

## **How to take a water sample**

1. Sterilize a glass 1L Coke bottle by boiling it in water for about 10 min. Let the bottle heat up gradually with the water. (cap off, but also in the water)
2. Remove the bottle and cap and let it cool down completely.
3. Alternatively, buy 1L bottled water at the shop (STILL, not carbonated or flavored), empty the content for later use (do not drink from the bottle as it would cause contamination) and used the container to collect the sample. This will provide a “sterilized” container.
4. Let the borehole run for minimum 10 minutes and then fill the bottle all the way to the top. (Take sample as close as possible to the actual borehole outflow)
5. As little as possible air should be trapped in the bottle when closed.
6. Cool down the bottle overnight in the refrigerator. (Do not freeze the sample)
7. Wrap it in news paper and then in plastic or any other isolating material.
8. The temperature should ideally stay under 18 degrees Celsius and above 8.
9. Place in a cardboard box and deliver to any of the labs indicated below.
10. Also attach the analytical parameters provided for the test for Iron Removal.
11. Once you have received the analytical results from the lab please send to us that we can do the process design and costing.

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### **Preferred Laboratories**

**Please refer to our website**

<https://www.equilibrium-water.com/service>

## analytical parameters

| DETERMINANTS<br>CONSTITUENTS               | Results expressed in mg/ℓ unless specifically stated |  |
|--|--|--|
|  | Borehole   | WHO QC Standard  |
| Conductivity (μS/cm)                       |  | < 750  |
| Total Dissolved Solids (TDS @ 105 °C)      |  | < 500  |
| Suspended Solids (TSS)                     |  | Must be Absent   |
| pH   |  | 6.50 to 8.5  |
| HCO <sub>3</sub> (mg/l)                    |  | ≤150   |
| Total-Alkalinity                           |  | 20 to 200  |
| Free & Saline Ammonia (as N) (μg/ℓ)        |  | < 200 (Target < 20)                                      |
| Total Hardness (TDH as CaCO <sub>3</sub> ) |  | 20 to 220  |
| Calcium (Ca as CaCO <sub>3</sub> )         |  | 10 to 200  |
| Magnesium ( Mg as CaCO <sub>3</sub> )      |  | 5 to 120   |
| Strontium                                  |  | 0 to 5   |
| Sodium (Na)                                |  | 5 to 100   |
| Chloride (Cl)                              |  | 5 to 100 (Aesthetic influence)                           |
| Sulphide (R-S-R) Total (μg/ℓ)              |  | < 2.0 (Target = 0)                                       |
| Nitrate (NO <sub>3</sub> )                 |  | < 10 (Target < 5.0)                                      |
| Turbidity (NTU)                            |  | < 0.50 (Target < 0.20)                                   |
| Iron (Fe) Total (μg/ℓ)                     |  | < 200 (Target < 20)                                      |
| Iron (Fe - Dissolved) (μg/ℓ)               |  | (Target < 20)  |
| Iron (Fe – Organometallic) (μg/ℓ)          |  | Remains stubbornly soluble                               |
| Manganese (Mn) Total (μg/ℓ)                |  | < 50 (Target < 10)                                       |
| Silica (Si as SiO <sub>2</sub> )           |  | NS (Mostly colloidal & particulate)                      |
| Total Organic Carbon (TOC)                 |  | Eliminate suspended Carbon                               |
| Dissolved Organic Carbon (DOC)             |  | < 10 (Target < 5.0)                                      |
| Tannoids (Total)                           |  | NS Contribute to DOC                                     |
| Langelier Saturation Index (LSI @ 22 °C)   |  | LSI < -0.300 do not support metal elimination processes. |
| Stiff & Davis Index (@ 22 °C)              |  | Corrosive & aggressive tendency.                         |
| Total Heterotrophic plate count            |  |  |
| Total Coliforms                            |  |  |
| Faecal Coliforms                           |  |  |
| Total Macro Bacterial Count                |  |  |