

Worksheet 4a: More Identifying Types of Acids and Bases

As quickly as possible, identify the compounds below by type of acid or base and the symbol to be used in an acid or base calculation. (Answer key below)

Possible types of acid or base answers:

strong acid, weak acid, strong base, weak base, Lewis acid, neither, ...

Possible symbols: H^+ , OH^- , HA, A^- , B, BH^+ , none (at the bottom of the page are some polyprotic cases. For these amphiprotic is a choice as well as A^{2-} , HA^- , etc...)

Name or Formula	Type of Acid or Base	Symbol in calculations
CH_3COOH		
Potassium Formate		
NH_3		
Nitric Acid		
$NaClO_4$		
Ammonium Nitrate		
Diethyl Amine		
$(CH_3)_2NH$		
Cesium Benzoate		
HCN		
$LiOH$		
$(CH_3CH=CH)NH_2$		
NaI		
KCN		
Barium Hydroxide		
$CsBr$		
CH_3NH_3Br		
NH_4F		
Potassium Iodide		
KI		
H_2CO_3		
Na_2HPO_4		
Copper (II) Sulfate		
H_3PO_4		
$H_2C_2O_4$		
KHS		
$NaHSO_3$		
CO_3^{2-}		
$NaHCO_3$		

Name or Formula	Type of Acid or Base	Symbol in calculations
CH ₃ COOH	Weak acid	HA
Potassium Formate	Weak base	A ⁻
NH ₃	Weak base	B
Nitric Acid	Strong Acid	H ⁺
NaClO ₄	Spectator ions	nothing
Ammonium Nitrate	Weak Acid	BH ⁺
Diethyl Amine	Weak Base	B
(CH ₃) ₂ NH	Weak Acid	BH ⁺
Cesium Benzoate	Weak Base	A ⁻
HCN	Weak Acid	HA
LiOH	Strong Base	OH ⁻
(CH ₃ CH=CH)NH ₂	Weak Base	B
NaI	Spectator ions	nothing
KCN	Weak Base	A ⁻
Barium Hydroxide	Strong Base	OH ⁻
CsBr	Spectator ions	nothing
CH ₃ NH ₃ Br	Weak Acid	BH ⁺
NH ₄ F	Weak Acid/Weak Base	BH ⁺ and A ⁻
Potassium Iodide	Spectator ions	nothing
KI	Spectator ions	nothing
H ₂ CO ₃	Diprotic acid	H ₂ A
Na ₂ HPO ₄	Amphiprotic	HA ²⁻
Copper (II) Sulfate	Weak base	A ²⁻
H ₃ PO ₄	Triprotic Acid	H ₃ A
H ₂ C ₂ O ₄	Diprotic Acid	H ₂ A
KHS	Amphiprotic	HA ⁻
NaHSO ₃	Amphiprotics	HA ⁻
CO ₃ ²⁻	Weak base	A ²⁻
NaHCO ₃	Amphiprotic	HA ⁻