

Excerpt directly from EPA 522 Method – Pay special attention to bolded and underlined sentences.

8. SAMPLE COLLECTION, PRESERVATION, AND STORAGE

8.1 SAMPLE PRESERVATIVES – Preservation reagents, listed in the table below, are added to each sample at the time of sample collection. Sodium sulfite must be added first and may be placed as a dry material in the sample bottles prior to shipment to the field. Aqueous solutions of sodium sulfite may not be added to sample bottles prior to shipment to the collection site because these solutions are unstable and cannot be relied upon to completely dechlorinate the samples. Sodium bisulfate is added only after the sodium sulfite has been dissolved in the aqueous sample. See Section 8.2.2 and 8.2.3 for complete instructions.

Compound Amount Purpose

Sodium sulfite 50 mg/L Reduce chlorine/chloramine residual

Sodium bisulfate 1 g/L (approx) Microbial inhibitor

8.2 SAMPLE COLLECTION

8.2.1 Open the tap and allow the system to flush until the water temperature has stabilized (approximately three to five min). Collect samples from the flowing system.

8.2.2 Fill sample bottles, taking care not to flush out the sample dechlorination reagent. Samples do not need to be collected headspace free.

8.2.3 After collecting the sample, cap the bottle and agitate by hand until the sodium sulfite is dissolved. Add enough sodium bisulfate such that the final concentration will be 1 g/L. Cap the bottle and mix until dissolved. Unless field verification of pH is to be performed, keep the sample sealed until just prior to extraction.

8.2.4 Field verification of pH 4 (optional). It is anticipated that 1 g/L of sodium bisulfate will be sufficient to acidify most samples to < pH 4. If there is reason to suspect that more may be needed, the pH can be verified with narrow range pH paper at the time of sample collection. After acidification and mixing, pour a small amount of sample over a strip of the pH paper (do not dip the strip in the sample). Read the result as instructed on the pH paper package. If the pH is ≥ 4 , add additional sodium bisulfate until pH < 4 is obtained. Seal the bottle, and keep the sample sealed until extraction.

8.3 SAMPLE SHIPMENT AND STORAGE – **Samples must be chilled during shipment and must not exceed 10 °C during the first 48 hours after collection.** Sample temperature must be confirmed to be at or below 10 °C when they are received at the laboratory. Depending upon the water temperature at the time of collection, samples may need to be refrigerated to reduce their temperature before being packed on ice for shipment. Samples stored in the lab must be held at or below 6 °C until extraction, but should not be frozen. Freezing samples may compromise the sealed cap or result in sample bottle breakage.