



## Certificate of Analysis

### Chitosan Herbal Extract

#### Product information

Product name **Chitosan**  
 Botanical name **/**  
 Plant part  
 Country of origin **P.R.CHINA**

#### Batch information

Batch no. **4420405**  
 Best Before End: **January 2024**

#### Analysis item

#### Specification

#### Result

#### Analysis test method

Analysis item	Specification	Result	Analysis test method
Assay	90% Deacetylation	91.1%	Volumetry Titrator
<b>Organoleptic properties</b>			
Appearance <sup>1</sup>	Fine White powder	Conform to specification	Visual
Taste	Typical to botanical	Conform to specification	Gustatory
Odor	Typical to botanical	Conform to specification	Olfactory
<b>Physical properties</b>			
Sieve analysis	90% pass 80 mesh	Conform to specification	Mesh screen or equivalent
Moisture content	≤10%	9.46%	IR balance or equivalent
Ash	≤5%	0.77%	2g/525°C/5hrs or equivalent
<b>Heavy metals<sup>2</sup></b>			
Arsenic (As)	≤ 1 ppm	Conform to specification	AA or equivalent
Cadmium (Cd)	≤ 1 ppm	Conform to specification	AA or equivalent
Lead (Pb)	≤ 3 ppm	Conform to specification	AA or equivalent
Mercury (Hg)	≤ 0.1 ppm	Conform to specification	AA or equivalent
Total heavy metals	≤ 10 ppm	Conform to specification	Colorimetry or equivalent
<b>Microbiology</b>			
Total plate count	≤10000cfu/g	Conform to specification	AOAC or equivalent
Yeasts & Molds	≤1000cfu/g	Conform to specification	AOAC or equivalent
Salmonella	Absent/10g	Conform to specification	AOAC or equivalent
E.Coli	Absent/1g	Conform to specification	AOAC or equivalent
Identification	Positive	Conform to specification	TLC
<b>Additional information</b>			
Bulk Density	0.3g/ml		
Molecular Formula	(C <sub>6</sub> H <sub>11</sub> O <sub>4</sub> N) <sub>n</sub>		
Molecular Weight	(161) <sub>n</sub>		



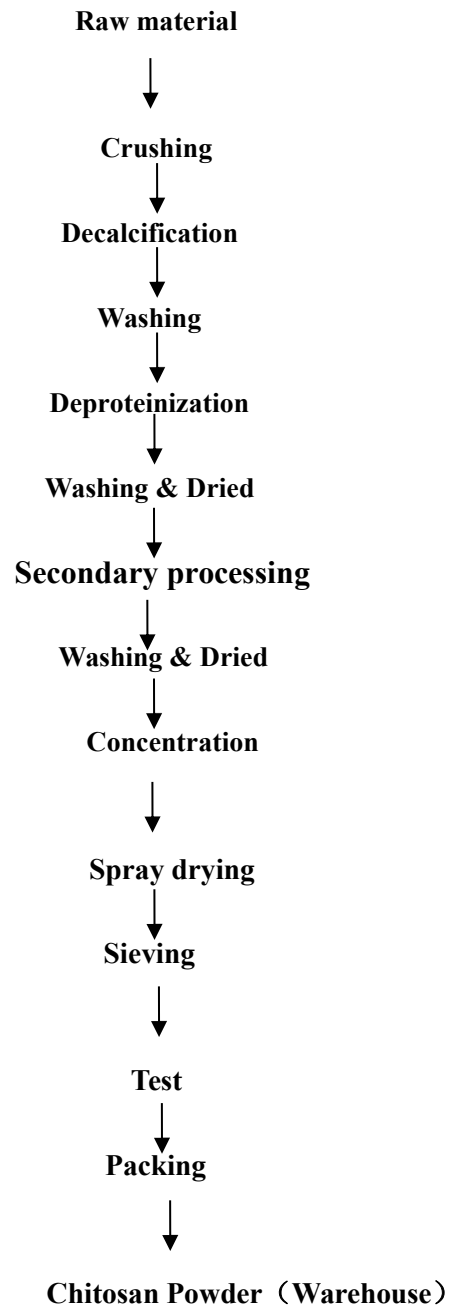
**Allergen Declaration  
Chitosan Powder**

**Allergen Information**

<b>Component</b>	<b>Present in the product</b>	<b>Present in other products manufactured on the same line</b>	<b>Present in the same manufacturing plant</b>
<b>Peanut (and/or its derivatives,) e.g., protein oil</b>	No	No	No
<b>Tree Nuts (and derivatives)</b>	No	No	No
<b>Sesame Seeds (and derivatives)</b>	No	No	No
<b>Dairy Products (Lactose, Milk, Casein, Whey)</b>	No	No	No
<b>Coconut / Palm Fruit</b>	No	No	No
<b>Eggs</b>	No	No	No
<b>Fish</b>	No	No	No
<b>Shellfish</b>	Yes	Yes	Yes
<b>Soy (and derivatives)</b>	No	No	No
<b>Wheat</b>	No	No	No
<b>Corn</b>	No	No	No
<b>Sulphites (ppm level)</b>	No	No	No
<b>Gluten</b>	No	No	No
<b>Tartrazine</b>			

**If an allergen is present on the same line or in the same manufacturing plant but not in the product, please include a description of the procedures in place to prevent cross contamination.**

## Process Flow Chart of Chitosan Powder



# Material Safety Data Sheet

## 1. IDENTIFICATION OF SUBSTANCE/COMPANY

Product Name: **Chitosan**  
 Company Name: MADAR Corporation Limited  
 19-20 Sandleheath Industrial Estate  
 Fordingbridge, Hampshire  
 SP6 1PA  
 Telephone Number: 01425 653574  
 Approved Sellers: Mystic Moments, New Directions, World of Moulds

## 2. HAZARDS IDENTIFICATION:

No hazards identified under regulation 67/548/EEC.  
 Reach Registration: Exempt as per Annex VI and V according to EU Regulation 1907/2006  
 This product does not belong to any list of substances supposedly hazardous to human or animal health according to EU Regulation 1272/2008 and further amendments, not to those having recognised exposition limits. Care should be taken when handling hot oil as it may constitute a burn hazard. Spills constitute a slippage hazard.

## 3. COMPOSITION/ INFORMATION ON INGREDIENTS

Inci Name: CHITOSAN  
 Chemical Composition: Chitosan is produced by deacetylation of chitin  
 CAS No: 9012-76-4  
 EINECS No: 222-311-2  
 Function: Anti-Hypolipidemic

## 4. FIRST-AID MEASURES

Inhalation: Not expected, but in case of need remove from exposure site to fresh air. Keep at rest. Seek medical advice.  
 Skin Contact: No measures, being a non-toxic product, in case any symptoms appear, remove contaminated clothes. Cover wash with water and soap; cover the irritated skin with emollient – may need to seek medical advice.  
 Eye Contact: Check for and remove lenses. Flush with water for at least 15 minutes. Contact a doctor if symptoms persist.  
 Ingestion: Generally, first aid is not necessary. Seek medical attention in case of any adverse effects.  
 Other: When assessing action take Risk & Safety Phrases into account (Section 15).

## 5. FIRE FIGHTING MEASURES

Extinguishing Media: Use CO2, Dry Powder or Foam type Extinguishers,  
 Spraying Recommended: Extinguishing media to base of flames. Do not use direct water jet on burning material.  
 Special Measures: Avoid vapour inhalation. Keep away from sources of ignition. Do not smoke. Wear positive pressure self-contained breathing apparatus & protective clothing.  
 Extinguishing Procedures: Closed containers may build up pressure when exposed to heat and should be cooled with water spray.

## 6. ACCIDENTAL RELEASE MEASURES:

Personal Precautions:	No special precautions required.
Environment Precautions:	No special precautions required.
Cleaning Up Methods:	Remove all potential ignition sources. Contain spilled material with an inert or non-combustible inorganic absorbent material, sweep up and remove to an approved disposal container. Observe state, federal & local disposal regulations.

## 7. HANDLING AND STORAGE

Precautions in Handling:	Apply good manufacturing practice & industrial hygiene practices, ensuring proper ventilation. Observe good personal hygiene, and do not eat, drink or smoke whilst handling.
Storage Conditions:	In well filled and closed container protected from light at a temperature not exceeding 25°C.
Fire Protection:	Keep away from ignition sources & naked flames. Take precautions to avoid static discharges in working area.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION:

Respiratory Protection:	No special measures under normal conditions.
Ventilation:	No special measures under normal conditions.
Hand Protection:	No special measures under normal conditions.
Eye Protection:	Use safety glasses.
Work/ Hygiene Practices:	Wash hands with soap and water after handling.

## 9. PHYSICAL DATA AND CHEMICAL PROPERTIES:

Appearance:	Fine powder
Colour:	White
Odour:	Faint vegetable odor
Oxidizing Properties:	Avoid exposure to air.
Flash Point °C:	> 600
Flammability:	Avoid open flame.
Melting Point/ Range °C:	30-36
Specific Gravity @ 50°C:	0.89

## 10. STABILITY AND REACTIVITY:

Reactivity:	It presents no significant reactivity hazards, by itself or in contact with water. Avoid contact with strong alkali, acid or oxidising agents.
Decomposition:	Liable to cause smoke and acrid fumes during combustion; carbon monoxide, carbon dioxide and non-identified organic compounds may be formed.

## 11. TOXICOLOGICAL INFORMATION:

Vegetable powder of natural origin. Non-toxic product.

## 12. ECOLOGICAL INFORMATION:

Biodegradability:	> 90% (OECD) This product is unlikely to accumulate in the environment and environmental problems under normal use conditions are not expected
Precautions:	Prevent surface contamination of soil, ground and surface water.

## 13. DISPOSAL CONSIDERATIONS:

When possible recover spilled product. When product must be discarded, do so into an authorised dump or recycling service station. Act in accordance with local and national regulations

#### 14. TRANSPORT INFORMATION

Road (ADR/ RID): N/a  
Air (IATA): N/a  
Sea (IMDG): N/a  
CHIP: See section 15  
NDPA Ratings: Health: 0, Flammability: 1, Reactivity: 0, Personal protection: A

#### 15. REGULATORY INFORMATION:

Hazards: N/a  
Symbols: N/a  
Risk Phrases: N/a  
Safety Phrases: S25 Avoid contact with eyes  
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical attention  
S 39 Wear eye protection

#### 16. OTHER INFORMATION

Cosmetics Directive 7th Amendment: Not restricted

##### PACKAGING:

Type	Suitability
Glass	Yes
Lacquered lined steel/ tin	Yes
Aluminium	Yes
HPPE	Yes
F/HDPE	Yes
Other Plastic	Yes

Revision date 19-Jan-16

**This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

##### Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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 process, unless specified in the text.



## Chitosan

### Product

Name	<b>Chitosan</b>
Botanical name	/
OHI product code	
Plant part	
Country of origin	P.R.CHINA

### Physical and Chemical Properties

Appearance	White, FINE POWDER	Visual
Taste	Typical to botanical	Gustatory
Odor	Typical to botanical	Olfactory
Sieve analysis	90% pass 80 mesh	Mesh screen
Moisture	≤10%	IR balance
Ash	≤5%	2g/525°C/5hrs

### Microbiology

Total plate count	≤100000cfu/g	AOAC
Yeasts & Molds	≤10000cfu/g	AOAC
Salmonella	Absent/10g	AOAC
E.Coli	Absent/1g	AOAC
Sterilization method	High Temperature & High Pressure	
	Short time (5" - 10")	

### Packaging | Storage<sup>3</sup>

Packaging	Carton drum   inner double layer plastic bag
Storage	Cool, dry, dark, airtight environment. Storage of products at room temperature Keep away from sunshine and moisture Reclose packaging tightly after use
Re-test date	24 months after manufacture date in original packaging and advised storage condition

### Heavy metals<sup>2</sup>

Arsenic (As)	≤ 1 ppm	AA or equivalent
Cadmium (Cd)	≤ 1 ppm	AA or equivalent
Lead (Pb)	≤ 3 ppm	AA or equivalent
Mercury (Hg)	≤ 0.1 ppm	AA or equivalent
Total heavy metals	≤ 10 ppm	Colorimetry or eq.
Identification	Positive	TLC

### Additional product information

Bulk Density	0.3g/ml
Molecular Formula	(C <sub>6</sub> H <sub>11</sub> O <sub>4</sub> N) <sub>n</sub>
Molecular Weight	(161) <sub>n</sub>

### Composition

Assay	90% Deacetylation	Volumetry
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# Chitosan

<b>Product</b>	
Name	<b>Chitosan</b>
Botanical name	/
Product code	HECHIT
Plant part	
Country of origin	P.R.CHINA

### Physical and Chemical Properties

Appearance <sup>1</sup>	White, FINE POWDER	Visual
Taste	Typical to botanical	Gustatory
Odor	Typical to botanical	Olfactory
Sieve analysis	80	Mesh screen
Moisture	≤5%	IR balance
Ash	≤5%	2g/525°C/5hrs

### Microbiology

Total plate count	≤10000cfu/g	AOAC
Yeasts & Molds	≤1000cfu/g	AOAC
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Molecular Weight	(161) <sub>n</sub>

Composition	90% Deacetylation	Volumetry
Assay		

## Product data

### MADAR Corporation

Approved sellers: Mystic Moments, New Directions, World of Moulds

This datasheet is in compliance with USA and EU food regulations

<sup>1</sup> This is a natural product; color variations may appear between extraction batches due to crop, harvest and seasonal fluctuations.  
<sup>2</sup> Individual and total heavy metals are not being tested for each batch. Random analyses are being regularly performed minimum once a year.  
<sup>3</sup> Packaging, storage and Re-test date can differ upon customer or quantity requirements or special product features

Analysis methods indicated in this product datasheet are generally used methods. Equivalent methods can be applied to determine the product specifications.

### Disclaimer

Before using, read, understand and comply with the information and precautions in the technical data sheets, material safety data sheets, corporate label and other product literature. The information presented herein, while not guaranteed, was prepared and tested by technical personnel and, to the best of our knowledge and belief, is true and accurate as of the date hereof. No warranty, representation or guarantee, express or implied, can be made regarding accuracy, performance, stability, reliability or use. This information is not intended to be all-inclusive, because the manner and conditions of use, handling, storage and other factors may involve other or additional safety or performance considerations. The user is responsible for determining the suitability of any material for a specific purpose and for adopting such safety precautions as may be required. Refer to material safety datasheets for specific and handling instructions. Product might be an irritant. MADAR Corporation does not warrant the results to be obtained in using any material, and disclaims all liability with respect to the use, handling or further processing of any such material. No suggestion for use is intended as, and nothing herein shall be construed as, a recommendation to infringe any existing patent, trademark or copyright or to violate any federal, state or local law or regulation. This document is the property of MADAR Corporation. Document must be returned by receiver upon request. The information contained herein is confidential and may not be copied, shown, or otherwise disclosed, directly or indirectly, to any person not subject to a MADAR Corporation supply contract or confidentiality and nondisclosure agreement without the express, written consent of MADAR Corporation

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