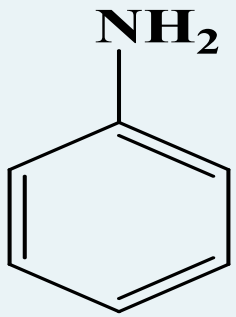
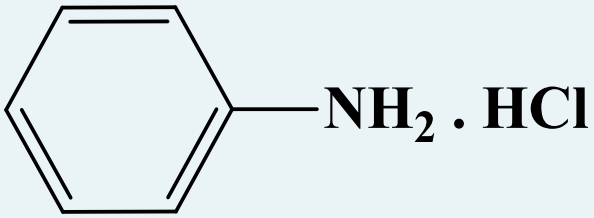
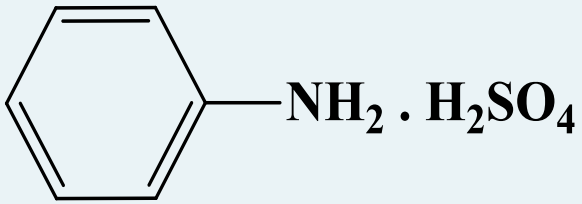
AMINES & AMINES SALTS

Aniline	Aniline hydrochloride	Aniline sulphate
 1ry amine		
All aromatic		

Physical properties:			
State	Liquid, oily, true	Solid, fine powder	
Color	Reddish brown	White green *((gray))*	White creamy color
Odor	Fishy odor	Characteristic odor	

	Aniline	Aniline. HCl	Aniline sulphate
Ignition test:			
Inflammability	Inflammable, luminous, smoky		
Change in appearance	Volatilization	Melting	
Change in odor	No change		
Color imparted to the flame	No change		
Residue	No residue		
comment	***All the compounds are aromatic***		

Solubility & Miscibility:

	Aniline	Aniline hydrochloride	Aniline sulphate
H_2O	Immiscible	soluble	
L.p.		Blue ⟹ Red	
Dil. HCl	Miscible in large amount		
Na_2CO_3 test:		Strong effervescence	
Comment:	*Basic compound*	*.: The compounds are Strong acid*	

Preliminary test:

	Aniline	Aniline hydrochloride	Aniline sulphate
Soda lime			
On cold:	Not done (for solid only)	No reaction	
On hot:		Fishy odor	
30% NaOH		Salt + H_2O + 30% NaOH ⟶	
On cold:	No reaction	oily droplet + white ppt + fishy odor	
On hot:		Not done	
$FeCl_3$	1 drop aniline + dil. HCl + 2dps $FeCl_3$ ↓	salt + H_2O + 2dps $FeCl_3$ ⟶	
On cold:	No reaction	No reaction	
On hot:	Green color	Green color	
Conc. H_2SO_4	Aniline + 2 dopes Conc. H_2SO_4		
On cold:	White ppt of aniline sulphate	No reaction	
On hot:	Not done		

General test :

1. Azo dye formation test:

(1) 1 drop aniline (red color) + dil.HCl (until dissolve) + $NaNO_2$ (sod. Nitrite solution) → until faint pale yellow color {Diazonium salt formed}

It is unstable because that we must put it in ice, without ice it will decompose

(2) few phenol + 10% NaOH (until phenol dissolved)

↓

Add (1) on (2) gradually →

Orange – red ppt or color

2. Acetylation test:

5 ml aniline + 20ml acetic anhydride —*Reflux 20 min.*→ Pour in ice

↓

White ppt of anilide.

Specific test = Identification of Cl^- / $SO4^{-2}$ *((acidic radical))*:

Aniline HCl	Aniline sulphate
$AgNO_3$ test:	***$BaCl_2$ test:***
 Aniline HCl+ Distilled H_2O + Dil. HNO_3 + 2 dps $AgNO_3$ *((silver nitrate))* 	 Aniline sulphate + Distilled H_2O + Dil. HCl + 1 dps $BaCl_2$ 
White curdy ppt of AgCl	***White ppt of $BaSO_4$***