

To measure dissolved sulfide, insoluble matter in the sample must first be removed. Because sulfide may be oxidized during filtration, removal is achieved by producing an aluminum hydroxide flocculent. The flocculent is allowed to settle, the supernatant decanted off and preserved with zinc acetate and sodium hydroxide.

Supplies Needed: *(per sample)*

- 1 plastic vial containing 1mL of 6N sodium hydroxide (NaOH)
- 1 x 250mL clear glass jar
- 1 plastic vial containing 0.5mL of aluminum chloride (AlCl₃)
- 1 x 125mL HDPE green cap bottle containing 1.0mL of 2N zinc acetate and 1.0mL of 5N NaOH

Procedure:

1. Open the NaOH vial and pour the contents into the 250mL clear glass jar.
2. Collect the sample *(with minimum aeration)* in the 250mL clear glass jar containing the sodium hydroxide. Completely fill the jar *(such that it is headspace free when capped)*.
3. Immediately add one vial (0.5mL) of the aluminum chloride solution, cap, and mix by holding the jar in an upright position and rotating your wrist back and forth for 1 minute.
4. Allow the sample to settle for 5 to 15 minutes *(long enough to allow the flocculent to settle to the bottom of the jar but not longer than necessary)*.
5. Carefully decant the supernatant into the 125mL HDPE bottle containing the zinc acetate and sodium hydroxide.
6. The sample remaining in the 250mL glass jar is caustic. Please return the partially filled jar to CARO for disposal.

If you have any questions regarding the procedures described above, please contact a CARO representative.