

**TITLE:**  
**PROCEDURE FOR THE  
ACTIVATION OF HB2**

**PURPOSE:**

This document demonstrates the proper procedure laboratory personnel must follow for the activation of HB2.

**EQUIPMENT / REAGENTS:**

- City water (Tap)
- HB2 Solution
- Bleach (Any concentration will suffice)
- Syringes
- Magnetic stir plate with magnet or glass rod
- pH Meter

**ASSOCIATED MATERIALS:**

- ETQC35 HB2: Procedure for Validation of Bromine and Chlorine for Process Equipment (Modified DPD Method)
- ETQC28: Analysis by HACH Colorimeter

**PROCEDURE:**

1. Measure out 900 ml of tap water.
2. Using a syringe, add 4.8 ml of HB2 solution.
3. Using a magnetic stir plate and stir bar or glass rod, mix the solution gently to homogenize.
4. Smoothly add the bleach using a clean syringe until the solution turns from a pale yellow to a dark orange and then back to a straw color. If using 12.5% bleach, the volume added should be around 9 ml. If using another bleach concentration, calculate the volume needed and adjust accordingly.
5. Measure the pH of the solution (should be between 6.9–7.4). Keep solution out of direct UV light. Add more HBr or bleach to obtain the correct pH if necessary.
6. Results should be close to 1333 ppm as Cl<sub>2</sub> (3000 ppm as Br<sub>2</sub>). Do not use the solution if it is over two hours old. Use immediately.
7. To obtain a 225 ppm Br<sub>2</sub> solution, use one part of the solution made in step 6 to 13 parts water. The actual activity can be measured following “ETQC35 HB2: Procedure for Validation of Bromine and Chlorine for Process Equipment (Modified DPD Method)” or Section IV and Section VI of “ETQC28: Analysis by HACH Colorimeter.”



Original SOP Effective Date: 12/14/09

Superseded SOP Dated: 5/5/10

Effective Date: 9/28/10

**Procedure No.: ETQC32**

Facility: Modesto

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Approval Title: Lab Manager

**Revision No.: 3**

Review Frequency: 2 years

Revised Section(s): Modified Section V.

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