

# Engineering Chemistry 1 Water Unit Notes Ebicos

Environmental Engineering and Water Chemistry - Unit ...  
 Engineering Chemistry UNIT-1-WATER CHEMISTRY  
 Engineering Chemistry 1 Water Unit Notes  
 Engineering Chemistry 1-Question Bank-1st Edition ...  
 Unit-1 Water Technology (External Conditioning) - Chemistry  
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Water and its Treatment *Unit-1 Water Technology (Hardness, Types \u0026 Estimation by EDTA Method)* - Chemistry Water and its Treatment | Engineering chemistry | klasspm **Sources of WATER - Engineering Chemistry** Engineering chemistry 1-year, Hardness of water (part-1), [type, units, cause, degree of hardness]. Engineering Chemistry Syllabus | Book | Practical || Stephen SIMON Normal Hardness Numerical | Engineering Chemistry 1 Lectures in Hindi Determination of Hardness of water by EDTA Method

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$50 \times 1 \text{ mg of CaCO}_3 = V \text{ 1 ml of EDTA}$   $\therefore 1 \text{ ml of EDTA} = 50/V \text{ 1 mg of CaCO}_3 \text{ eq.}$   
 Now  $50 \text{ ml. of given hard water} = V \text{ 2 ml EDTA} = V \text{ 2} \times 50/V \text{ 1 mg of CaCO}_3 \text{ eq.}$   $\therefore$   
 $1 \text{ L (1,000 mL) of given hard water} = 1000 \text{ V 2 /V 1 mg of CaCO}_3 \text{ eq.}$   $\therefore$  Total hardness of water =  $1000 \text{ V 2 /V 1 mg/L} = 1000 \text{ V 2 /V 1 ppm}$  Now  $50 \text{ ml of boiled water} = V \text{ 3}$

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**ENGINEERING CHEMISTRY -I. QUESTION BANK (COMMON TO FIRST YR - ALL BRANCHES) UNIT - 1 WATER TECHNOLOGY. PART - A.** 1. Differentiate hard water and soft water. 2. Define hardness. 3. What are the types of hardness?  
**Engineering Chemistry 1-Question Bank-1st Edition ... WATER TECHNOLOGY 1 Course: B.Tech Subject: Engineering Chemistry Unit: 2.** 2. Sources of Water A) Surface Waters Rain Water - Pure but contaminated with gases River Water - High dissolved salts moderate organics Lake Water - Const. composition but high organics Sea Water - High salinity, pathogens, organics B) Underground Waters Spring/Well Water - Crystal clear but high dissolved salts and high purity from organics  
**2.B.tech. ii engineering chemistry unit 2 water technology Engineering Chemistry 1-CHARACTERISTICS and HARDNESS of Water WATER TREATMENT. ... the following are the important characteristics of potable water.** 1. It should be clear, colourless and odourless. 2. It should be cool and pleasant to taste. 3. It should be free from harmful bacteria and suspended impurities. ... (Unit 1) Solved Ques

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 Engineering Chemistry UNIT-1-WATER

### CHEMISTRY

Calculations: 50 ml of standard hard water =  $V_1$  ml of EDTA ∴ 50 × 1 mg of CaCO<sub>3</sub> =  $V_1$  ml of EDTA ∴ 1 ml of EDTA =  $50/V_1$  mg of CaCO<sub>3</sub> eq. Now 50 ml. of given hard water =  $V_2$  ml EDTA =  $V_2 \times 50/V_1$  mg of CaCO<sub>3</sub> eq. ∴ 1 L (1,000 mL) of given hard water =  $1000 V_2 / V_1$  mg of CaCO<sub>3</sub> eq. ∴ Total hardness of water =  $1000 V_2 / V_1$  mg/L =  $1000 V_2 / V_1$  ppm Now 50 ml of boiled water =  $V_3$

### Engineering Chemistry 1 Water Unit Notes

Calgon = sodium hexa meta phosphate  
 The process involves the addition of calgon to boiler water. Engineering Chemistry UNIT-1-WATER CHEMISTRY. Dept Of Chemistry, ANITS Page 3. It prevents scale and sludge formation by forming highly soluble calcium hexa meta phosphate complex compound with CaSO<sub>4</sub>.

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EDTA crystals + 0.1 gm MgCl<sub>2</sub> in 1lit 3.

Indicator: 0.5 gm of EBT in 100 ml of alcohol. 4.

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Standard hard water: 1 gm of dry  $\text{CaCO}_3$  is dissolved in minimum quantity of HCl and evaporate the solution to dryness on a water bath, and then diluted to 1 lit with water. Each ml of this solution then

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carbonate equivalent hardness per 106

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