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Table III

The Chemical Composition of Collagens and Elastin

(Grams of residues or of N in 100 g. of protein)

Amino Acid	Bovine collagen	Bovine elastin	Ichthyocol	Herring scales	Cornein	Spongin
	(40)	(95 169 106)	(28, 163)	(32)	(30, 33)	(30, 53)
~ ·	(40)	(85, 163, 196) 22.5	14.9	15.7	11.8	10.9
Glycine	19.9		9.5	10.1	11.0	0.2
Alanine	7.6	15.1	1.9	2.6	5.7	3.3
Phenylalanine	3.7	4.4		4.7	0.1	6.1
Leucines	4.8	10.1	5.2			0.1
Valine	2.9	12.5	2.0	2.4		4.3
Proline	12.7	13.4	13.3	7.2		
Hydroxyproline	12.1	1.7	4.0	0.0		0.0
Glutamic acid	10.0	2.4	8.6	6.3		14.6
Aspartic acid	5.5	0.35	5.1			3.5
Arginine	7.9	0.88	8.4	6.0	5.2	4.6
Lysine	4.0	0.39	. 4.4	3.2	2.6	3.0
Hydroxylysine	1.1		0.32			
Histidine	0.7	0.04	0.91	2.2	0.4	0.0
Serine	2.7	0.68	4.2	6.2		
Threonine	2.0	0.87	2.9	2.4		
Methionine	0.7	0.18	2.2	2.5		
Cystine	0.0	0.28	0.09	0.60	5.5	2.6
Tyrosine	1.3	1.4	0.39	2.5	12.8	1.5
Tryptophan	0.0	0.0	0.0	0.28	0.0	0.0
Total	99.6	87.2	88.3	64.8	44.0	54.6
Total N	18.6	16.9	18.3	16.0	14.7	14.6
Amide N	0.65	0.04	0.47			0.6

Original sources are indicated at column heads and include only the most recent reports needed to secure as complete coverage as possible for these significantly different preparations. All data have been reduced to expression as grams of residues or of N per 100 g. of ash- and moisture-free protein. Bovine collagen and elastin are those of purified hide and ligamentum nuchae, respectively. Ichthyocol samples were derived from fish swim bladders and skins, whose analyses are sufficiently similar to be combined for present purposes. Similarly, available analyses of the corneins, gorgonin of Gorgonia flabellum and plexaurin of Plexaurella dichotoma, have been combined, as have also results derived from the spongins of Hippospongia equina are of