

Dissociation Constants for Weak Acids

Name	Formula	K _{a1}	K _{a2}	K _{a3}
Acetic Acid	HC ₂ H ₃ O ₂	1.8 x 10 ⁻⁵		
Arsenic Acid	H ₃ AsO ₄	5.5 x 10 ⁻³	1.7 x 10 ⁻⁷	5.1 x 10 ⁻¹²
Arsenious Acid	H ₃ AsO ₃	5.1 x 10 ⁻¹⁰		
Ascorbic	H ₂ C ₆ H ₇ O ₆	8.0 x 10 ⁻⁵	1.6 x 10 ⁻¹²	
Aspartic Acid	H ₃ C ₄ H ₄ NO ₄	1.0 x 10 ⁻²	1.3 x 10 ⁻⁴	1.3 x 10 ⁻¹⁰
Benzoic	HC ₇ H ₅ O ₂	6.5 x 10 ⁻⁵		
Boric	H ₃ BO ₃	5.4 x 10 ⁻¹⁰		
Butanoic acid	CH ₃ (CH ₂) ₂ COOH	1.5 x 10 ⁻⁵		
Carbonic	H ₂ CO ₃	4.5 x 10 ⁻⁷	4.7 x 10 ⁻¹¹	
Chloroacetic	HC ₂ H ₂ O ₂ Cl ₂	1.4 x 10 ⁻³		
Chlorous	HClO ₂	1.1 x 10 ⁻²		
Citric	H ₃ C ₆ H ₅ O ₇	7.4 x 10 ⁻³	1.7 x 10 ⁻⁵	4.1 x 10 ⁻⁷
Cyanic	HCNO	3.5 x 10 ⁻⁴		
Dichloroacetic	Cl ₂ CHCOOH	5.0 x 10 ⁻²		
Ethanethiol	CH ₃ CH ₂ SH	2.9 x 10 ⁻¹¹		
Formic	HCHO ₂	1.8 x 10 ⁻⁴		
Hydroazoic	HN ₃	2.5 x 10 ⁻⁵		
Hydrocyanic	HCN	6.2 x 10 ⁻¹⁰		
Hydrofluoric	HF	6.3 x 10 ⁻⁴		
Hydrogen peroxide	H ₂ O ₂	2.4 x 10 ⁻¹²		
Hydrogen sulfide	H ₂ S	8.9 x 10 ⁻⁸	1.0 x 10 ⁻¹⁹	
Hypobromous	HBrO	2.8 x 10 ⁻⁹		
Hypochlorous	HClO	4.0 x 10 ⁻⁸		
Hypoiodous	HIO	3.2 x 10 ⁻¹¹		
Iodic	HIO ₃	1.7 x 10 ⁻¹		
Lactic	HC ₃ H ₅ O ₃	8.3 x 10 ⁻⁴		
Maleic	H ₂ C ₄ H ₄ O ₅	1.5 x 10 ⁻²	8.5 x 10 ⁻⁷	
Malonic	H ₂ C ₃ H ₂ O ₄	1.5 x 10 ⁻³	2.0 x 10 ⁻⁶	
Nitrous	HNO ₂	5.6 x 10 ⁻⁴		
p-Nitrophenol	NO ₂ (C ₆ H ₄)OH	7.1 x 10 ⁻⁸		
Oxalic	H ₂ C ₂ O ₄	5.9 x 10 ⁻²	6.4 x 10 ⁻⁵	
Periodic	HIO ₄	2.3 x 10 ⁻²		
Phthalic acid	C ₆ H ₄ (COOH) ₂	1.3 x 10 ⁻³	3.9 x 10 ⁻⁶	
Phenol	HC ₆ H ₅ O	1.3 x 10 ⁻¹⁰		
Phosphoric	H ₃ PO ₄	7.5 x 10 ⁻³	6.2 x 10 ⁻⁸	4.8 x 10 ⁻¹³
Phosphorous	H ₃ PO ₃	5.0 x 10 ⁻²	2.0 x 10 ⁻⁷	
Propionic	HC ₃ H ₅ O ₂	1.3 x 10 ⁻⁵		
Selenic Acid	H ₂ SeO ₄	Very large	1.2 x 10 ⁻²	
Selenous	H ₂ SeO ₃	2.4 x 10 ⁻³	4.8 x 10 ⁻⁹	
Succinic acid	(CH ₂) ₂ (COOH) ₂	6.9 x 10 ⁻⁵	2.5 x 10 ⁻⁶	
Sulfuric	H ₂ SO ₄	Strong	1.2 x 10 ⁻²	
Sulfurous	H ₂ SO ₃	1.7 x 10 ⁻²	6.4 x 10 ⁻⁸	

Tartaric	$\text{H}_2\text{C}_4\text{H}_4\text{O}_6$	1.0×10^{-3}	4.6×10^{-5}
Tellurous	H_2TeO_3	5.4×10^{-7}	3.7×10^{-9}
Thiophenol	$\text{C}_6\text{H}_5\text{SH}$	3.0×10^{-7}	
Trichloroacetic	Cl_3CCOOH	2.1×10^{-1}	

Dissociation Constants for Weak Bases

Name	Formula	K_b	
Ammonia	NH_3	1.8×10^{-5}	
Aniline	$\text{C}_6\text{H}_5\text{NH}_2$	4.3×10^{-10}	
Diethylamine	$(\text{C}_2\text{H}_5)_2\text{NH}$	1.2×10^{-3}	
Dimethylamine	$(\text{CH}_3)_2\text{NH}$	4.8×10^{-4}	
Ethylamine	$\text{C}_2\text{H}_5\text{NH}_2$	6.5×10^{-4}	
Hydrazine	H_2NNH_2	1.3×10^{-6}	
Hydroxylamine	HONH_2	8.7×10^{-9}	
Methylamine	CH_3NH_2	4.4×10^{-4}	
Morphine	$\text{C}_{17}\text{H}_{19}\text{NO}_3$	1.6×10^{-6}	
Piperidine	$(\text{C}_5\text{H}_{10})\text{NH}$	1.9×10^{-3}	
Pyridine	$\text{C}_5\text{H}_5\text{N}$	1.8×10^{-9}	
Strychnine	$\text{C}_{21}\text{H}_{22}\text{N}_2\text{O}_2$	1.8×10^{-6}	
Triethylamine	$(\text{C}_2\text{H}_5)_3\text{N}$	6.0×10^{-4}	
Trimethylamine	$(\text{CH}_3)_3\text{N}$	6.4×10^{-5}	
Urea	$(\text{NH}_2)_2\text{CO}$	1.2×10^{-14}	