedure will selectively determine free chlorine, combined chlorine, and monopersulfate (not persulfate). To determine monopersulfate it is first necessary to determine both free and combined chlorine, if present.

NOTE: When dispensing reagents from dropper bottles, **always** hold bottle in a vertical position.

**Free & Combined Chlorine Test**

1. Rinse and fill sample tube to 25 mL mark with water to be tested.
2. Add 1 heaping dipper R-0870 DPD Powder and QUICKLY swirl to mix. **IMMEDIATELY** add 1.0 mL R-0867 Deox Reagent and QUICKLY swirl to mix. Sample will turn pink if free chlorine (FC) is present.
3. Add R-0871 FAS-DPD Titrating Reagent (chlorine) dropwise, swirling and counting after each drop, until color changes from pink to colorless. Number of drops is **Reading A**. **IMMEDIATELY** add 10 drops R-0003 DPD Reagent #3. Swirl to mix. WAIT 1 MINUTE. Sample will turn pink if combined chlorine (CC) is present.
4. Add R-0871 FAS-DPD Titrating Reagent (chlorine) dropwise, swirling and counting after each drop, until color changes from pink to colorless. Number of drops is **Reading B**.
5. Multiply **Reading A** by 0.2. Record as parts per million (ppm) free chlorine (FC). Multiply **Reading B** by 0.2. Record as ppm combined chlorine (CC).

**Monopersulfate Compound Test**

1. Rinse and fill sample tube to 25 mL mark with water to be tested.
2. Add 1 heaping dipper R-0870 DPD Powder. Swirl until dissolved.
3. Add 10 drops R-0003 DPD Reagent #3. Swirl to mix. WAIT 1 MINUTE.
4. Add R-0871 FAS-DPD Titrating Reagent (chlorine) dropwise, swirling and counting after each drop, until color changes from pink to colorless.
5. Multiply drops of R-0871 FAS-DPD Titrating Reagent (chlorine) by 0.2. Record as part per million (ppm) total oxidizer (TO).
6. To calculate parts per million (ppm) monopersulfate compound (MC) as chlorine (Cl<sub>2</sub>):  
 Formula:  $TO - (FC + CC) = MC$ .

NOTE: A negative value for MC may be obtained when MC is zero (0) or very low (0-0.4 ppm as chlorine). This is caused by variables such as sample measurement, drop variation, etc.

NOTE: Refer to manufacturer's instructions for proper monopersulfate adjustment.

**COLOR COMPARISON TEST  
FREE & TOTAL CHLORINE (.5-5 ppm)  
& MONOPERSULFATE COMPOUND  
(USE WITH R-0001 & R-0002)**

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

NOTE: This procedure will selectively determine free chlorine, combined chlorine, and monopersulfate (not persulfate). To determine monopersulfate it is first necessary to determine both free and combined chlorine, if present.

NOTE: When dispensing reagents from dropper bottles, **always** hold bottle in a vertical position.

**Free & Total Chlorine Test**

1. Rinse and fill small comparator tube to 9 mL mark with water to be tested.
2. Add 5 drops R-0001 DPD Reagent #1 and 5 drops R-0002 DPD Reagent #2. Cap and invert to mix. Remove cap. IMMEDIATELY add 0.5 mL R-0867 Deox Reagent. Cap and invert to mix.
3. Match color with color standard. Record as parts per million (ppm) free chlorine (FC). Remove cap. IMMEDIATELY add 5 drops R-0003 DPD Reagent #3. Cap and invert to mix. WAIT 1 MINUTE.
4. Match color with color standard. Record as parts per million (ppm) total chlorine (TC).

**Monopersulfate Compound Test**

1. Rinse and fill small comparator tube to 9 mL mark with water to be tested.
2. Add 5 drops R-0001 DPD Reagent #1 and 5 drops R-0002 DPD Reagent #2. Cap and invert to mix. Remove cap.
3. Add 5 drops R-0003 DPD Reagent #3. Cap and invert to mix. WAIT 1 MINUTE.
4. Match color with color standard. Record as parts per million (ppm) total oxidizer (TO).
5. To calculate parts per million (ppm) monopersulfate compound (MC) as chlorine ( $Cl_2$ ):  
Formula:  $TO - TC = MC$ .

NOTE: A negative value for MC may be obtained when MC is zero (0) or very low (0-0.4 ppm as chlorine). This is caused by variables such as sample measurement, drop variation, etc.

NOTE: Refer to manufacturer's instructions for proper monopersulfate adjustment.

