



<b>Title:</b>	<b>Specification - Hemp Hearts</b>	Document #:	<b>SPEC-001</b>
Location:	Fresh Hemp Foods : Winnipeg	Doc Phase:	Released
Approved by:	QC Manager	Revision:	10
Revised by:	Sacha Roth-Masson	Effective Date:	30-Jan-2020

**PRODUCT DESCRIPTION**

Description	Hemp Hearts are made from industrial hemp seed ( <i>Cannabis sativa</i> L.) and are not genetically modified. This product has been packed in a sealed container under a blanket of nitrogen gas for freshness.
Flavor & Odor	Slight nutty flavor and odor
Color & Appearance	Small, creamy white nuts with some green skin flecks
Ingredients	shelled hemp seeds
Shelf-life	23 months from the date of packaging when stored in original packaging
Storage	Keep stored in a cool, dry place at ambient temperature. Keep away from heat or light. Humidity between 30-50%. Refrigerate after opening for freshness (not required for microbiological / food safety control).
Certifications	<p><b>Organic</b> status: this product may be certified organic by Pro-Cert, where indicated.</p> <p><b>Gluten</b> status: this product may be certified gluten-free, where indicated</p> <p><b>Kosher</b> status: this product is certified OU Pareve.</p> <p><b>Halal</b> status: this product is Halal certified.</p> <p><b>Non-GMO</b> status: this product is Non-GMO Project Verified.</p>
Allergen statement	<b>Allergen:</b> this product is produced in a facility that does not handle any of the top recognized “major” allergens (sesame seeds, eggs, seafood, milk, peanuts, soy, tree nuts, wheat, sulphite, mustard).

**PRODUCT SPECIFICATION**

TEST	SPECIFICATION	METHOD
<b>MICROBIAL QUALITY</b>		
Standard Plate Count	≤ 250,000 cfu/g	AOAC 990.12
Coliforms	≤ 500 cfu/g	AOAC 991.14
<i>E. coli</i>	<10 cfu/g	AOAC 991.14
<i>E. coli</i> 0157:H7	Negative	MFLP-30 or MFHPB-10 *
<i>Salmonella</i>	Negative	MFLP-29 *
Yeast & Mold	<10,000 cfu/g	AOAC 2014.05
<b>CHEMICAL &amp; ELEMENTAL IMPURITIES</b>		
Pesticides	All contracted hemp seed growers are obliged by contract to grow all hemp seed crops without the use of in-crop pesticides.	
Residual Solvents	All hemp and hemp derived products are processed without the use of solvents.	
Heavy Metals	Cadmium <0.5 ppm Lead < 0.5 ppm Arsenic <1.5 ppm Mercury <1.5 ppm	ICP-MS * (limits based on USP)
Mycotoxins	<20 ppb	Elisa or LCMSMS *
THC	<4 ppm on dry weight basis	GC-MS *
Gluten	<20 ppm	ELISA

\* tested at an ISO/IEC 17025:2005 accredited 3<sup>rd</sup> party Laboratory  
 \*\* Nutritional profile and Fatty Acid Profile are based on typical test results, not a complete list of all fatty acids or amino acids. These are average values and should be used only to approximate the nutritional composition of any food formulations



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**NUTRITIONAL PER 100 GRAMS \*\***

Nutrients	Per 100g
<b>BASIC COMPONENTS</b>	
Calories (kcal)	608.70
Protein (g)	34.87
Carbohydrates (g)	6.86
Dietary Fiber (g)	4.91
Soluble Fiber (g)	1.44
Insoluble Fiber (g)	3.47
Total Sugars (g)	1.95
Added Sugar (g)	0
Fat (g)	50.77
Saturated Fat (g)	4.86
Mono Fat (g)	6.58
Poly Fat (g)	39.30
Omega 3 Polyunsaturated fatty acids (g)	9.04
Omega 6 Polyunsaturated fatty acids (g)	30.30
Omega 9 fatty acids (g)	6.56
Trans Fatty Acid (g)	0.15
Cholesterol (mg)	0
Other Nutrients	
Sugar Alcohol (g)	0

Nutrients	Per 100g
<b>Vitamins</b>	
Vitamin A – RAE (mcg)	0
Beta-Carotene (mcg)	0
Vitamin B1 (mg)	0.98
Vitamin B2 (mg)	0.20
Vitamin B3 (mg)	9.54
Vitamin B6 (mg)	0.60
Vitamin B12 (µg)	-
Vitamin C (mg)	0
Vitamin D (mcg)	0
Vitamin E – Alpha-tocopherol (mg)	3.13
Folic Acid (mcg)	149.8
Pantothenic acid (mg)	-
<b>Minerals</b>	
Calcium (mg)	62.63
Copper (mg)	1.42
Iron (mg)	12.60
Phosphorus (mg)	1530.33
Magnesium (mg)	656.46
Manganese (mg)	7.66
Potassium (mg)	1109.33
Sodium (mg)	0
Zinc (mg)	9.41

**NUTRITIONAL PER 100 GRAMS \*\***

Nutrients	Per 100g
<b>Amino Acid Profile (%)</b>	
Alanine	1.19
Arginine	4.57
Aspartic Acid	3.33
Cystine	0.78
Glutamic Acid	5.35
Glycine	1.30
Histidine	0.68
Isoleucine	1.38
Leucine	2.23
Lysine	1.24
Methionine	0.91
Phenylalanine	1.67
Proline	1.60
Serine	1.61
Threonine	1.34
Tryptophan	0.29
Tyrosine	0.88
Valine	1.59

Nutrients	Per 100g
<b>Fatty Acid Profile (%)</b>	
Linoleic acid (LA) (Omega 6)	28.16
Alpha Linolenic acid (ALA) (Omega 3)	8.33
Oleic acid (Omega 9)	5.89
Palmitic acid	2.73
Gamma linolenic acid (GLA) (Omega 6)	2.11
Stearic acid	1.37
Stearidonic acid (SDA) (Omega 3)	0.67
Arachidic acid	0.49
C18:1 cis-isomers	0.49
C20 cis-11-eicosenoic	0.22
Behenic acid	0.20
Lignoceric acid	0.08
Conjugated linoleic acid (CLA)	0.02