Miscible Liquids :-Immisible hiquid ctharol water oil water When two Liquide are mixed and they do not form layers are Called Missible Liquide (Ethanol + Water) When two highids are mixed and they form different layers are Called Trissible Liquide (Oil + Water) *) Reason for two immiscible Liquid is different densities! Fractional Oistillation of Two Miscible Liguide water out 78°C Liebig Condenser 0000 Glass Fractionations reade! Flask 0 00,000 0 water = 100°c Round Etherol = 780c Distillate Flask

Elictric heater!



Seperation technique in which two or more miscible diquids are seperated because of different Boiling points is called Fractional Oistillation! ► Indirect heat is provided because :i) Oirect heat will not provide uniform rise in temp! 11) Flammable Ziquids may catch fire! ← Glass beads provide large surface area. For the vapours to condense back → Leipig condenser is used to convert vapours back into Liquid A) Errors in Apparatue •) Cold water in should be against Gravity! o) Thermometer should not touch the Glass beads!) Oistillating apparatus should not be Air-Tight!

Fractional Distillation of Crude Oil

No M.PIB.P of Refinery Cas cooking purpose Factionine colum Petrol Vehidus Naphta Chemicale Pasrafia Jet fuel (Kerosine)) iesel Heavy Vehicle Heat Fuel for Industries Chubricating oil) Bitumen Road making! Crease



(iii) Fractional Distillation of diquid Air Air Filtration Clean Air Cooling -80°c Clean air without CO2 & H2O ! To remove To remove Ha04 CO2 (0°C) (-78°C) dust particles Air is compressed & COOL , Compressed Cool Air Air is Expanded & COOL -200°, Liquid Air! Fractional Distillation! N2 Noble Gases 79% 20% dess than 1%. Ua More exponsion More cooling U2

Air is compressed when expand to increase cooling effect!

~ SIMPLE Distillation ~

