

OPTIPEP 90 DH 4 INSTANT

TECHNICAL SPECIFICATION

Product Description Optipep 90 DH4 Instant is an enzyme hydrolysed Whey Protein Isolate providing a high quality source of peptides. It is lightly hydrolysed offering a low bitter flavour profile and is suitable for use in enhanced nutritional and functional applications. This ingredient has been instantised to improve its solubility and dispersibility in water.

Ingredient Listing Hydrolysed Whey Protein Isolate (Emulsifier: Soy Lecithin)

Customer Deimos SRL

Chemical	Specification	Typical	Test Method
Protein (TN x 6.41*) (% dry basis)	89.0 Min	90.0	Kjeldahl
Total Nitrogen (% TN)	13.0 Min	14.0	Kjeldahl
Moisture (%)	6.0 Max	5.0	Oven
Fat (%)	1.5 Max	1.3	NIR
Ash (%)	4.0 Max	3.0	Furnace 550°C
Lactose (%)	2.0 Max	1.0	Calculated
pH	6.0 Min	6.4	10% Aq Soln

* Kjeldahl Factor adjusted for changes in Nitrogen : Protein ratio due to the degree of hydrolysis

Microbiological			
Standard Plate Count (SPC)	50,000 / g Max	<10,000 / g Max	ISO 4833:2003
Coliforms	<10 / g	<10 / g	ISO 4832:2006
E.coli	<10 / g	<10 / g	ISO 16649-2:2001
Staph. aureus	<10 / g	<10 / g	ISO 6888:2003
Salmonella	Not Detected / 25g	Not Detected / 25g	ISO 6579:2002
Yeast & Moulds	50 / g Max	<10 / g	ISO 6611:2004

Physical			
Scorched Particles	Disc B or better	Disc A	ADPI Bulletin 916
Bulk Density	0.40 ± 0.10 g/cc	0.40	IDF134:1996
Appearance		Homogenous, free-flowing powder	Visual
Colour		Creamy white	Visual
Organoleptic		Typical, free from off-flavour	Taste

Mineral Profile			
Calcium (mg/100g)	400 - 600	500	Atomic Spectroscopy
Sodium (mg/100g)	120 - 250	170	Atomic Spectroscopy
Potassium (mg/100g)	400 - 600	500	Atomic Spectroscopy
Magnesium (mg/100g)	50 - 120	60	Atomic Spectroscopy
Phosphorous (mg/100g)	100 - 300	200	Atomic Spectroscopy
Chloride (mg/100g)	<50	<50	Titration

Hydrolysis Characteristics				
Degree of Hydrolysis (%)	4.0 ± 2	4.0	TNBS Assay	
AN/TN (%)	6.0 - 12.0	9.2	Calculated	
Molecular Weight Profile	>10,000	Daltons (%)	72	Size Excl. Chromatography
	5,000 - 10,000	Daltons (%)	3	Size Excl. Chromatography
	2,000 - 5,000	Daltons (%)	4	Size Excl. Chromatography
	1,000 - 2,000	Daltons (%)	3	Size Excl. Chromatography
	500 - 1,000	Daltons (%)	4	Size Excl. Chromatography
	<500	Daltons (%)	14	Size Excl. Chromatography
Average Molecular Weight		Daltons	15,011	Calculation

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Typical Nutritional Information

Amino Acid Profile	(g per 100g Powder)	(g per 100g Protein)
Leucine	9.68	10.75
Isoleucine	5.00	5.56
Valine	4.91	5.46
<i>Total Branched Chain Amino Acids</i>	<i>19.59</i>	<i>21.77</i>
Aspartic Acid	11.48	12.76
Glutamic Acid	16.71	18.57
Serine	5.24	5.82
Glycine	1.70	1.89
Histidine	1.48	1.65
Arginine	1.91	2.12
Threonine	7.22	8.02
Alanine	5.31	5.90
Proline	5.85	6.50
Tyrosine	2.82	3.13
Methionine	2.22	2.47
Cystine	2.41	2.68
Phenylalanine	3.04	3.38
Lysine	9.06	10.06
Tryptophan	1.96	2.18

Protein Utilisation*

PER	3.5
BV	104
PDCAAS	0.98
Digestibility	98 % - 100 %

* As per scientific literature

Fatty Acid Profile

Saturates (%)	<0.5
Mono-unsaturates (%)	<0.5
Polysaturates (%)	<0.5
Cholesterol (mg/100g)	5

Carbohydrates

Lactose (%)	1.0
Glucose (%)	<0.10
Sucrose (%)	<0.10

Energy	372 Kcal / 1557 KJ
Fibre	Nil

Diet Suitability

This product is suitable for individuals with the following dietary requirements: Kosher, Halal, Vegetarian, Ovo-Lacto Vegetarian, Coeliacs, Diabetics, GMO Free, Nut/Seed free.

Storage

Store under clean, cool, dry conditions not exposed to direct sunlight or strong odours and avoiding direct contact with walls and floors. Recommended shelf life is 36 months.

Packaging

Packed in 20 kg multi-wall paper-sacks with polythene liners. Each sack will be heat sealed. The product will be palletised and shrink wrapped.

Labelling

The following will be printed in large blue writing on white sacks. "Optipep", Manufactured by Carbery Food Ingredients and processor EU number.

Coding

Each sack will be individually coded by an automatic ink jet system to ensure traceability.