

## Dissociation Constants for Acids at 25°C

Name	Formula			$K_a$		
Acetic	CH <sub>3</sub> COOH			$1.7 \times 10^{-5}$		
Benzoic	C <sub>6</sub> H <sub>5</sub> COOH			$6.3 \times 10^{-5}$		
Boric	H <sub>3</sub> BO <sub>3</sub>			$5.9 \times 10^{-10}$		
Carbonic	H <sub>2</sub> CO <sub>3</sub>	HCO <sub>3</sub> <sup>-</sup>		$4.3 \times 10^{-7}$	$4.8 \times 10^{-11}$	
Cyanic	HNCO			$3.5 \times 10^{-4}$		
Formic	HCOOH			$1.7 \times 10^{-4}$		
Hydrocyanic	HCN			$4.0 \times 10^{-10}$		
Hydrofluoric	HF			$6.8 \times 10^{-4}$		
Hypochlorous	HOCl			$3.5 \times 10^{-8}$		
Nitrous	HNO <sub>2</sub>			$4.5 \times 10^{-4}$		
Oxalic	HOCCOOH	HOCCOO <sup>-</sup>		$5.6 \times 10^{-2}$	$5.1 \times 10^{-5}$	
Carbolic (Phenol)	C <sub>6</sub> H <sub>5</sub> OH			$1.1 \times 10^{-10}$		
Phosphoric	H <sub>3</sub> PO <sub>4</sub>	H <sub>2</sub> PO <sub>4</sub> <sup>-</sup>	HPO <sub>4</sub> <sup>-2</sup>	$6.9 \times 10^{-3}$	$6.2 \times 10^{-8}$	$4.8 \times 10^{-13}$
Phosphorous	H <sub>3</sub> PO <sub>3</sub>		H <sub>2</sub> PO <sub>3</sub> <sup>-</sup>	$1.6 \times 10^{-2}$		$7 \times 10^{-7}$
Propionic	CH <sub>3</sub> CH <sub>2</sub> COOH			$1.3 \times 10^{-5}$		
Pyruvic	CH <sub>3</sub> COCOOH			$1.4 \times 10^{-4}$		
Sulfurous	H <sub>2</sub> SO <sub>3</sub>		HSO <sub>3</sub> <sup>-</sup>	$1.3 \times 10^{-2}$	$6.3 \times 10^{-8}$	

Ebbing, Darrell D. *General Chemistry* 3rd ed.; Houghton Mifflin Company: Boston, MA, 1990; p 645.

## Dissociation Constants for Bases at 25°C

Name	Formula		$K_b$	
Ammonia	NH <sub>3</sub>		$1.75 \times 10^{-5}$	
Aniline	C <sub>6</sub> H <sub>5</sub> NH <sub>2</sub>		$4.0 \times 10^{-10}$	
Ethylamine	CH <sub>3</sub> CH <sub>2</sub> NH <sub>2</sub>		$4.3 \times 10^{-4}$	
Ethylenediamine	NH <sub>2</sub> C <sub>2</sub> H <sub>4</sub> NH <sub>2</sub>	NH <sub>2</sub> C <sub>2</sub> H <sub>4</sub> NH <sub>3</sub> <sup>+</sup>	$8.5 \times 10^{-5}$	$7.1 \times 10^{-8}$
Hydrazine	H <sub>2</sub> NNH <sub>2</sub>		$1.3 \times 10^{-6}$	
Methylamine	CH <sub>3</sub> NH <sub>2</sub>		$4.8 \times 10^{-4}$	
Piperidine	C <sub>5</sub> H <sub>11</sub> N		$1.3 \times 10^{-3}$	
Pyridine	C <sub>5</sub> H <sub>5</sub> N		$1.7 \times 10^{-9}$	

Christian, Gary D. *Analytical Chemistry*, 5<sup>th</sup> ed.; John Wiley & Sons: New York, 1994; pp 775-776.