



## 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. **4486705**  
 Best Before End: **November 2205**

### Analysis item

### Specification

### Result

### Analysis test method

Analysis item	Specification	Result	Analysis test method
Assay	90% Deacetylation	90.62%	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%	9.44%	IR balance or equivalent
Ash	≤5%	0.81%	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 Statement

**PRODUCT NAME: Chitosan Powder**

Madar Corporation Limited certifies that the above-mentioned products does not contain any of the major food allergens listed hereafter.

(1)Major food allergens as listed by regulation(EU)No.1169/2011 of the European Parliament and of the Council of 25 October 2011 on the provision of food information to consumers,Annex II,and its subsequent amendments.

<b>Major food allergens</b>	<b>Presence</b>
Cereals containing gluten,namely:wheat, rye, barley, spelled, oats, kamut or their hybrids	NO
Crustaceans or its derivatives	Yes
Eggs and products thereof	NO
Fish and products thereof <i>Except:fish gelation used as carrier for vitamin or carotenoid preparations.</i>	NO
Peanuts and products thereof	NO
Soy or its derivatives	NO
Milk or its derivatives (including lactose)	NO
Tree Nuts or its derivatives: <i>Almonds, hazelnuts, walnuts, cashews, pecans, Brazil nuts, pistachios, macadamias or Queensland nuts,and products thereof.</i>	NO
Celery and products thereof	NO



Mustard and products thereof	NO
Sesame seeds and products thereof	NO
Sulphur dioxide and sulphites at concentrations of more than 10mg/kg or 10mg/litre expressed as SO <sub>2</sub>	NO
Lupins and products thereof	NO
Mollusks and products thereof	NO

**Date: Jan 15th,2020**



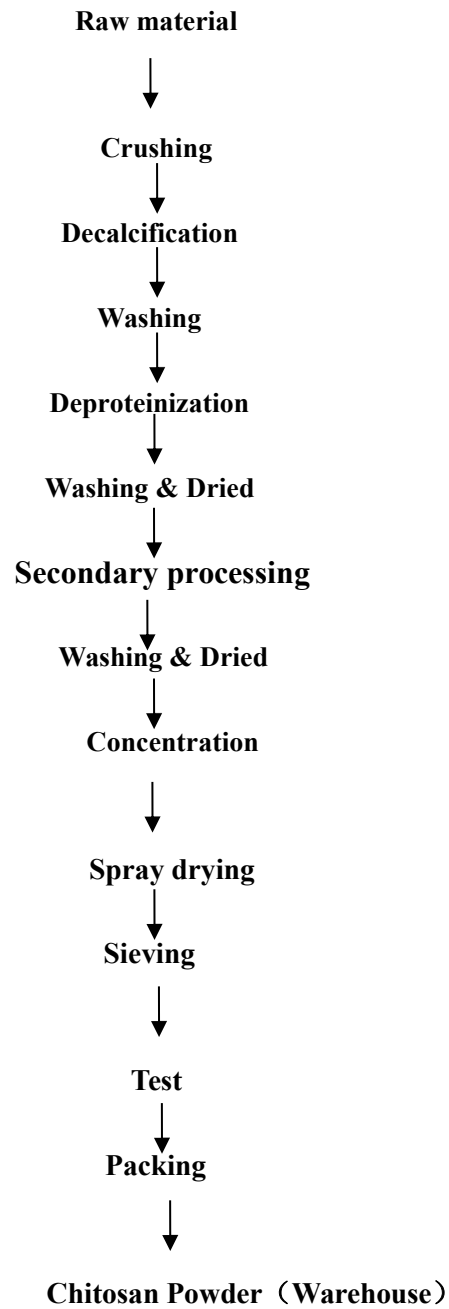
## **CMR Statement**

**PRODUCT NAME: Chitosan Powder**

We hereby certify that the above products does not contain any CMR substances (Carcinogenic, mutagens, reproductive toxins) according 7th amendment of Annex I of European Council Directive 67/548/CEE relating to the classification of dangerous substances.

**Date: August 7th,2021**

## Process Flow Chart of Chitosan Powder





## **CONFIRMATION OF Non GMO STATUS**

**PRODUCT NAME: Chitosan Powder**

This is to certify that the above-mentioned product is not manufactured from GM raw materials and are therefore not subject to labelling under regulations 1829/2003/EC and 1830/2003/EC. and European Directive 2001/18 and related amendments.

**Date: August 7,2021**

# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Product Name:** Chitosan Powder  
**Emergency Contact:** Madar Corporation Limited

**Company Name:** Madar Corporation Limited  
**Tel:** + 44 (0) 1425 655 555  
**E-mail:** technical@madarcorporation.co.uk

## 2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	Percentage	Cas Number	OSHA PEL	ACGIH TLV	Other Limits
Chitosan Powder	100%Chitosan Powder	/	No data.	No data.	No data.

## 3. Hazards Identification

**Emergency Overview:** No data available.

**Route(s) of Entry:** Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection

**Potential Health Effects (Acute and Chronic):** Material may be irritating to the mucous membranes and upper respiratory tract. May be harmful by inhalation, ingestion, or skin absorption. May cause eye, skin, or respiratory system irritation. The toxicological properties of this compound have not been fully evaluated.

**Signs and Symptoms Of Exposure:** No data available.

## 4. First Aid Measures

**Emergency and First Aid Procedures:** If inhaled remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention. If swallowed, wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel. In case of contact with eyes, hold eyelids apart and flush eyes with plenty of water. After initial flushings, remove any contact lenses and continue flushing for at least 20 minutes. Have eyes examined and tested by medical personnel. In case of skin contact, immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

## 5. Fire Fighting Measures

Flash Pt: No data.

Explosive Limits: LEL: No data. UEL: No data.

Autoignition Pt: No data.

Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus ressure-demand (MSHA/NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

Flammable Properties and Hazards: Emits toxic fumes under fire conditions.

Extinguishing Media: Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.

Unsuitable Extinguishing Media: No data available.

## 6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released: Wear a NIOSH/MSHA approved self-contained breathing apparatus

Released Or Spilled: and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves). Vacuum or sweep up material and place in disposal container. Avoid raising dust. After removal, ventilate contaminated area and flush thoroughly with water.

## 7. Handling and Storage

**Hazard Label Information:** Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.

### Precautions To Be Taken in Handling:

Avoid breathing (dust, vapor, mist, gas). Avoid contact with eyes, skin, and clothing.

Avoid prolonged or repeated exposure. Do not reuse this container.

Use with adequate ventilation. Wash thoroughly after handling.

**Precautions To Be Taken in Storing:** Keep tightly closed. Store at correct temperature.

## 8. Exposure Controls/Personal Protection

Protective Equipment Summary – Hazard Eye wash station in work area Lab coat Latex disposable gloves

**Label Information:** Safety glasses Safety shower in work area Vent Hood **Respiratory Equipment (Specify Type):** No data available.

**Eye Protection:** Safety glasses

**Protective Gloves:** Latex disposable gloves

**Other Protective Clothing:** Lab coat

**Engineering Controls (Ventilation etc.):** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

**Work/Hygienic/Maintenance Practices:** Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Wash thoroughly after handling.

## 9. Physical and Chemical Properties

**Physical States:** Powder

**Melting Point:** No data.

**Boiling Point:** No data.  
**Flash Pt:** No data. Method:  
**Specific Gravity (Water = 1):** No data.  
**Vapor Density (vs. Air = 1):** No data.  
**Solubility in Water:** No data  
**Corrosion Rate:** No data.  
**Molecular Weight:** No data.  
**Color:** Yellow

**Autoignition Pt:** No data.  
**Explosive Limits:** LEL: No data. UEL: No data.  
**Vapor Pressure (vs. Air or mm Hg):** No data.  
**Evaporation Rate (vs Butyl Acetate=1):** No data.  
**Percent Volatile:** N.A.  
**Formula:** No data.  
**pH:** No data.  
**Appearance and Odor:** Fine powder

## 10. Stability and Reactivity

**Stability:** Unstable [ ] Stable [ X ]

**Conditions To Avoid - Instability:** protect from moisture

**Incompatibility - Materials To Avoid:** strong oxidizing agents  
monoxide

**Hazardous Decomposition Or Byproducts:** carbon dioxide carbon

**Hazardous Polymerization:** Will occur [ ] Will not occur [ X ]

**Conditions To Avoid – Hazardous** No data available. **Polymerization:**

## 11. Toxicological Information

Toxicological Information: The toxicological effects of this compound have not been thoroughly studied

Carcinogenicity/Other Information: No data available.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

## 12. Ecological Information

**Ecological Information:** Run off from fire control or dilution water may cause pollution.

## 13. Disposal Considerations

Waste Disposal Method: Dispose in accordance with local, state and federal regulations.

## 14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name: No data available.

Additional Transport Information: Transport in accordance with local, state, and federal regulations.

## 15. Regulatory Information

### US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
Chitosan Powder	/	No	No	No	No

### US EPA CAA,CWA,TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP65
Chitosan Powder	/	No	No	No	No

SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

Reauthorization Act of 1986 ) Lists :

Sec.302 EPA SARA Title III Section 302 Extremely Hazardous Chemical with TPQ indicates 10000 LB TPQ if not volatile .

Sec.304 EPA SARA Title III Section 304:Cercla Reportable + Sec.302 with Reportable Quantity . Indicates statutory RQ.

Sec.313: EPA SARA Title III Section 313 Toxic Release Inventory. Note:-Cat indicates a member of a chemical category.

Sec.110: EPA SARA 110 Superfund Site Priority Contaminant List

TSCA (Toxic Substances Control

Act) Lists:

5A(2): Chemical Subject to Significant New Rules (SNURS)

6A: Commercial Chemical Control Rules

8A: Toxic Substances Subject To Information Rules on Production

8A CAIR: Comprehensive Assessment Information Rules - (CAIR)

8A PAIR: Preliminary Assessment Information Rules - (PAIR)

8C: Records of Allegations of Significant Adverse Reactions

8D: Health and Safety Data Reporting Rules

8D TERM: Health and Safety Data Reporting Rule Terminations

Other Important Lists:

CWA NPDES: EPA Clean Water Act NPDES Permit Chemical

CAA HAP: EPA Clean Air Act Hazardous Air Pollutant

CAA ODC: EPA Clean Air Act Ozone Depleting Chemical (1=CFC, 2=HCFC)

CA PROP 65: California Proposition 65

## 16. Other Information

Additional Information About This Product: References: Not available.

Other Special Considerations: Not available.

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall ScienceLab.com be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if ScienceLab.com has been advised of the possibility of such damages





**Product**

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

*Chitosan*

**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
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
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**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

**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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