

4.13 Hydrolysis of Salts

Salts ... ionize 100% in water to make cation +, & anion -

Hydrolysis ...

what is a hydrolysis question asking?

Will the ions in a dissolved salt produce a solution which is ... Acidic, Basic, or Neutral?

Spectator Ions: ... these ions do NOT react!

Spectator Cations "+"

alkali	&	alkaline Earth
Li		Be
Na		Mg
K		Ca
Rb		Sr
Cs		Ba
Fr		Ra

Spectator anion "-"

- Top 5 Strong Acids on Table

ClO_4^-	NOT	HSO_4^-
I^-		↳ becomes "weak"
Br^-		acid with a
Cl^-		K_a value
NO_3^-		

Predicting if a salt solⁿ is acidic, basic or neutral:

1. determine ions produced when salt dissociates
2. discard spectators
3. Remaining ions act as acids if on Left side of table ;
" " " " bases if on Right "
4. If both cation & anion hydrolyze, compare K_a & K_b of each
 - bigger K_a = acidic solⁿ
 - bigger K_b = basic solⁿ

Examples:

1. KCl

2. NH_4Cl

3. FeBr_3

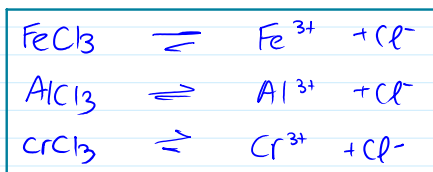
4. NaF

5. NaHC₂O₄

6. NH₄NO₂

7. Al(H₂O)₅(OH)(NO₃)₂

Note :



These
become

