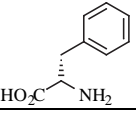
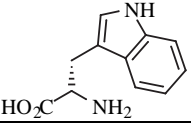
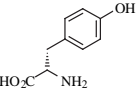
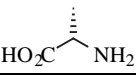
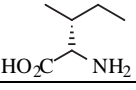
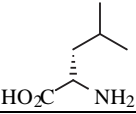
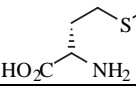
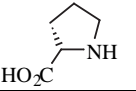
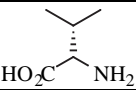
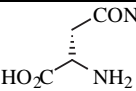
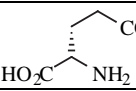
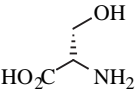
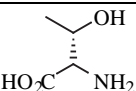
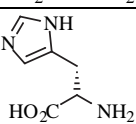
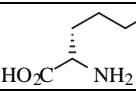
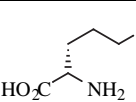
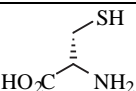
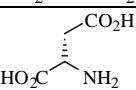
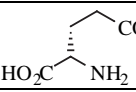
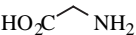
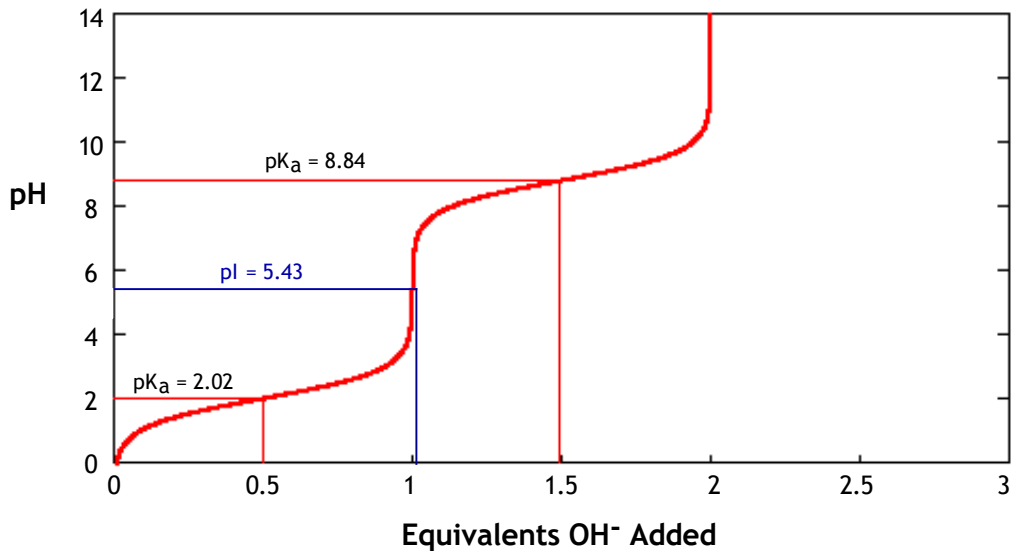


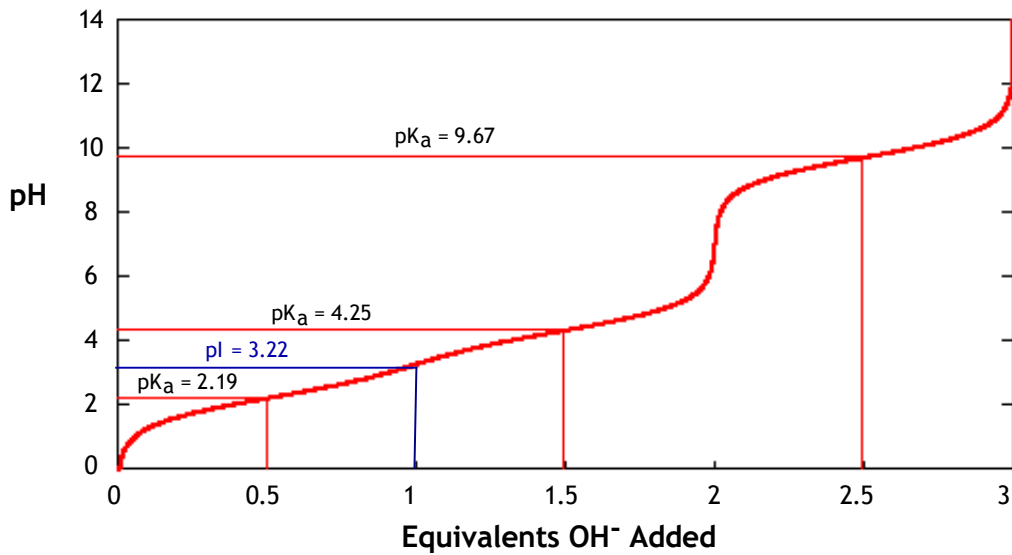
Structure	Name	Abbreviation	Polarity	pKa side chain
	Phenylalanine	Phe, F	Non-Polar (‘hydrophobic’) Aromatic	
	Tryptophan	Trp, W	Non-Polar (‘hydrophobic’) Aromatic	
	Tyrosine	Tyr, Y	Non-Polar (‘hydrophobic’) Aromatic	10.07
	Alanine	Ala, A	Non-Polar (‘hydrophobic’)	
	Isoleucine	Ile, I	Non-Polar (‘hydrophobic’)	
	Leucine	Leu, L	Non-Polar (‘hydrophobic’)	
	Methionine	Met, M	Non-Polar (‘hydrophobic’)	
	Proline	Pro, P	Non-Polar (‘hydrophobic’)	
	Valine	Val, V	Non-Polar (‘hydrophobic’)	
	Asparagine	Asn, N	Hydrophilic, uncharged	
	Glutamine	Gln, Q	Hydrophilic, uncharged	
	Serine	Ser, S	Hydrophilic, uncharged	
	Threonine	Thr, T	Hydrophilic, uncharged	
	Histidine	His, H	Hydrophilic, basic Aromatic	6.04
	Lysine	Lys, K	Hydrophilic, basic	10.79
	Arginine	Arg, R	Hydrophilic, basic	12.48
	Cysteine	Cys, C	Hydrophilic, acidic	8.33
	Aspartic Acid	Asp, D	Hydrophilic, acidic	3.86
	Glutamic Acid	Glu, E	Hydrophilic, acidic	4.25
	Glycine	Gly, G		

# Acid-Base Titration of Amino Acids

## Asparagine



## Glutamic Acid



## Lysine

