

DISINFECTION OF WELL

- Steps of disinfection of well 1.
- 1. Find volume of water in a well
- $1 \text{ m}^3 = 1000 \text{ litres}$
- Volume = $\pi R^2 H$ (in m^3) • 2. Find the amount of bleaching powder
- Estimate the chlorine demand of well water by Horrock's Apparatus & calculate the amount of bleaching powder required to disinfect the well
- Horrock's Apparatus Estimates-chlorine demand of water
Content-6 white cups (200ml), 1 black cup, 2 metal spoons, 7 glass stirring rods
Indicator - starch

iodide (produce blue color)

- Here development of blue color indicates the presence of residual chlorine Chlorine demand (dose of bleaching powder required) = $n \times 2$ gm to disinfect 455 litres of water (n - number of the 1st cup which shows blue color change)

- 3. Dissolve bleaching powder in water

- Required amount of bleaching powder is kept in a bucket

- Water is added to make a thin paste

- More water is added to fill $\frac{1}{4}$ of bucket

- Contents are stirred & allowed to

sediment

- When lime settles down, the Supernatant Solution viz. chlorine solution is transferred to another bucket & lime is discarded

- 4. Delivery of chlorine solution into the well • Bucket containing chlorine solution is lowered below the water surface & well water is agitated by moving bucket vertically & horizontally

- 5. Contact period > Contact period of 1 hour is allowed before the water is drawn for use

- 6. Orthotolidine Arsenite test

- To test for free residual chlorine at the end of 1 hour contact, which should be