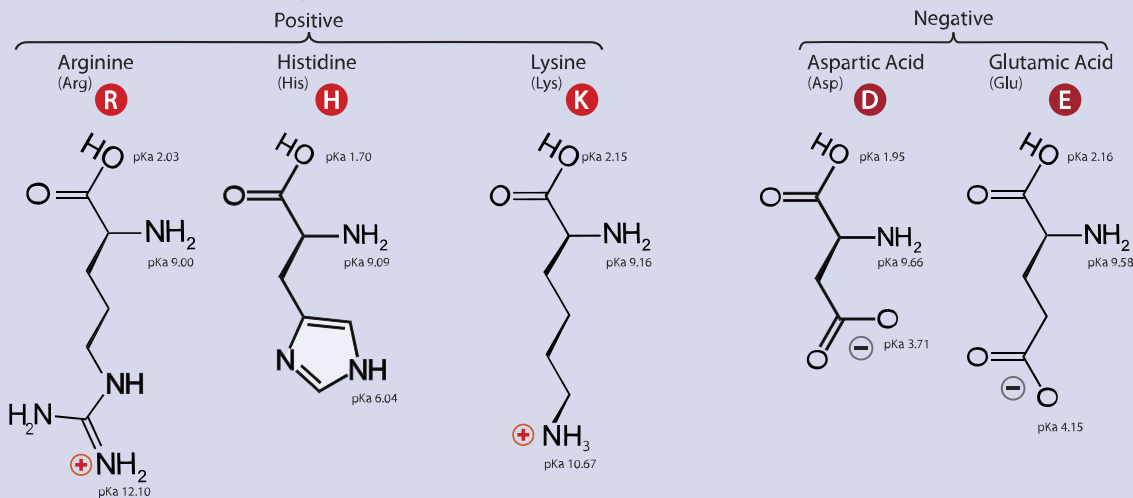


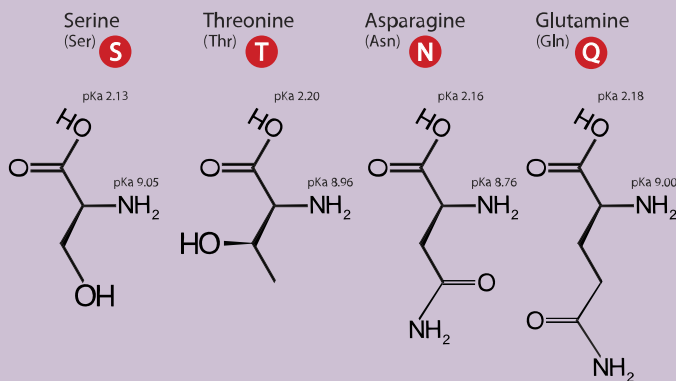
Twenty-One Amino Acids

⊕ Positive ⊖ Negative
• Side chain charge at physiological pH 7.4

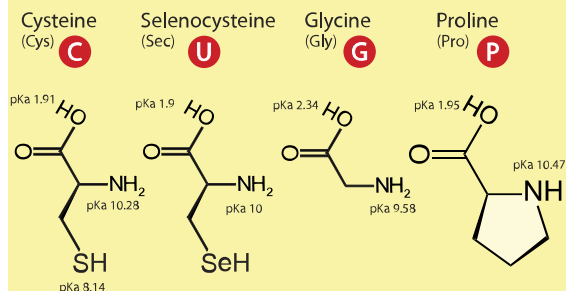
A. Amino Acids with Electrically Charged Side Chains



B. Amino Acids with Polar Uncharged Side Chains



C. Special Cases



D. Amino Acids with Hydrophobic Side Chain

