

## Household Water Purification Unit

The household water purification unit (capacity 20L) developed by DRL, DRDO Tezpur provides pure drinking water by removing the harmful contaminants present in water. It enables to remove three main contaminants viz. arsenic, iron and manganese from drinking water but retaining other essential dissolved salt/ions in the water. The unit is made of food grade plastic material and consists of an aeration pump and two cylindrical chambers. The first chamber unit which contains (i) the aeration system, (ii) two nos. of ceramic candles and (iii) the pH adjuster tray suspended between the ceramic candles. The second chamber is having two nos. of layered filter candles. The second chamber is placed on the stand, on which, the aeration pumps is attached. The aeration pump has dual operation function that can be operated either by using electricity through an adapter provided or by using battery (in case no electricity is available).

### **Main features:**

- It can remove arsenic, manganese and iron from contaminated water
- Can be operated successfully without electricity with filtration rate 1.5 litres/hr
- Made of food grade plastic materials and consist of two cylindrical chambers
- Equipped with an aeration system, which helps in enhancing the removal of target contaminants
- Removal efficiency;
  - a) Arsenic : 200 ppb to < 10 ppb
  - b) Iron : 30 ppm to < 0.3 ppm
  - c) Manganese: 2 ppm to < 0.1 ppm



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