

E.1 DISSOCIATION CONSTANTS FOR ACIDS AT 25 °C

Name	Formula	K_{a1}	K_{a2}	K_{a3}
Acetic	$\text{HC}_2\text{H}_3\text{O}_2$	1.8×10^{-5}		
Ascorbic	$\text{HC}_6\text{H}_7\text{O}_6$	8.0×10^{-3}		
Arsenic	H_3AsO_4	5.6×10^{-3}	1.0×10^{-7}	3.0×10^{-12}
Arsenous	H_3AsO_3	6.0×10^{-10}		
Benzoic	$\text{HC}_7\text{H}_5\text{O}_2$	6.5×10^{-5}		
Boric	H_3BO_3	5.8×10^{-10}		
Butyric acid	$\text{HC}_4\text{H}_7\text{O}_2$	1.5×10^{-5}		
Carbonic	H_2CO_3	4.3×10^{-7}	5.6×10^{-11}	
Cyanic	HCNO	3.5×10^{-4}		
Citric	$\text{H}_3\text{C}_6\text{H}_5\text{O}_7$	7.4×10^{-4}	1.7×10^{-5}	4.0×10^{-7}
Formic	HCHO_2	1.8×10^{-4}		
Hydroazoic	HN_3	1.9×10^{-5}		
Hydrocyanic	HCN	4.9×10^{-10}		
Hydrofluoric	HF	7.2×10^{-4}		
Hydrogen chromate ion	HCrO_4^-	3.0×10^{-7}		
Hydrogen peroxide	H_2O_2	2.4×10^{-12}		
Hydrogen selenate ion	HSeO_4^-	2.2×10^{-2}		
Hydrogen sulfate ion	HSO_4^-	1.2×10^{-2}		
Hydrogen sulfide	H_2S	5.7×10^{-8}	1.3×10^{-13}	
Hypobromous	HBrO	2.0×10^{-9}		
Hypochlorous	HClO	3.0×10^{-8}		
Hypoiodous	HIO	2.0×10^{-11}		
Iodic	HIO_3	1.7×10^{-1}		
Lactic	$\text{HC}_3\text{H}_5\text{O}_3$	1.4×10^{-4}		
Malonic	$\text{H}_2\text{C}_3\text{H}_2\text{O}_4$	1.5×10^{-3}	2.0×10^{-6}	
Oxalic	$\text{H}_2\text{C}_2\text{O}_4$	5.9×10^{-2}	6.4×10^{-5}	
Nitrous	HNO_2	4.5×10^{-4}		
Phenol	$\text{HC}_6\text{H}_5\text{O}$	1.3×10^{-10}		
Phosphoric	H_3PO_4	7.5×10^{-3}	6.2×10^{-8}	4.2×10^{-13}
Paraperiodic	H_5IO_6	2.8×10^{-2}	5.3×10^{-9}	
Propionic	$\text{HC}_3\text{H}_5\text{O}_2$	1.3×10^{-5}		
Pyrophosphoric	$\text{H}_4\text{P}_2\text{O}_7$	3.0×10^{-2}	4.4×10^{-3}	
Selenous	H_2SeO_3	2.3×10^{-3}	5.3×10^{-9}	
Sulfuric	H_2SO_4	strong acid	1.2×10^{-2}	
Sulfurous	H_2SO_3	1.7×10^{-2}	6.4×10^{-8}	
Tartaric	$\text{H}_2\text{C}_4\text{H}_4\text{O}_6$	1.0×10^{-3}	4.6×10^{-5}	

E.2 DISSOCIATION CONSTANTS FOR BASES AT 25°C

Name	Formula	K_b	Name	Formula	K_b
Ammonia	NH_3	1.8×10^{-5}	Hydroxylamine	HONH_2	1.1×10^{-8}
Aniline	$\text{C}_6\text{H}_5\text{NH}_2$	4.3×10^{-10}	Methylamine	CH_3NH_2	4.4×10^{-4}
Dimethylamine	$(\text{CH}_3)_2\text{NH}$	5.4×10^{-4}			
Ethylamine	$\text{C}_2\text{H}_5\text{NH}_2$	6.4×10^{-4}	Trimethylamine	$(\text{CH}_3)_3\text{N}$	6.4×10^{-5}
Hydrazine	H_2NNH_2	1.3×10^{-6}			