E1: Acid Dissociation Constants at 25°C

Name	Formula	K_{a1}	pK_{a1}	K_{a2}	pK_{a2}	K_{a3}	pK_{a3}	K_{a4}	pK_{a4}
Acetic acid	CH_3CO_2H	1.75×10^{-5}	4.756	-	-	-	-	-	-
Arsenic acid	H_3AsO_4	5.5×10^{-3}	2.26	1.7×10^{-7}	6.76	5.1×10^{-12}	11.29	-	-
Benzoic acid	$C_6H_5CO_2H$	6.25×10^{-5}	4.204	-	-	-	-	-	-
Boric acid	H_3BO_3	5.4×10^{-10}*	9.27*	$>1 \times 10^{-14}$*	>14*	-	-	-	-
Bromoacetic acid	CH_2BrCO_2H	1.3×10^{-3}	2.90	-	-	-	-	-	-
Carbonic acid	H_2CO_3	4.5×10^{-7}	6.35	4.7×10^{-11}	10.33	-	-	-	-
Chloroacetic acid	CH_2ClCO_2H	1.3×10^{-3}	2.87	-	-	-	-	-	-
Chlorous acid	$HClO_2$	1.1×10^{-2}	1.94	-	-	-	-	-	-
Chromic acid	H_2CrO_4	1.8×10^{-1}	0.74	3.2×10^{-7}	6.49	-	-	-	-
Citric acid	$C_6H_8O_7$	7.4×10^{-4}	3.13	1.7×10^{-5}	4.76	4.0×10^{-7}	6.40	-	-
Cyanic acid	HCNO	3.5×10^{-4}	3.46	-	-	-	-	-	-
Dichloroacetic acid	$CHCl_2CO_2H$	4.5×10^{-2}	1.35	-	-	-	-	-	-
Fluoroacetic acid	CH_2FCO_2H	2.6×10^{-3}	2.59	-	-	-	-	-	-
Formic acid	CH_2O_2	1.8×10^{-4}	3.75	-	-	-	-	-	-
Hydrazoic acid	HN_3	2.5×10^{-5}	4.6	-	-	-	-	-	-
Hydrocyanic acid	HCN	6.2×10^{-10}	9.21	-	-	-	-	-	-
Hydrofluoric acid	HF	6.3×10^{-4}	3.20	-	-	-	-	-	-
Hydrogen peroxide	HOOH	2.0×10^{-12}	11.7						
Hydrogen selenide	H_2Se	1.3×10^{-4}	3.89	1.0×10^{-11}	11.0	-	-	-	-
Hydrogen sulfide	H_2S	8.9×10^{-8}	7.05	1×10^{-19}	19	-	-	-	-
Hydrogen telluride	H_2Te	2.5×10^{-3}‡	2.6‡	1×10^{-11}	11	-	-	-	-
Hypobromous acid	HBrO	2.8×10^{-9}	8.55	-	-	-	-	-	-

* Measured at 20°C, not 25°C.

‡ Measured at 18°C, not 25°C.

Name	Formula	K_{a1}	pK_{a1}	K_{a2}	pK_{a2}	K_{a3}	pK_{a3}	K_{a4}	pK_{a4}
Hypochlorous acid	HClO	4.0×10^{-8}	7.40	-	-	-	-	-	-
Hypoiodous acid	HIO	3.2×10^{-11}	10.5	-	-	-	-	-	-
Iodic acid	HIO_3	1.7×10^{-1}	0.78	-	-	-	-	-	-
Iodoacetic acid	CH_2ICO_2H	6.6×10^{-4}	3.18	-	-	-	-	-	-
Nitrous acid	HNO_2	5.6×10^{-4}	3.25	-	-	-	-	-	-
Oxalic acid	$C_2H_2O_4$	5.6×10^{-2}	1.25	1.5×10^{-4}	3.81	-	-	-	-
Periodic acid	HIO_4	2.3×10^{-2}	1.64	-	-	-	-	-	-
Phenol	C_6H_5OH	1.0×10^{-10}	9.99	-	-	-	-	-	-
Phosphoric acid	H_3PO_4	6.9×10^{-3}	2.16	6.2×10^{-8}	7.21	4.8×10^{-13}	12.32	-	-
Phosphorous acid	H_3PO_3	5.0×10^{-2}*	1.3*	2.0×10^{-7}*	6.70*	-	-	-	-
Pyrophosphoric acid	$H_4P_2O_7$	1.2×10^{-1}	0.91	7.9×10^{-3}	2.10	2.0×10^{-7}	6.70	4.8×10^{-10}	9.32
Resorcinol	$C_6H_4(OH)_2$	4.8×10^{-10}	9.32	7.9×10^{-12}	11.1	-	-	-	-
Selenic acid	H_2SeO_4	Strong	Strong	2.0×10^{-2}	1.7	-	-	-	-
Selenious acid	H_2SeO_3	2.4×10^{-3}	2.62	4.8×10^{-9}	8.32	-	-	-	-
Sulfuric acid	H_2SO_4	Strong	Strong	1.0×10^{-2}	1.99	-	-	-	-
Sulfurous acid	H_2SO_3	1.4×10^{-2}	1.85	6.3×10^{-8}	7.2	-	-	-	-
meso-Tartaric acid	$C_4H_6O_6$	6.8×10^{-4}	3.17	1.2×10^{-5}	4.91	-	-	-	-
Telluric acid	H_2TeO_4	2.1×10^{-8}‡	7.68‡	1.0×10^{-11}‡	11.0‡	-	-	-	-
Tellurous acid	H_2TeO_3	5.4×10^{-7}	6.27	3.7×10^{-9}	8.43	-	-	-	-
Trichloroacetic acid	CCl_3CO_2H	2.2×10^{-1}	0.66	-	-	-	-	-	-
Trifluoroacetic acid	CF_3CO_2H	3.0×10^{-1}	0.52	-	-	-	-	-	-
* Measured at 20°C, not 25°C.									
‡ Measured at 18°C, not 25°C.									

Source of data: *CRC Handbook of Chemistry and Physics*, 84th Edition (2004).