

### Product Technical Data Sheet

<b>Product name:</b> <b>Chickpea Protein 80% (F1)</b>	<b>AC code:</b> AC00015a
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1. Technical Data Sheet		
Compliance (Food / Pharmacopoeia / FCC / Feed)	Food	
Source (animal, plant, mineral, petrochemical)	Plant	
<b>Brief introduction:</b> Chickpea protein is obtained from chickpeas which is not a listed allergen and gluten-free and can act as a substitute for animal-based protein such as egg protein, dairy protein, meat.		
Item	Standard	Analysis Method
Appearance & Solubility		
Appearance	Light yellow powder	
Organoleptic	without any off-odor	
Typical Analysis		
Bulk Density	0.38±0.10kg/L	Measuring cylinder
PH	6.0-8.0	PH meter
Protein (dry basis),	≥80.0%	GB 5009.5
Moisture	≤8.0%	GB 5009.3
Ash	≤8.0%	GB 5009.4
Fat(free fat)	≤3.0%	GB 5009.6 I(Soxhlet extraction method )
Fat(total fat)	≤10.0%	GB 5009.6 II(Acid hydrolysis method)
Crude Fiber	≤2.0%	GB/T 5009.10
Heavy metals		
Total Arsenic	≤0.2ppm	GB 5009.11
Total Mercury	≤0.2ppm	GB 5009.17
Cadmium	≤0.1ppm	GB 5009.15
Lead	≤0.2ppm	GB 5009.12
Microorganism		
TPC	≤10000cfu/g	GB 4789.2
Total Coliform	Not Detected	GB 4789.3
Yeast&Mould	≤100cfu/g	GB 4789.15
E-Coli	Not Detected	GB 4789.38
Salmonella	Not Detected	GB 4789.4
Staphylococcus aureus	Not Detected	GB 4789.10
Listeria monocytogens	Not Detected	GB 4789.30
Storage & Shelf Life		
Package	20kg or 25kg	
Storage & Shelf Life	Keep in cool, dry place, away from light.Under these conditions the product can be stored for 2 years.	

## 2.Origin & ingredient

Country of origin of the product: China

Origin statement: available

This product is a pure material <input type="checkbox"/>		This product is a compound material <input checked="" type="checkbox"/>	
Animal origin	<input type="checkbox"/> bovine	Specific Source: /	
	<input type="checkbox"/> porcine	Specific Source: /	
	<input type="checkbox"/> ovine	Specific Source: /	
	<input type="checkbox"/> Others:	Specific Source: /	
Synthetic	<input checked="" type="checkbox"/>	Starting material: Chickpea	origin: china
Biotechnological processing	<input type="checkbox"/> Catalysis By Enzymes	Name Of Enzyme: / Sources Of Enzymes: /	
	<input type="checkbox"/> Fermentation	Source Of Medium: / Strain: /	
Botanical Origin	Botanical Name:	chickpea	
	Part:	/	
	Wild Or Cultivated:	Cultivated	
	Country Of Origin:	China	
	Solvent Used:	/	

For compound material, all compounds are listed (e.g. antioxidants; coating materials and with their functions):

Each ingredient including food additives	Percentage %	Function (e.g. Nutrient, Binder, Diluent, carrier)	Source Material(s)	Country of Origin of the Source Material
chickpea	100%	Nutrient	Plant	China
Remarks:	Compounds may change according to customized formula from customer			
Processing aid used <input type="checkbox"/>				
Name of processing aids:	Purpose:		Source:	
/	/		/	

## 3.Nutrition Data

Nutritional Composition

Per 100g

Per Serving

<input type="checkbox"/> Energy(Kj) <input checked="" type="checkbox"/> Energy(Kcal)	380Kcal
Protein(as is)	75g/100g
Protein( dry basis)	80g/100g
Total Fat(acid hydrolysis method)	5.60g/100g
--Saturated Fat	1.28g/100g
--Monounsaturated Fat	2.04g/100g
--Polyunsaturated Fat	2.3g/100g
--Trans fat	0
Cholesterol	0
Carbohydrate	5.0g/100g
--Total Sugars	0.0
--Starch	5.0g/100g
Dietary Fiber	5.0g/100g
Vitamin A	0
Vitamin C	0
Vitamin D	0
Sodium	1.0g/100g
Potassium	32mg/100g
Calcium	77mg/100g
Iron	22mg/100g
Remarks: Nutrition Data Are Obtained By 3 <sup>rd</sup> Party Lab; Tested On A Yearly Basis	

4. GMO declaration	YES	NO
The product does not contain or consist of GMO	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The product is not produced from GMO or not contain ingredients produced from GMO (irrespective of whether there is NDA or protein of GM origin in the final production)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
This product is not produced by means of GM microorganism including precursor substances, e.g. with GMOs or Genetically Modified microorganisms processing aids(bacteria, yeast,..)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
This product is not produced with the help of enzymes, which were obtained from GMOs	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the product contain any ingredients from animal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If yes, are genetically modified crops contained in the feed for the animal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
We confirm that this product complies with regulations EC/1829/2003 and EC1830/2003 and keep NON-GMO statement available		<input checked="" type="checkbox"/>

## 5. Allergen declaration

We have carefully reviewed this product according to EU Regulation 1169/2011 and modifications and confirm the following:

	Direct incorporation as a base raw material or in a derivative form (don't forget the carriers, the additives and the processing aids)		CROSS CONTAMINATION					
			Presence on the production line		Presence on the production workshop		Presence on the production factory	
			Yes (precise nature)	No	Yes (precise the nature)	No	Yes (precise the nature)	No
Cereals containing gluten(1) and products thereof		N		N		N		N
Crustaceans and products thereof		N		N		N		N
Eggs and products thereof		N		N		N		N
Fish and products thereof (2)		N		N		N		N
Peanuts and products thereof		N		N		N		N
Soybeans and products thereof (3)		N		N		N		N
Milk and products thereof (including lactose)(4)		N		N		N		N
Nuts (5) or products thereof		N		N		N		N
Celery and products thereof		N		N		N		N
Mustard and products thereof		N		N		N		N
Sesame seeds and product thereof		N		N		N		N
Sulphur dioxide and sulphites at concentrations of more than 10mg/kg or 10 mg/l expressed as SO <sub>2</sub>		N		N		N		N
Lupines and products thereof		N		N		N		N
Mollusc and product thereof		N		N		N		N

- (1) Cereals which contain gluten (i.e. wheat, rye, barley, oats, spelt, kamut or their hybridised strains) except: wheat-based glucose syrups including dextrose, wheat-based maltodextrins, glucose syrups based on barley, cereals used for making distillates or ethyl alcohol of agricultural origin for spirit drinks and other alcoholic beverages;
- (2) Except: fish gelatine used as carrier for vitamin or carotenoid preparations, fish gelatine or Isinglass used as fining agent in beer and wine;
- (3) Except fully refined soybean oil and fat, natural mixed tocopherols (E306), natural D-alpha tocopherol, natural D-alpha tocopherol acetate, natural D-alpha tocopherol succinate from soybean sources; vegetable oils derived phytosterols and phytosterol esters from soybean sources; plant stanol ester produced from vegetable oil sterols from soybean sources;
- (4) Except when used for making distillates or ethyl alcohol of agricultural origin for spirit drinks and other alcoholic beverages, lactitol;
- (5) almond (*Amygdalus communis* L.) hazelnuts (*Corylus avellana*), walnut (*Juglans regia*), cashew (*Anacardium occidentale*), pecan nuts (*Carya illinoensis*), brazil nut (*Bertholletia excelsa*), pistachio nut (*Pistacia vera*), macadamia nut and queensland nut (*Macadamia terniflora*) and products thereof, except nuts used for making distillates or ethyl alcohol of agricultural origin for spirit drinks and other alcoholic beverages;

## 6. NON IRRADIATION

(According to EU directive 1999/2/EC & 1999/3/EC)

This product has not been treated with ionising radiation	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
None of the raw materials we used for this product have been treated with ionising radiation.	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO

We confirm above Non-Irradiation statement is available	<input checked="" type="checkbox"/>
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<b>7.NANOMATERIAL</b> (according to EU Regulation (EU) No. 1169/2011)		
This product does not contain any nanomaterials as defined in EU food legislation	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
This product has not been made with nanotechnology	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
We confirm above Non-Nanomaterial statement is available	<input checked="" type="checkbox"/>	

<b>8. Residual solvents</b> (according to UE Directive 2009/32 modified by(UE)2010/59; EP5.4;USP476;ICH Q3C(R7))		
For this product following solvents are used during production process: Solvent A:                    max residual level:	<input checked="" type="checkbox"/> solvent used  <input type="checkbox"/> solvent not used	
We confirm solvent residual of this product complies with:	<input checked="" type="checkbox"/> EP5.4  <input checked="" type="checkbox"/> USP <476>  <input checked="" type="checkbox"/> ICH Q3C(R7)  <input checked="" type="checkbox"/> Directive 2010/59/EU  <input checked="" type="checkbox"/> NA	
We confirm Solvent residual statement is available	<input checked="" type="checkbox"/>	

<b>9. Pesticide residual</b> (according to EC 396/2005; EP07; USP <561>)		
This product is of vegetable origin	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
We confirm pesticide residual of this product complies with:	<input type="checkbox"/> EC 396/2005  <input type="checkbox"/> EP 07/2008  <input type="checkbox"/> USP<561>	

	<input type="checkbox"/> N/A
Pesticide residual statement available	<input checked="" type="checkbox"/>

### 10. BSE/TSE information

(according to EU legislation 999/2001; EP general chapter 5.2.8)

Cattle, sheep, goats and animals that are naturally susceptible to infect with transmissible spongiform encephalopathy agents or susceptible to infection through the oral route other than humans and non-human primates are defined as "ESE-relevant animal species"

Pigs and birds are not naturally susceptible to infection via the oral route; therefore, they are not TSE-relevant animal species. Dogs, rabbits and fish are not TSE-relevant animal species."

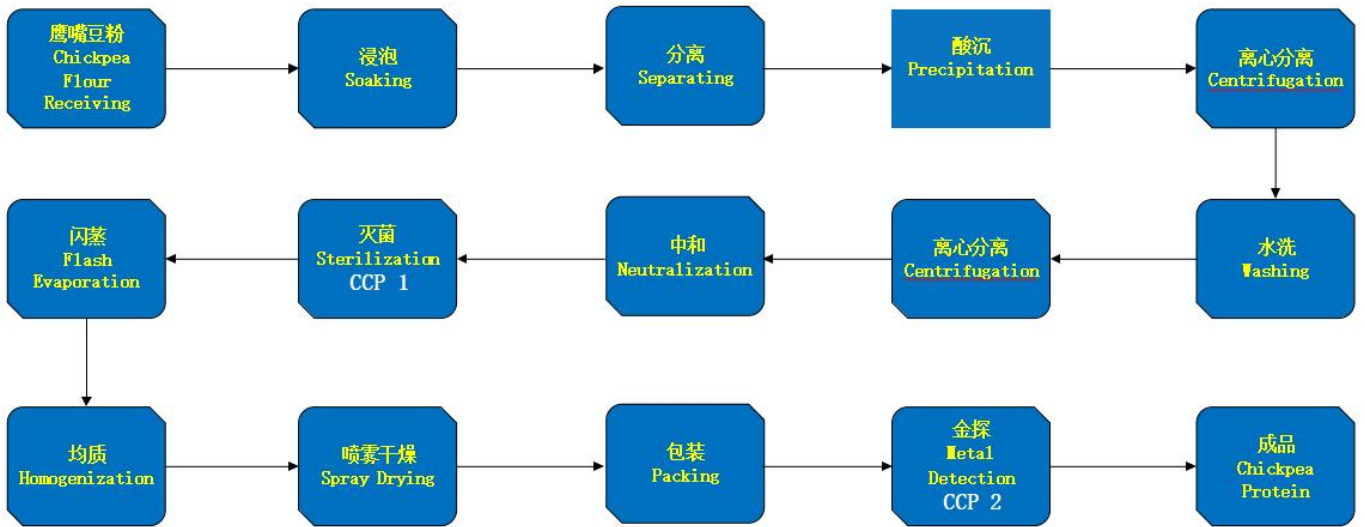
the product contains no ingredients of ruminant origin and no materials derived from, or exposed to ruminants affected by or under quarantine for Transmitting Transmissible Spongiform Encephalopathy (TSE) / Bovine Spongiform Encephalopathy (BSE)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> NA
In the manufacturing of this product, there is no any raw or source material and /or reagent used that is of animal origin i.e. bovine, serum-albumin, enzymes, culture broths including those used to prepare working or master cell tanks	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Equipment/systems/tools use for processing or storage of the material do not come into contact at any time with materials of animal origin (e.g., components of media filler used to check such system)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
The material is not purified by using solvents, chromatographic media or buffers that contain components of animal origin	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
We confirm this product complies with:	<input checked="" type="checkbox"/> EU legislation 999/2001 & <input type="checkbox"/> EP general chapter 5.2.8
We confirm BSE/TSE statement is available	<input checked="" type="checkbox"/> YES

### 11. Contaminants information

(according to UE regulation NO.1881/2006 and NO.629/2008 as regards maximum levels for certain contaminants in foodstuff)

<ul style="list-style-type: none"> <li>●Aflatoxin B1 &lt;5ppb</li> <li>●Aflatoxins B1 + B2 + G1 + G2 &lt;10ppb</li> <li>●Ochratoxin A &lt;15ppb</li> </ul>	<input checked="" type="checkbox"/> YES  <input type="checkbox"/> NO  <input type="checkbox"/> NA
<ul style="list-style-type: none"> <li>●Melamine</li> </ul>	<input checked="" type="checkbox"/> YES
<p>For polycyclic aromatic hydrocarbons, in cocoa fibre, banana chips, food supplements and their preparations, dried herbs <i>and dried spices</i>:</p> <ul style="list-style-type: none"> <li>●Maximum level of 10 µg/kg of benzo(a)pyrene</li> <li>●50 µg/kg for the sum of PAH4 (PAH4; benzo[a]pyrene, chrysene, benz[a]anthracene and benzo[b]fluoranthene) in food supplements</li> </ul>	<input checked="" type="checkbox"/> YES  <input type="checkbox"/> NO  <input type="checkbox"/> NA
We confirm this product complies with NO.1881/2006 and NO.629/2008 and keep compliance statement available	<input checked="" type="checkbox"/> YES

### Flow Chart of Chickpea Protein 80% (F1)



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## Material Safety Data Sheet (MSDS)

### Chickpea Protein 80% (F1)

#### 1. PRODUCT IDENTIFICATION

**Product Name:** Chickpea Protein 80% (F1)

**Concentration:** 100%

**Hazardous ingredient:** None

**CAS number:** Not Applicable

#### 2. PHYSICAL & CHEMICAL PROPERTIES

**Melting Point:** not determined

**Boiling Point:** not determined

**Vapor Pressure:** not determined

**Vapor Density:** not determined

**Physical state:** powder

**Colour:** Light yellow

**Odour:** without any off-odor

**Liquid solubility:** Freely soluble in water

#### 3. STABILITY & REACTIVITY

**Conditions to avoid:** avoid the moisture, hot and prevent fire

**Materials to avoid:** water and all of non edible materials.

**Hazardous decomposition Products:** Under normal conditions of storage and use, Hazardous decomposition products should not be produced

#### 4. HANDLING & STORAGE

Avoid contact with eyes. Wash thoroughly after handling. As with all chemicals, good industrial hygiene practices should be followed when handling this material.

Avoid freezing or excessive heat. Do not handle or store near an open flame, heat or other sources of ignition. Keep the container tightly closed and in a cool, well-ventilated place.

#### 5. ACCIDENTAL RELEASE MEASURES

Isolate spill area immediately. Keep unauthorized personnel away.

Ventilate closed spaces before entering. Do not touch or walk through spilled material. Prevent entry into waterways, sewers, basements or confined areas. Surface may become slippery after spillage. Use vacuum or broom sweeping and remove to disposal container. If damp, flush with water.

#### 6. EXPOSURE CONTROLS & PERSONAL PROTECTION

**Respiratory Protection:** Where exposure likely exceeds acceptable criteria, use NIOSH/OSHA-approved respiratory equipment.

**Protective Clothing:** Gloves recommended to prevent skin contact. Safety glasses, goggles, or face shield recommended for eye protection.

**Other Protective Measures:** Employees must practice good personal hygiene, washing exposed areas of skin several times daily and laundering contaminated clothing before re-use.

#### 7. HAZARDS IDENTIFICATION

**General:** Non hazardous and non combustible.

**Inhalation:** Not a primary route of entry. Mists and vapors may cause dizziness (alcohol)

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**Eye Contact:** May cause slight irritation. Irrigate eye with water. Seek medical attention if symptoms persist.

**Skin Contact:** Not a skin irritant.

**Ingestion:** No specific hazard known.

## 8. FIRST AID MEASURES

**Eyes:** Irrigate eyes with a heavy stream of water for at least 15 to 20 minutes. If irritation persists get medical attention.

**Skin:** Wash exposed areas of the body with soap and water.

**Inhalation:** Remove from area of exposure. If breathing is difficult, give oxygen. Seek medical attention if symptoms persist.

**Ingestion:** If gastrointestinal symptoms develop, consult medical personnel.

## 9. FIRE FIGHTING MEASURES

**Flammability Limits:** None known

**Unusual Fire Hazard:** None known

**Fire Fighting Procedures:** Firefighters should wear full firefighting turn-out gear (full Bunker gear) including NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

## 10. TOXICOLOGICAL INFORMATION

**Acute toxicity:** Not classified

**Irritancy and corrosiveness:** Not classified

**Sensitization:** Not classified

**Subacute, subchronic and prolonged toxicity:** Not classified

**Empirical data on effects on humans:** Not classified

## 11. DISPOSAL CONSIDERATIONS

Small amounts may be flushed to sewer, Material is very biodegradable, otherwise, dispose of in accordance with Local regulations for non- hazardous substances

## 12. TRANSPORT INFORMATION

**General:** not regarded as hazardous material

**DOT Shipping Name:** Refer to corresponding hazard class

**ADR/RIC Code:** Refer to corresponding hazard class

**Sea Transport IMDG Code:** Refer to corresponding hazard class

**Air Transport IATA:** Refer to corresponding hazard class

## 13. DISCLAIMER

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process. Such information is to be the best of the company's knowledge and believed accurate and reliable as of the date indicated. However, no representation, warranty or guarantee of any kind, express or implied, is made as to its accuracy, reliability or completeness and we assume no responsibility for any loss, damage or expense, direct or consequential, arising out of use. It is the user's responsibility to satisfy himself as to the suitability & completeness of such information for his own particular use.