Properties of an Unknown Weak Monoprotic Acid, *HA*
CHE 122

ACID	FORMULA	GRAM-MOLECULAR WEIGHT/ GRAM EQUIVALENT WEIGHT	K_a	pK_a
Benzoic	C_6H_5COOH	122.1	6.14×10^{-5}	4.21
Crotonic	CH_3C_2HCOOH	86.09	2.03×10^{-5}	4.69
Formic	$HCOOH$	46.03	1.77×10^{-4}	3.75
Hydrocyanic	HCN	27.03	2.10×10^{-9}	8.68
Hydrofluoric	HF	20.01	6.76×10^{-4}	3.17
p-Hydroxybenzoic	p-HOC_6H_4COOH	138.1	2.63×10^{-5}	4.58
Hypochlorous	$HOCl$	52.46	2.95×10^{-8}	7.53
Lactic (2-hyroxypropanoic)	$CH_3CHOHCOOH$	90.08	1.37×10^{-4}	3.86
Mandelic (2-phenyl-2-hydroxyacetic)	$C_6H_5CHOHCOOH$	152.16	3.88×10^{-4}	3.41
Methylamine hydrochloride	$[CH_3NH_3^+]Cl^-$	67.52	2.75×10^{-11}	10.56
Monochloroacetic	$ClCH_2COOH$	94.50	1.36×10^{-3}	2.87
Nitrous	HNO_2	47.02	5.10×10^{-4}	3.29
Phenol	C_6H_5OH	94.12	1.00×10^{-10}	10.00
Potassium acid phthalate	p-$C_6H_4(COOK)COOH$	204.23	3.09×10^{-6}	5.51
Propanoic	CH_3CH_2COOH	74.08	1.34×10^{-5}	4.87
Pyruvic (2-ketopropanoic)	$CH_3COCOOH$	88.07	3.24×10^{-3}	2.49
Salicylic (o-hydroxybenzoic)	o-HOC_6H_4COOH	138.1	1.05×10^{-3}	2.98
Sodium bicarbonate	$NaOCOOH$	84.01	5.62×10^{-11}	10.25
Sulfamic	NH_2SO_2OH	97.10	1.03×10^{-1}	0.99
Trichloroacetic	$CHCl_3COOH$	163.39	1.29×10^{-1}	0.89