00000018 breakage cleanolyte Electrolysis Cotion (+) Anion (-) Towards (The Process of) Possage of electricity the electrolite breakes this is known as electrolysis. moves toward's Cathode(-) (the electroly) (negative electrode) cte -> c A + e (od) At cathode! - reduction Delenent with relenent with higher higher oxidation Potential (200) standard reduction retential (SRP) get deposited first will get deposited inst when noe when more than one lation were present than one out were present Order of deposition (of cation) Kt < Cat? < Nat < Mgt < AAlt < 2nt < Fet? < H+ Can < Hgt < Agt < Pt < Pd < Aut3 short trick H < CHAPPA CO Hy Ag Pt Pd Au

order of deposition of our ion [SNO closs Bring Ice] Sou 2 Nos KOH KCJ KBA KI electrolysis depends on prature of electrolyte prature of electrode Electrocles -> cornects internal anderdenal I Ports of cell. Reactive Inest * not involved in * will involve in reaction surface for redox 9 xm Reaction g! Pt, Pd Moncentration of solution iv) over potential of gasses Example: Electrolysis of Ward motten Nacl very dilute ag Nach ag Nacl using H electrode Nach rising using pt using Hg electrode electrode Pt dectrole Na -> cathode Natte -> Na E= Atwt H+ -> Cathode 6= 22.4 2H++2e→ H2 €=== CP - Anode 2C1 -> C12+2e 201-> (12+20 E= Mwt OH > 2 Hzo+Oz+YE (0) = 2214 E= 32 = 22.4 1 chos less sop but it is obtained at A because of over patential I am

injust North using the electrode Nat + Hy -> lattgte Northy + H20 -> (NaOH)+(H2)+ e Solice analgun ct - selit at Anode 4" sha a har ever potential (i) very dilute Nacl using Ptelectrode Ma Ht -> Hi: at cathede de suce conc is less OH -> ioil at anode at lectrolysis of aqueous soln of Nazson using Pt elected ag Nazsoy Na+ 15/4-2 Electrolysis of H2504 dil Hesay 501. H2 SO4 H+ > H2 at cathode + HSOY Soft OH -> Oratanode To completely cionized Hason gibes 150,2 it infinite dilution & for weak lectrolytes is also 1. Hsoq is not Insert due to dilution Peroxidisulphus

Electrolysis of the since water is not a good conductor of electricity, we prefer to take Acidulated water (Having traces of acid) (generally Hisay) scidulated water Ht -> Hz OH -> 02 Note + 201 -> (12+20 Eop = -1.36V 2H2O -> 02 + 4e + 4Ht Eop = -1.23 V Knetically slow Hence aditional potential is required whiled ever potential or subble potential. ag Cu Soy VIMP Using Using Pt co electrole (ut) + 2e > (ci) cathode (0+2+2= ->: (0: cothede (Ĉu) -> (Ĉu+2) + 2e YOH- -> 2 H20 +102+4e has higher Anode The concentration of cut is not changing be cause they are renduced again at Anode.