Certificate of Analysis Chitosan Herbal Extract

Product information Product name Botanical name	Chitosan /	Batch information Batch no.	4545601 June 2027
Plant part		Best Before End:	June 2027
Country of origin	P.R.CHINA		
Analysis item	Specification	Result	Analysis test method
Assay	90% Deacetylation	91.04%	Volumetry Titrator
Organoleptic properties			
Appearance ¹	Fine Light yellow powder	Conform to specification	Visual
Taste	Typical to botanical	Conform to specification	Gustatory
Odor	Typical to botanical	Conform to specification	Olfactory
Physical properties			
Sieve analysis	90% pass 80 mesh	Conform to specification	Mesh screen or equivalent
N	-100/	0.550/	TD 1 1 1 1

Physical Sieve and Moisture content Ash

Heavy metals² Arsenic (As) Cadmium (Cd) Lead (Pb) Mercury (Hg) Total heavy metals

Microbiology Total plate count Yeasts & Molds Salmonella E.Coli

Identification Additional information Bulk Density Molecular Formula Molecular Weight

≤10% ≤5%

≤1 ppm $\leq 1 \text{ ppm}$ \leq 3 ppm $\leq 0.1 \text{ ppm}$ $\leq 10 \text{ ppm}$

≤10000cfu/g ≤1000cfu/g Absent/10g Absent/1g

Positive

0.3g/ml (C6H11O4N)n (161)n

9.55% 0.76%

Conform to specification Conform to specification Conform to specification Conform to specification Conform to specification

Conform to specification Conform to specification Conform to specification Conform to specification

Conform to specification

valent IR balance or equivalent 2g/525°C/5hrs or equivalent

AA or equivalent AA or equivalent AA or equivalent AA or equivalent Colorimetry or equivalent

AOAC or equivalent AOAC or equivalent AOAC or equivalent AOAC or equivalent

TLC

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.

Major food allergens				
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	NO			
Except: fish gelation used as carrier for vitamin or carotenoid preparations.				
Peanuts and products thereof	NO			
Soy or its derivatives	NO			
Milk or its derivatives (including lactose)	NO			
Tree Nuts or its derivatives:	NO			
Almonds, hazelnuts, walnuts, cashews, pecans, Brazil nuts, pistachios, macadamias or Queensland nuts, and				
products thereof.				
Celery and products thereof	NO			

Mustard and products thereof				
Sesame seeds and products thereof	NO			
Sulphur dioxide and sulphites at concertrations of more than 10mg/kg or 10mg/litre				
expressed as SO2				
Lupins and products thereof	NO			
Mollusks and products thereof	NO			

Date: Jan 15th,2020

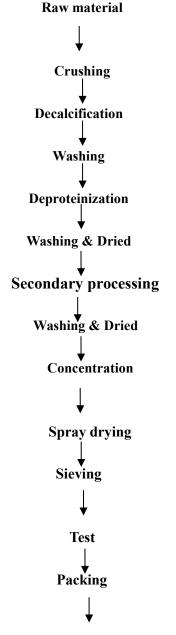
CMR Statement

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



Chitosan Powder (Warehouse)

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 Wear a NIOSH/MSHA approved self-contained breathing apparatus

Released Or Spilled: and appropriate personal Wear a NIOSH/MSHA approved self-contained breathing apparatus 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. Protective Gloves: Latex disposable gloves

Eye Protection: Safety glasses 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.

BiOrigins, 19-20 Sandleheath Industrial Estate, Fordingbridge, Hampshire, SP6 1PA, UK Tel: 01425 655555 Email: technical@madarcorporation.co.uk

Boiling Point: No data.	Autoignition Pt: No data.
Flash Pt: No data. Method:	Explosive Limits: LEL: No data. UEL: No data.
Specific Gravity (Water = 1): No data.	Vapor Pressure (vs. Air or mm Hg): No data.
Vapor Density (vs. Air = 1): No data.	Evaporation Rate (vs Butyl Acetate=1): No data.
Solubility in Water: No data	Percent Volatile: N.A.
Corrosion Rate: No data.	Formula: No data.
Molecular Weight: No data.	pH: No data.
Color: Yellow	Appearance and Odor: Fine powder
40 Otability and Depatholty	

10. Stability and Reactivity

Stability: Unstable [] Stable [X] **Incompatibility - Materials To Avoid:** strong oxidizing agents monoxide

Conditions To Avoid - Instability: protect from moisture **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)	cal 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. EPA SARA Title III Section 313 Toxic Release Inventory. Note:-Cat indicates a member of a chemical category. Sec.313: 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) 8C: Records of Allegations of Significant Adverse Reactions 8A PAIR: Preliminary Assessment Information Rules - (PAIR) 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	Chitosan				Chitagan	
Botanical name					Chitosan	
	HECHIT					
Product code	HECHII					
Plant part	in P.R.CHINA					
Country of orig	an P.K.CHINA					
Physical and C	Chemical Properties Appearance1		Microbiology			
FINE Light Ye	Chemical Properties Appearance1 llow POWDER	Visual	Total plate count	≤10000cfu/g	AOAC	
Taste	Typical to botanical	Gustatory	Yeasts & Molds	≤1000cfu/g	AOAC	
Odor	Typical to botanical	Olfactory	Salmonella	Absent/10g	AOAC	
Sieve analysis	80	Mesh screen	E.Coli	Absent/1g	AOAC	
Moisture	≤5%	IR balance	Sterilization method	High Temperature & High Pressure		
Øcshtent	≤5%	2g/525°C/5hrs		Short time (5" - 10")		
Packaging St	orage3		Heavy metals ²			
Packaging	Carton drum inner double layer plastic	bag	Arsenic (As)	$\leq 1 \text{ ppm}$	AA or equivalent	
Storage	Cool, dry, dark, airtight environment.	-	Cadmium (Cd)	$\leq 1 \text{ ppm}$	AA or equivalent	
	Storage of products at room temperature	2	Lead (Pb)	\leq 3 ppm	AA or equivalent	
	Keep away from sunshine and moisture		Mercury (Hg)	$\leq 0.1 \text{ ppm}$	AA or equivalent	
	Reclose packaging tightly after use		Total heavy metals	$\leq 10 \text{ ppm}$	Colorimetry or eq.	
Re-test date	24 months after manufacture date in ori	ginal packaging and advised stor	age condition	* *	~ .	
			Identification	Positive	TLC	
Additional pro	oduct information		Composition			
Bulk Density	0.3g/ml		Assay	90% Dea	cetylation Volumetry	
Molecular Form	nula (C6H11O4N)n				Titrator	
Molecular Wei	ght (161)n					

Product data

MADAR Corporation

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

This datasheet is in compliance with USA and EU food regulations

1 This is a natural product; color variations may appear between extraction batches due to crop, harvest and seasonal fluctuations. 2 Individual and total heavy metals are not being tested for each batch. Random analyses are being regularly performed minimum once a year. 3 Packaging, storage and Re-test date can differ upon customer or quantify 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 mamer and conditions of use, handling, storage and other factors may involve other or additional safety or performance considerations. The use 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 report 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.