



Essential Amino Acid content on Gelatine and Collagen

Hydrolyzed Marine Collagen consists of small peptides produced from the extracted gelatine by an enzymatic reaction. For this reason, there are not substantial differences in amino acid composition between gelatine and collagen from the same origin. Therefore, comparing amino acid profiles from gelatine and collagen, it is a normal practice. Amino acid composition depends mainly on the specie and tissue it comes from.

It is important to underline that essential amino acids cannot be produced by human body and must be obtained through diet.

In Table 1, there are the amino acid contents of gelatine or collagen extracted from the skin of 4 different species: Pork, Tilapia, Alaska pollock and Cod. Essential amino acids are marked in blue.

Table 1 Amino acid composition of collagen/gelatine extracts from different species origin. All extracts are from the skin. Units are number of amino acids for 100 amino acids.

	Pork skin gelatine (1)	Tilapia skin gelatine (2)	Alaska pollock skin collagen (3)	Cod skin gelatine (4)
Alanine	11,2	12,3	10,8	9,6
Arginine	4,9	4,7	5,1	5,6
Aspartic Acid	4,6	4,8	5,1	5,2
Cysteine	0,0	0,0	0,0	0,0
Glutamic Acid	7,2	6,9	7,4	7,8
Glycine	33,0	34,7	35,8	34,4
Histidine	0,4	0,6	0,8	0,8
Isoleucine	1,0	0,8	1,1	1,1
Leucine	2,4	2,3	2,0	2,2
Lysine	2,7	2,5	2,6	2,9
Hydroxylysine	0,6	0,8	0,6	0,6
Methionine	0,4	0,9	1,6	1,7
Phenylalanine	1,4	1,3	1,2	1,6
Hydroxyproline	9,1	7,9	5,5	5,0
Proline	13,2	11,9	9,5	10,6
Serine	3,5	3,5	6,3	6,4
Threonine	1,8	2,4	2,5	2,5
Tyrosine	0,3	0,2	0,3	0,3
Valine	2,6	1,5	1,8	1,8
Total Essential amino acids	12,7	12,3	13,6	14,6

Compared with Tilapia skin collagen, Alaska pollock skin collagen and Cod skin gelatine have > 10% and > 18% more essential amino acids, respectively.

BDF Naturlagen C3000 is done exclusively with Cod skin and BDF Naturlagen P3000 contains collagen from Cod and Alaska pollock skin.

References:

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