


## Product Description:

Name of the Product	Trademark	Description	Composition
Dried Bovine Hemoglobin Human Consumption		It is an organic product, obtained from the centrifugation of bovine blood, from slaughterhouses with ante- and post-mortem veterinary inspection (IPSA), collected and processed under strict hygiene conditions and traceability. The hemoglobin is spray dried which guarantees high solubility, preserves the functional and nutritional properties of the product (proteins of high biological value).	Bovine Hemoglobin + Sodium Citrate

## Specifications

### Sensorial

Parameter	Specification	Method
Physical appearance	Fine dust particles	Visual
Color	Red Wine	Visual
Odor	Characteristic	Organoleptic
Flavor	Characteristic	Organoleptic

### Chemical Physicists

Parameter	Specification	Method
Moisture	Max. 7%	Oven 105°C constant weight
Fat	Max. 1 %	Extraction Soxhlet
pH	7 - 8	pH-meter
Solubility	95 ± 1 % minimum	Gravimetric (w/w)
Ash	4% máximo	Calcination to 550°C

### Microbiological

Parameter	Specification	Method
Aerobic Mesophiles	<10 <sup>4</sup> UFC/g	AOAC 990.12
Salmonella (25g)	Absence	MLG 4.05 USDA-FSIS
Total Coliforms	<100 UFC/g	(BAM), 8 th Edition, Chapter 4.
Generic E. Coli	<100 UFC/g	(BAM), 8 th Edition, Chapter 4.
E. Coli 0157-H7 (25 g)	Absence	MacConkey Agar sorvitol Base.
Molds	<10 <sup>3</sup> UFC/gr	NB32006
Yeast	<10 <sup>3</sup> UFC/gr	NB32006

## Amino acid (%w/w based on dry matter)

Parameter	Specification	Method
Total Lysine	6.25 %	ESS_3.4.7.219
Arginine	4.63 %	ESS_3.4.7.219
Methionine	1.94 %	ESS_3.4.7.219
Threonine	0.73 %	ESS_3.4.7.219
Leucine	2.84 %	ESS_3.4.7.219
Valine	6.84 %	ESS_3.4.7.219
Histidine	4.97 %	ESS_3.4.7.219
Phenylalanine	2.14 %	ESS_3.4.7.219
Cystine	3.88 %	ESS_3.4.7.219
Tryptophan	2.27 %	ESS_3.4.7.219
Isoleucine	3.83 %	ESS_3.4.7.219
Tyrosine	1.30 %	ESS_3.4.7.219
Glycine	2.52 %	ESS_3.4.7.219
Serine	5.06 %	ESS_3.4.7.219
Proline	3.83 %	ESS_3.4.7.219
Alanine	3.27 %	ESS_3.4.7.219
Aspartic Acid	7.43 %	ESS_3.4.7.219
Glutamic acid	10.3 %	ESS_3.4.7.219

\* Analysis performed at Laboratorios Exact Scientific Inc. (USA), 1355 Pacific Place, Suite 101, Ferndale, WA 98248. Phone: (360) 733-1205, Fax: (888) 818-2978. Email: lab@exactscientific.com. Date: 17/1/2018

## Nutritional Facts (100 g)

Parameter	Specification
Calories	362
Protein	90g
Fat	0.2g
Carbohydrates	0g
Iron (min)	250 mg (2,500 ppm)

## Product Applications

<b>Applications:</b>	<ul style="list-style-type: none"> <li>As an ingredient fortifying Foods with hemic iron</li> <li>As a natural colorant in processed meat industries</li> <li>Protein supplement, meat substitute and/or complement</li> </ul>
<b>Recommended use:</b>	<p><u>Fortification:</u> Dosage 1 - 7 % according to food type</p> <p><u>Natural Food Coloring:</u> 0.5 a 1 % depending on ingredients in formulation</p>
<b>Presentation and Packaging:</b>	Screen-printed virgin polypropylene bags with polyethylene inner bag/lining. Net weight: 25 ± 1 kg
<b>Distribution System:</b>	It is transported in closed trucks/containers at room temperature.
<b>Shelf life:</b>	1 year from its manufacture date
<b>Handling and conservation conditions:</b>	This product should be stored in a cool, dry place without sun exposure. Stow on pallets at a minimum height of 15 cm from the floor, 50 cm from the wall. For export, wooden pallets are required to be fumigated and certified by IPSA.
<b>GTIN Identification number:</b>	74-33200-73901-3

