

## DECHLORINATION OF DRINKING WATER SAMPLES

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Clients are urged to carefully follow all preservation guidelines as specified in each applicable method. Government agencies are strictly enforcing these guidelines including sample dechlorination. If residual chlorine is present in a sample, follow the instructions outlined below. Pay close attention to the order in which reagents are added to the sample. A brief synopsis of dechlorinating reagents by method is given for your referenced.

### **EPA 524.2**

Add 25 mg of ascorbic acid to sample vials before filling. After the vial is filled to overflow, then add one to two drops of 1:1 HCl for each 20 ml of sample volume to a pH of <2. Seal the vial taking care not to trap any air bubbles. Turn vial septa-face down, and shake vigorously for 1 minute. Collect samples in duplicate 40ml VOA vials.

### **EPA 502.2**

Add 25 mg of ascorbic acid or 3 mg of sodium thiosulfate to sample vials before filling. After the vial is filled to overflow, then add one to two drops of 1:1 HCl for each 20 ml of sample volume to a pH of <2. Seal the vial taking care not to trap any air bubbles. Turn vial septa-face down, and shake vigorously for 1 minute. Collect samples in duplicate 40ml VOA vials.

### **EPA 504.1**

Add 3 mg of sodium thiosulfate crystals or 75  $\mu$ l of sodium thiosulfate solution to sample vials before filling. Seal the vial taking care not to trap any air bubbles. The addition of acid to sample vials is not recommended. Collect samples in duplicate 40ml VOA vials.

### **EPA 505/508**

Add sodium thiosulfate when residual chlorine is present. Collect samples in 1 liter glass containers.

### **EPA 515.1**

Add sodium thiosulfate when residual chlorine is present. Collect samples in 1 liter glass containers.

### **EPA 525.2**

Add sodium thiosulfate when residual chlorine is present. After the bottle is filled, then add 5mls of 1:1 HCl for each liter of sample volume to a pH of <2. Collect samples in 1 liter glass containers.

**EPA 531.1**

Add 3 mg of sodium thiosulfate crystals to 1.2ml monochloroacetic acid buffer to sample vials before filling. Seal the vial taking care not to trap any air bubbles. Collect samples in duplicate 40ml VOA vials.

**EPA 547**

Add 3 mg of sodium thiosulfate crystals or 75 µl of sodium thiosulfate solution to sample vials before filling. Seal the vial taking care not to trap any air bubbles. Collect samples in duplicate 40ml VOA vials.

**EPA 548.1**

Add 20 mg of sodium thiosulfate crystals sample bottle before filling. Collect samples in 250ml glass containers.

**EPA 549.2**

Add sodium thiosulfate when residual chlorine is present. After the bottle is filled, then add 5mls of 1:1 HCl for each liter of sample volume to a pH of <2. Collect samples in 1 liter amber plastic containers.

**EPA 608**

If aldrin is to be determined, add sodium thiosulfate when residual chlorine is present. If necessary, samples should be adjusted to a pH range of 5.0 to 9.0 with sodium hydroxide or sulfuric acid. Collect samples in 1 liter glass containers.

**EPA 625**

If residual chlorine is present, add 80mg of sodium thiosulfate per each liter of water. Collect samples in 1-liter amber glass containers.

**Cyanide**

Add 0.6 g of ascorbic acid to sample bottle before filling. After the bottle is filled, then add 1 ml of 50% NaOH for each 500 ml of sample volume to a pH of > 12.

The EPA recommends the use of sodium thiosulfate as the dechlorinating reagent in the event that a method allows the use of more than one dechlorinating reagent. One exception to this recommendation is ascorbic acid must be used when vinyl chloride and other gases are measured with a mass spectrometer.

The aforementioned reagents are available from the laboratory. Upon request, VOA vials containing the pre-measured amount of reagent as specified in the method may be supplied. A separate vial containing HCl will be provided for final pH adjustment to <2 when applicable. Be advised to clearly note this requirement when requesting containers, otherwise, HCl preserved VOA vials will be provided.