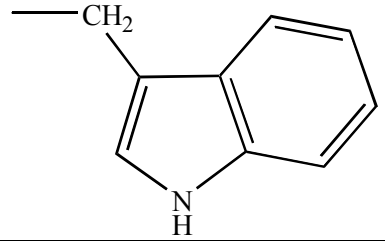
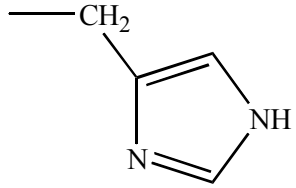
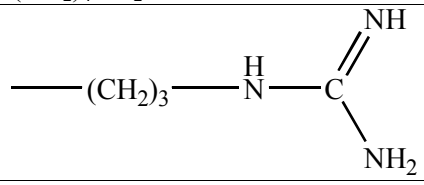
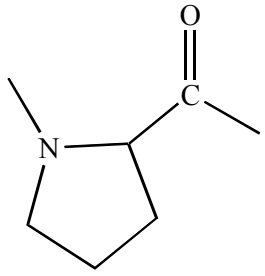
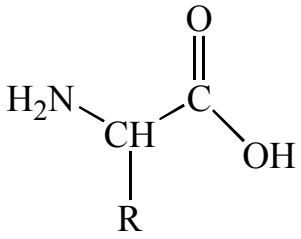
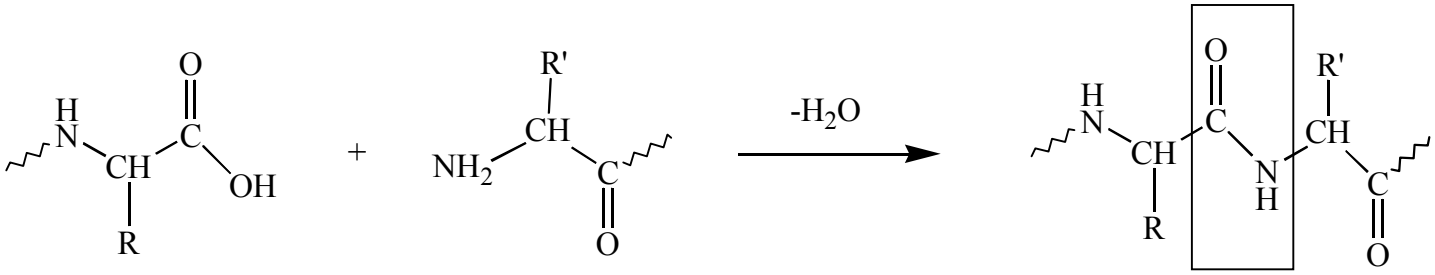
Amino Acid			Residue Mass (-NHCHRCO-)	-R	Proton Affinity (kcal/mol)
Glycine	Gly	G	57	-H	211.9
Alanine	Ala	A	71	$-CH_3$	215.5
Valine	Val	V	99	$-CH(CH_3)CH_3$	217.6
Isoleucine	Ile	I	113	$-CH(CH_3)CH_2CH_3$	219.3
Leucine	Leu	L	113	$-CH_2CH(CH_3)CH_3$	218.6
Serine	Ser	S	87	$-CH_2OH$	218.6
Threonine	Thr	T	101	$-CH(CH_3)OH$	220.5
Cysteine	Cys	C	103	$-CH_2SH$	215.9
Methionine	Met	M	131	$-CH_2CH_2SCH_3$	223.6
Aspartic Acid	Asp	D	115	$-CH_2C(O)OH$	217.2
Glutamic Acid	Glu	E	129	$-CH_2CH_2C(O)OH$	218.2
Asparagine	Asn	N	114	$-CH_2C(O)NH_2$	222.0
Glutamine	Gln	Q	128	$-CH_2CH_2C(O)NH_2$	224.1
Phenylalanine	Phe	F	147	$-CH_2C_6H_5$	220.6
Tyrosine	Tyr	Y	163	$-CH_2C_6H_4OH$	221.0
Tryptophan	Trp	W	186		226.8
Histidine	His	H	137		236.0
Lysine	Lys	K	128	$-(CH_2)_4NH_2$	238.0
Arginine	Arg	R	156		251.2
Proline (Note: this is an imino acid)	Pro	P	97		220.0

Structure of the Amino Acids



Structure of the Amide Bond in Proteins



Formation of Disulfide Bonds

Cysteine

Cysteine