



HEMP SEED 33% PROTEIN POWDER (P33)

PRODUCT OVERVIEW

Description:	Cold- milled hemp powder made from hemp seed
Common Names:	Hemp Flour, Hemp Protein Powder 35%
Ingredients:	Hemp seed flour
Hemp Varieties:	Finola, CFX-1, CFX-2, CRS-1, Canma, Grandi, Granma, Katani, Piccoli, X-59
Purity:	99.9%
Shelf Life:	3o months from date of manufacture
Storage:	Store in a cool, dry place, at ambient temperatures. 30-50% RH. Keep away from heat or light.
Packaging:	2000 lbs bulk tote bags, or 50 lbs poly-woven bag with food grain liners
Allergen:	Does not contain any 'major' allergens as defined by the FDA and CFIA
Accreditations*:	BRCGS certified, Kosher (OU), Halal, Non-GMO, Organic (COR / NOP / EUEQ)
Protein Digestibility****:	PDCAAS= 0.67(source***:House et al.)
Treatment:	No preservatives, no irradiation

TEST	SPECIFICATION	METHOD
ORGANOLEPTIC		
Appearance	Light brownish green, fine powder	Internal SOP
Flavor & Odor	Fresh nutty flavor and aroma, typical hemp seed odor	Internal SOP
MICROBIOLOGICAL		
Standard Plate Count (SPC)	< 250,000 cfu/g	AOAC 990.12
Total Coliform	< 500 cfu/g	AOAC 991.14
Yeast & Mold	< 1,000 cfu/g	AOAC 2014.05
<i>E. coli</i>	< 10 cfu/g	AOAC 991.14/ MFHPB-10
<i>Salmonella</i>	Negative in 375 g	MFLP-29
<i>Staphylococcus Aureus</i>	Negative at <25	USP<2021/2022>
<i>Listeria</i>	Negative	MFHPB-30
CHEMICAL		
Peroxide Value (PV)	0-8 meq/kg	NIR
Free Fatty Acid (FFA)	0-2% (as oleic acid)	NIR
Gluten***	< 20 ppm	ELISA
Arsenic**	< 1.5 ppm	ICP-MS / AFVAN-SLIMF-0022
Cadmium**	< 0.5 ppm	ICP-MS / AFVAN-SLIMF-0022
Lead**	< 0.5 ppm	ICP-MS / AFVAN-SLIMF-0022
Mercury**	< 1.5 ppm	ICP-MS / AFVAN-SLIMF-0022
Total THC**	< 4 ppm	AFVAN-SLMF-0027
Total CBD**	<150 ppm	AFVAN-SLMF-0074
Total Fat %	7.2-10.8%	NIR/ FOSS NIR DS2500

* Accreditations and certifications available upon request.

** Verification testing only, batch specific testing not performed. Specific testing is available for additional charge.

*** Gluten verification only guaranteed for gluten-free orders

**** Nutritional analysis, Fatty Acid Profile, and Amino Acid Profile are based on typical test results and should be used only to approximate the nutritional composition of any food formulations.

***** Fatty acids <0.04% (g/100g) not listed in Fatty Acid Profile



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NUTRITIONAL ANALYSIS

NUTRIENTS	per 100 g
Calories (kcal)	370
Protein (g)	35.4
Carbohydrates (g)	41.90
Dietary Fiber (g)	38.25
Soluble Fiber (g)	1.91
Insoluble Fiber (g)	36.34
Total Sugars (g)	2.49
Added Sugar (g)	0
Sugar Alcohol (g)	0
Total Fat (g)	9.00
Saturated Fat (g)	0.88
Monounsaturated Fat (g)	1.17
Polyunsaturated Fat (g)	6.57
Omega 3 fatty acid (g)	1.17
Omega 6 fatty acid (g)	5.40
Omega 9 fatty acid (g)	1.11
Trans fats (g)	0
Cholesterol (mg)	0

RADICAL SCAVENGING	%
DPPH Scavenging Activity (%)	NA

FATTY ACID PROFILE (%)	%
Myristic acid 14:0	NA
Palmitic acid 16:0	0.60
Palmitoleic acid 16:1	NA
Heptadecanoic acid 17:0	NA
Stearic acid 18:0	0.22
Oleic acid 18:1 n-9c/Elaidic acid 18:1 n-9t	0.96
cis-isomers C18:1	0.03
Conjugated Linoleic Acid 18:2	0.03
Linoleic acid (LA) 18:2 n-6 cis	5.31
Alpha-Linolenic acid (ALA) 18:3 n-3	1.66
Gamma-Linolenic acid (GLA) 18:3 n-6	0.38
Arachidic acid 20:0	0.08
cis-11-Eicosenoic acid 20:1	0.03
Behenic acid 22:0	0.03
Lignoceric acid 24:0	0.01

VITAMINS	per 100 g
Beta-Carotene (mcg)	16
Vitamin A (mcg)	0
Vitamin B1 (mg)	0.89
Vitamin B2 (mg)	0.30
Vitamin B3 (mg)	5 (10.7 NE)
Vitamin B6 (mg)	0.80
Vitamin B9 Folic Acid (mcg)	147.00
Vitamin B12 (ug)	0
Vitamin C (mg)	0
Vitamin D (mcg)	0
Vitamin E (Alpha-tocopherol) (mg)	NA
Vitamin E (Y-tocopherol) (mg)	0.40
Pantothenic Acid (mg)	0

AMINO ACID PROFILE (%)	%
Alanine	1.21
Arginine	4.86
Aspartic Acid	3.67
Cystine	0.62
Glutamic Acid	5.50
Glycine	1.40
Histidine	0.57
Isoleucine	1.51
Leucine	2.43
Lysine	1.59
Methionine	0.81
Phenylalanine	1.77
Proline	2.03
Serine	1.67
Threonine	1.48
Tryptophan	0.34
Tyrosine	0.72
Valine	1.72

MINERALS	per 100 g
Sodium (mg)	0
Magnesium (mg)	528
Phosphorous (mg)	1125
Potassium (mg)	896.50
Manganese (mg)	13.45
Iron (mg)	15
Copper (mg)	1.95
Zinc (mg)	7.84
Calcium (mg)	151.33