

## Environmentally Relevant pKa Values for Acid/Base Systems

Compound	Formula	pKa <sub>1</sub>	pKa <sub>2</sub>	pKa <sub>3</sub>
<b>Monoprotic Systems:</b>				
Acetic Acid	CH <sub>3</sub> COOH	4.76		
Aluminum ion (hydrated)	Al(H <sub>2</sub> O) <sub>6</sub> <sup>3+</sup>	5.00		
Ammonium ion	NH <sub>4</sub> <sup>+</sup>	9.24		
Benzoic Acid	C <sub>6</sub> H <sub>5</sub> CO <sub>2</sub> H	4.20		
Formic Acid	HCOOH	3.75		
Hydrocyanic Acid	HCN	9.40		
Iron Hydroxide (hydrated)	FeOH(H <sub>2</sub> O) <sub>5</sub> <sup>2+</sup>	3.48		
Hydrofluoric Acid	HF	3.18		
Hypochlorous Acid	HClO	7.46		
Nitrous Acid	HNO <sub>3</sub>	4.5		
Phenol	C <sub>6</sub> H <sub>5</sub> OH	9.9		
<b>Diprotic Systems:</b>				
Carbonic Acid	H <sub>2</sub> CO <sub>3</sub>	6.35	10.33	
Hydrogen Sulfide	H <sub>2</sub> S	7.03	14	
<b>Triprotic Systems:</b>				
Phosphoric Acid	H <sub>3</sub> PO <sub>4</sub>	2.15	7.20	12.35