

Ag2+ Ag -> 2Ag+

(both reduced and oxidized)
Disproportion ation 2Cut -> Cu2t + Cu (middle ground)

lonic

equation

3) Adde

a) Add Ht

5) AND HXO

6) State Symbols

Cr207+6e -> 1C3+

Cr, 07 3+ 460+14H+ > 2cr3+

(1,0,2 + 6e+14H+ > 2cr + +1,0

cr, 07 (05) + 60 + 14H (07) -> 200 3+ (07) + Hx0(1)

Comproporpination

Flectron transfer

half poxidation (1055) DIL equation L reduction (gain) RIG

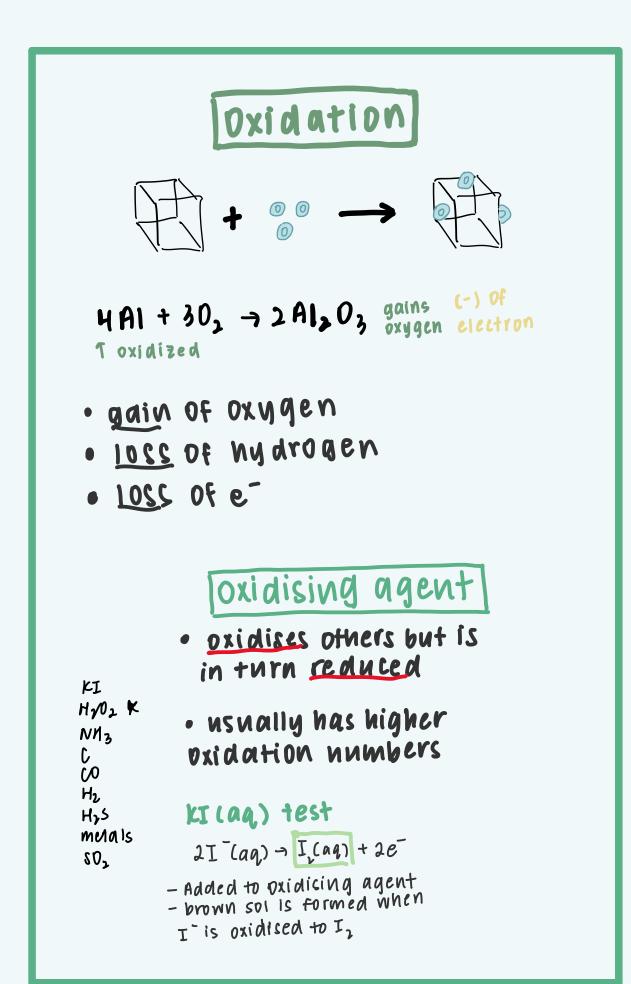
> $Na \rightarrow Na^{+} + e^{-}$ oxidation

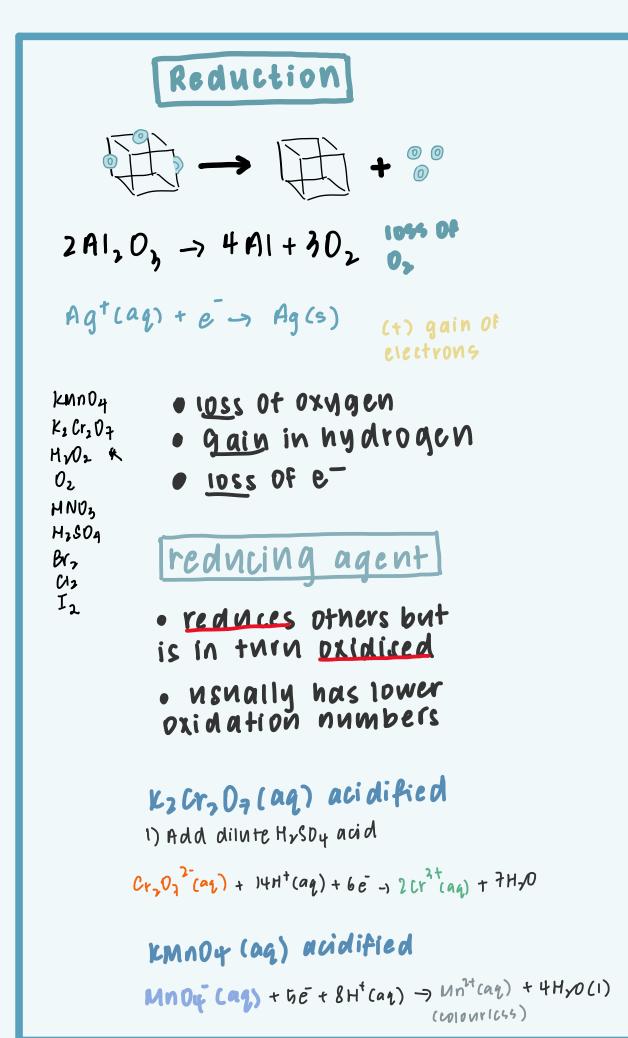
01+4e -> 102. reduction

4Na > 4Nat + 4E

4Na+02+4/e -> 4Na+4/e+202-4Na+0, -> 2Na,0

		Oxidation	Reduction
	Hydrogen transfer	Loss	Gain
<b>→</b>	Oxygen transfer	Gain	Loss
	Electron transfer	Loss	Gain
always applicabl	e		





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v oxidation 中
              oxidation states
                                                           oxidation
                                                            09 1
       1) Oxidation state of atoms/monoatomic
                                                            reduction
       ion is equal to its charge
        09 of Hin H2 = 0
                                                            09 V
      2) charge of a molecule / compound
       is equal to sum of oxidation states
       that make up the identity
                                                              H2504 X+4(-2)=-2, X=+6
                                                              Cr_2O_7^{1-} 2x+7(-2)=-2, x=+6
       [ Cy (H,0)6 ]2+
                                                               Halogen displacement
        05 of CU -> +2
                                                             C12(9) = 2 NOBr (04) -> 2 NOCT (04) + Br(04)
       3) some clements have a fixed
                                                                          reduced oxidised
                                                             ci is more
        oxidation state
                                                            (more likely to gain e)
                           A fractions
         Grp1 (+1)
                           are possible
         61P 2 (+2)
                 L+1) Except NAH (-1)
                 (-2) Except peroxides H,0,(-1) / OF, (+2)
                 (-1) FXCEPT W DIF (+1)
                                                  1) # of atoms
                                                  2) charge
           Balancing half equations
        1) conservation of mass
                                         b some half equations
           · H of atoms on LHS= RHS
                                        don't need to be balanced
        2) Balance of Charge
                                         in charged medium
           . sum of charges on LHS= 12HS
                                            Fe2+ (aq) -> Fe3+ (aq) + e
        3) "Adde"
        4) Add Ht/OH depending on medium
        5) And H,0 to valance
                                                           Combining
         6) Add state symbols
                                                       unoy + 50 + 8H+ -> Mn2+ + 4 H20
                                                        503 + 20H -> 504 + 2e + H10
                         alkaline
     acidic
                                                            LCM: 5×2=10 -> make coeff of e the same as
     menium
                          medium
                                                                                          gain in e = loss in e
1) Work out change
                                                          2MnOv + 10e + 16Ht -> 2Mn2+ + 8H>0
                          (+1) (-1)
CIO -> CI
                                       match Cl
 in oxidation state
                                                           55032 + 100H -> 55042 + 10e + 5 H20
                                     & enarge
                          (-1) (-2) (-1)
   Cr2072 -> Cr3+
                                                           2Mn04++190+16H++5503+100H -> 2Mn2+13HyO+5004+100
                                           balance
                          CIV + 2E -> CI
    (+6) (+3)
                                             total charge
                         (-1) (-2) (-1) (-2)
C10 + 2e -> C1 + 20H
2) Balance ant of element
so charge matches
                                                                        combine to HyO
                                                   1 balance
                                                    equation
                                                                2Mn04 (aq) + 6H+ (aq) + 5504 (aq) -> 2Mn2+ (aq) + 3H,0(U) + 5504 (aq)
    Cr, 07 -> 1Cr3+
                        (10 (aq) + 2 = + H,0 (1) -> ci (aq) + > 0H (aq)
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