



Certificate of Analysis/Conformance

Product	Vitamin C - Ascorbic Acid
Batch number	4510412
Best before end	June 2026
Production date	June 2023

Analysis Contents	Analysis Standard	Analysis Results
Characteristics	White or almost White crystals Crystalline Powder	Pass
Identification	Positive Reaction	Positive
Melting Point	About 190°C	190.8°C
PH(with 2% water solution)	2.4-2.8	2.56
PH(with 5% water solution)	2.1-2.6	2.34
Clarity Of Solution	Clear	Clear
Colour Of Solution	≤BY ₇	<BY ₇
Copper	≤5ppm	<5ppm
Heavy Metals	≤10ppm	<10ppm
Mercury	≤0.1mg/kg	<0.1mg/kg
Lead	≤2mg/kg	<2mg/kg
Arsenic	≤3ppm	<3ppm
Oxalic Acid	≤0.2%	<0.2%
Iron	≤2ppm	<2ppm
Impurity E	≤0.2%	<0.2%
Loss of Drying	≤0.4%	<0.4%
Sulphate Ash (Residue On Ignition)	≤0.1%	<0.1%
Specific Optical Rotation	+20.5° - +21.5°	+21.06°
Residual Solvents	Pass	Pass
Assay	99.0%-100.5%	99.71%
Conclusion	The Above-Mentioned Product Conforms To BP2016/USP39	



ALLERGEN FREE CERTIFICATE

WE HEREBY CONFIRM THAT OUR PRODUCT—VITAMIN C ,
ASCORBIC ACID IS FREE FROM ALLERGEN. THEY DO NOT CONTAIN
ANY KIND OF ALLERGEN DURING THE COURSE OF PROCESS.

06-05-2021



FLOW CHART

SORBITOL — FIRST STEP FERMENTATION — SORBOSE — SECOND STEP
FERMENTATION — GULONIC ACID — ESTERIFICATION — TRANSFORMATION
— ACIDIZATION — COARSE VC — DISSOLVE & DECOLOR — FILTER —
CRYSTALLIZATION — CENTRIFUGAL — DRYING — INSPECTION — PACKAGE —
VITAMIN C



NON-GMO CERTIFICATE

WE HEREBY CERTIFY THAT ASCORBIC ACID SUPPLIED BY US DO NOT CONTAIN ANY GENETICALLY MODIFIED ORGANISM (GMO) AND ALSO WE CERTIFY THAT THE MATERIAL USED FOR PRODUCING ASCORBIC ACID DOES NOT CONTAIN ANY GMO.



MATERIAL SAFETY DATA SHEET

Section 1-Chemical Product and Company Identification

MSDS name: L-(+)- the Ascorbic acid

Synonyms vitamin C

Company Identification: Madar Corporation Limited

19 - 20 Sandleheath Industrial Estate

Fordingbridge

SP6 1PA

Section 2- Composition, Information on Ingredients

CAS#	Chemical Name	%
50-81-7	L-(+)-Ascorbic Acid	100%

Section 3 – Hazards Identification

EMERGENCY OVERVIEW

Light sensitive Air sensitive .

POTENTIAL HEALTH EFFECTS

Eye	Contact cause transient eye irritation.
Skin	Low hazard for usual industrial handling.
Ingestion	Low hazard for usual industrial handling. May cause mild digestive tract irritation.
Inhalation	May cause respiratory tract irritation.
Chronic	Not available

Section 4 First Aid Measures

Eyes	Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid.
Skin	Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.
Ingestion	Get medical aid. Wash mouth out with water.
Inhalation	Remove from exposure to fresh air immediately, if not breathing give artificial respiration . If breathing is difficult, give oxygen.
	Get medical aid if cough or other symptoms appear.
Notes to Physician	Treat symptomatically and

Section 5 – Fire Fighting Measures

General Information As in any fire , wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH(approved or equivalent),and full protective gear.

Extinguishing Media	In case of fire use water spray, dry chemical, carbon dioxide, or chemical foam.
Autoignition Temperature	Not available.
Flash Point	Not available.
NFPH Rating	Not published.
Explosion Limits	Lower Not available. Upper Not available.

Section 6- Accidental Release Measures

General Information Use proper personal protective equipment as indicated in section
Spills/Leaks Vacuum or sweep up material and place into a suitable disposal container.

Section 7 - Handling and Storage

Handling Avoid breathing dust , vapor , mist ,or gas ,Avoid contact with skin and eyes.
Storage Stored in a cool dry place ,stored in a tightly closed container.

Section 8-Exposure Controls, Personal Protection

Engineering Controls Use adequate ventilation to keep airborne concentrations low.

PERSONAL PROTECTIVE EQUIPMENT

Eyes Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA ' s eye and face protection regulations in 29 OPR 1910.133 or European Standard EN166.
Skin Wear appropriate protective gloves to prevent skin exposure.
Clothing Wear appropriate protective clothing to prevent skin exposure.
Respirators Follow the OSHA respirator regulations found in 29 CFR 1910.134 Or European Standard EN149. Always use a NIOSH or European standard EN 145 approved respirator when necessary.

Section 9 – Physical and Chemical Properties

Physical State Powder
Appearance White
Odor Not available
PH Not available
Vapor Pressure Negligible
Viscosity Not available
Boiling Point Not available
Freezing/Melting Point 190 °C
Decomposition Temperature Not available
Solubility 333 Gs/ L water at 20 °C
Specific Gravity /Density 1.7000g/cm³
Molecular Formula C₆H₈O₆
Molecular Weight 176.13

Section 10 — Stability and Reactivity

Chemical stability Stable under normal temperatures and pressures
Conditions to Avoid Incompatible materials light exposure to air
Incompatibilities with Other Materials Strong oxidizing agents
Hazardous Decomposition Products Carbon monoxide carbon dioxide
Hazardous Polymerization Will not occur

Section 11 – Toxicological Information

RTECS # CAS # 50-81-7: C 17650000
LD50/LC50 CAS # 50-81-7: Oral mouse; LD50 =3367mg/kg Oral rat: LD50=11900mgkg
Carcinogenicity L-(+)-Ascorbic acid Not listed by ACGLI IARC NIOSH NTP, or OSHA
Other see actual entry in RTECS for complete information

Section 12-Ecological Information

For further information contact Luwei Pharmaceutical Group Co.,Ltd.

Section 13-Disposal Considerations

Dispose of in a manner consistent with local regulations.

Section 14 – Transport Information

US DOT	IMO	IATA	RID/ADR	Canadian TDG
N/A				N/A

Shipping Name

Hazard Class Does Not Correspond To The Classification Standard Of The United Nations

UN Number: Not Listed

IMO: Not Regulated by IMO/IMDG

Packing Group: .

Section 15-Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Not available.

Disk Phrases;

Safety Phrases;

S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

CAS # 50-81-7:0

Canada

CAS#50-81-7 is listed on Canada ' s DSLADSL List.

CAS#50-81-7 is not listed on Canada ' s ingredient disclosure list.

Exposure Limits

US FEDERAL

TSCA

CAS # 50-81-7 is listed on the TSCA inventory.

Section 16-Addirional Information

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 way shall the company 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 the company has been advised of the possibility of such damages.



Product Specification

Product	L-Ascorbic Acid (Vitamin C)
Country of origin	China
Product Description	Colourless, crystals or a white or almost white crystalline powder which dissolves on exposure to air and moisture; odourless or almost odourless and sour taste.
Chemical formula	C ₆ H ₈ O ₆
Packaging	25kg carton box with two plastic inner linings and vacuum bag
Shelf life	3 years
Storage Conditions	Cool, dry ambient conditions, away from direct sunlight

Analytical Standards

Molecular weight	176.13
Identification	Positive reaction
Melting point	About 190°C
pH (5% solution in water)	2.1-2.6
pH (2% solution in water)	2.4-2.8
Clarity of solution	Clear
Colour of solution	BY7max
Copper	5mg/kg max
Heavy metals	10ppm max
Iron	2ppm max
Oxalic acid	0.2% max
Sulphate ash (residue on ignition)	0.1% max
Specific optical rotation	+20.5°-+21.5°
Organic volatile impurities	Pass
Assay	99.0% - 100.5%
Loss on drying	≤0.4%
Arsenic	≤1ppm
Mercury	≤0.1ppm
Lead	≤0.4ppm

Nutritional Information, typical values per 100g

Energy, kcal	0
Energy, kJ	0
Protein	0
Total Fat	0
Of which saturates	0
Carbohydrates	0
Of which sugar	0
Fibre	0
Sodium	0

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Allergen Information

Is this product free from:	Y/N	Comments:
Eggs and products thereof	Y	
Milk and products thereof	Y	
Fish and products thereof	Y	
Crustaceans and products thereof	Y	
Molluscs and products thereof	Y	
Peanuts and products thereof	Y	
Tree nuts (e.g. almonds, hazelnuts, walnuts, cashews, pecans, brazils, pistachios, macadamia nuts or Queensland nuts) and products thereof	Y	
Sesame seeds and products thereof	Y	
Cereals containing gluten (e.g. wheat, spelt, rye, barley, oats, or their hybridised strains) and products thereof	Y	
Soya and products thereof	Y	
Celery and celeriac and products thereof	Y	
Mustard and products thereof	Y	
Lupin and products thereof	Y	
Sulphur dioxide and sulphites (at concentrations >10ppm)	Y	

Special Dietary Requirements

Is this product suitable for:	Y/N	Comments
Vegetarians	Y	
Vegans	Y	
Kosher	Y	
Halal	Y	

Specification Approval:

Customer	Contact	Position	Signature	Date

If this specification is not received signed within 3 working days it will be deemed as accepted.

Document Amendments:

Issue No:	Reason for Issue	Date:	Issued by:	Approved by:
01	-	03/08/2020	J Sharrocks	R Hanson

C

Quality Manual	Date: 03/08/2020	
	Issue: 1	

TECHNICAL DATA SHEET (TDS)

Commodity	: Vitamin C
Chemical name	: L-(+)-Ascorbic Acid
Description	: White or almost white crystals crystalline powder which discolors on exposure to air and moisture; odorless or almost odorless and tasted sour
Properties	
Chemical Formula	: C ₆ H ₈ O ₆
Molecular Weight	: 176.13
Specification:	
Identification	: Positive Reaction
Melting point	: 190-192Centi Grade Degrees
PH Of 2 Percent Water Solution	: 2.4-2.8
PH Of 5 Percent Water Solution	: 2.1-2.6
Clarity Of Solution	: Clear
Colour Of Solution	: BY ₇ max
Copper	: 5ppm max
Heavy Metals	: 10ppm max
Iron	: 2ppm max
Oxalic Acid	: 0.2% max
Sulphate Ash (Residue On Ignition)	: 0.1% max
Specific Optical Rotation	: +20.5° -+21.5°
Organic Volatile Impurities	: Pass
Assay	: 99.0%-100.5%
Loss on drying	: ≤0.4%
Arsenic	: ≤3ppm
Mercury	: <0.1mg/kg
Lead	: <2mg/kg

Characteristics: Colorless crystals or a white or almost white, crystalline powder which discolors on exposure to air and moisture; odorless or almost odorless and tasted sour, easily soluble in water and a few partial soluble in ethanol; insoluble in ether and chloroform; it melts at 190-192Centi Grade Degrees;

PH of a 5% w/v solution, 2.1 to 2.6; specific optical rotation in a 10% w/v solution, +20.5° to +21.5° .

Product specification: BP/USP/EP/FCCV/E300

Function: It applies mainly to production of various medicines as clinically important material for supplementary cure practice in different sectors. Being food additives, it acts as superior and reliable agent in nutrition, antiseptic and flour processing aspects. It also helps enhance the immune system of animals as being served in feed additives.

29-06-2023