

In-Vitro PDCAAS Analysis

Date: January 1, 2020
Sample Number: Example
Sample Name: Pea Protein

Amino Acid	Amino Acid Conc.	Amino Acid Conc.	Amino Acid Conc.	Amino Acid Conc.	1991 Reference Protein (mg/g protein)	Ratio	
	Dehydrated (g/100g sample)	Hydrated (g/100g sample)	Dehydrated (mg/g protein)	Hydrated (mg/g protein)		Dehydrated	Hydrated
Cystine + Methionine*	1.35	1.55	17.03	19.66	25.00	0.681	0.787
Tryptophan*	0.79	0.87	10.00	10.97	11.00	0.909	0.997
Aspartic acid	7.42	8.58					
Threonine*	2.28	2.68	28.82	33.96	34.00	0.848	0.999
Serine	2.92	3.52					
Glutamic Acid	10.34	11.78					
Proline	2.66	3.15					
Glycine	2.23	2.93					
Alanine	2.49	3.12					
Valine*	3.29	3.89	41.70	49.28	35.00	1.191	1.408
Isoleucine*	3.13	3.63	39.59	45.90	28.00	1.414	1.639
Leucine*	5.19	6.02	65.72	76.18	66.00	0.996	1.154
Tyrosine + Phenylalanine*	6.17	6.89	78.08	87.23	63.00	1.239	1.385
Total Lysine*	4.85	5.54	61.43	70.07	58.00	1.059	1.208
Histidine*	1.59	1.80	20.10	22.74	19.00	1.058	1.197
Arginine	5.48	6.11					

*essential amino acid for nutrition
limiting amino acid for sample

	Dehydrated Amino Acids	Hydrated Amino Acids
Total Moisture (%) =	6.36	6.36
Total Crude Protein (Dumas Combustion, %) =	79.0	79.0
<i>In Vitro</i> Digestibility =	1.00	1.00
First Limiting Amino Acid =	Cystine + Methionine*	Cystine + Methionine*
Amino Acid Score =	0.68	0.79
PDCAAS Value =	0.68	0.79
Total Quality Protein (g/100g) =	53.8	62.1
Serving Size (g) =	8	8
Total Quality Protein per Serving (g/serving) =	4.3	5.0

Note: Concentrations of amino acids in the sample are calculated using both the hydrated and dehydrated molecular weight of each individual amino acid for the Amino Acid Score. The above results are recommended for research and product development use. At this time, it is recommended to use *in vivo* PDCAAS (with rat digestion) for final product labeling unless animal testing is not allowed by the food manufacturer.