|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **pKa Values for Common Alpha Amino Acids** | | | | |
| **Amino Acid Type** | **Amino Acid** | **-COOH** | **-NH3+** | **RH or RH+** |
| **Hydrophobic: Aliphatic** | **Glycine** | **2.34** | **9.60** |  |
| **Alanine** | **2.34** | **9.69** |  |
| **Valine** | **2.32** | **9.62** |  |
| **Leucine** | **2.36** | **9.68** |  |
| **Isoleucine** | **2.36** | **9.68** |  |
| **Proline** | **1.99** | **10.6** |  |
| **Methionine** | **2.28** | **9.21** |  |
| **Hydrophobic: Aromatic** | **Phenylalanine** | **1.83** | **9.13** |  |
| **Tyrosine** | **2.2** | **9.11** | **10.07** |
| **Tryptophan** | **2.38** | **9.39** |  |
| **Hydrophilic: Polar Uncharged** | **Serine** | **2.21** | **9.15** |  |
| **Threonine** | **2.63** | **10.43** |  |
| **Cysteine** | **1.71** | **10.78** | **8.33** |
| **Asparagine** | **2.02** | **8.8** |  |
| **Glutamine** | **2.17** | **9.13** |  |
| **Hydrophilic: Acidic** | **Aspartic Acid** | **2.09** | **9.82** | **3.86** |
| **Glutamic Acid** | **2.19** | **9.67** | **4.25** |
| **Hydrophilic: Basic** | **Arginine** | **2.17** | **9.04** | **12.48** |
| **Histidine** | **1.82** | **9.17** | **6.00** |
| **Lysine** | **2.18** | **8.95** | **10.53** |