

Product Technical Dossier

Product	Sodium D-Aspartic Acid
CCL Product Code	P19225

Specification Details

	Specification	Method
Means of Identification	Positive	IR
Assay/Actives	98.5%-101.0%	Non-aqueous titration
Appearance	Crystalline white powder	Visual
Colour	White	Visual
Aroma	Odourless	Organoleptic
Flavour	Tasteless	Organoleptic
Sieve Analysis % passed	20% pass 20 mesh	sieve
Loss on Drying	≤0.25%	In oven 75°C 3h
Bulk Density	0.7-0.85 g/cm ³	
Tapped Density	0.9-1.0 g/cm ³	
pH	6.0– 7.5	C=10 by water

Microbiological Limits

Total Viable Count	≤1000cfu/g	GB 4789.2-2016
Yeasts & Moulds	≤100cfu/g	GB 4789.15-2016
E. Coli	Negative	GB 4789.3-2010
Salmonella	Negative/25g	GB 4789.4-2016

Heavy Metal Limits

Total Heavy metals	≤ 10ppm	GB 5009.74-2003
Lead (Pb)	≤ 3ppm	GB 5009.12-2010
Cadmium (Cd)	≤ 0.3ppm	ICP-MS
Mercury (Hg)	≤ 0.1ppm	ICP-MS
Arsenic (As)	≤ 1ppm	GB 5009.76-2003

Additional testing

Specific Rotation [α] _{D20}	-18.0° - -21.0°	C=8 by 6N HCl
Transmittance	≥95.0%	C=10 by water
Ammonium(NH ₄)	≤0.02%	Colorimetric method
Iron (Fe)	≤30ppm	Colorimetric method
Sulphate (SO ₄)	≤0.03%	Colorimetric method
Chloride (Cl)	≤0.02%	Colorimetric method

Product Code: P19225

Version: 2

Page 1 of 12



FDA number: 16806073982

Additional Technical Information

Raw Material Full Botanical / Chemical Name	Monosodium D- Aspartate
The material is Food Grade	Yes
Solvent used	Water
Country of Origin	China
Country of Manufacture	China
Melting Point	140°C
Solubility in Alcohol	Insoluble
Solubility in Water	Dissolve in water
Average Molecular weight	173.11
Molecular Formula	C4H6O4NNa.H2O
Shelf Life from Date of Manufacture	Min 2 years
Suitable for Vegetarians?	Yes
Suitable for Vegans?	Yes
Storage Conditions	This material is to be stored in a tightly sealed bag/container and to be kept in a cool place away from moisture and direct sunlight

Compound Ingredients Origin, Function and Percentages

Ingredients	Function	% composition	Source
n/a - No compound ingredient			

Nutritional Data

Test	Value per 100g
Energy kJ / Kcal	n/a
Fat (g)	n/a
-Of which Saturates (g)	n/a
Carbohydrate (g)	n/a
-Of which Sugars (g)	n/a
Fibre (g)	n/a
Protein (g)	n/a
Salt (g)	n/a

There are no nuts in this recipe. However, we cannot guarantee that the raw materials entering the site are nut free.

Product Code: P19225

Version: 2

Page 2 of 12



FDA number: 16806073982

Allergens	Product Contains YES/NO	Listed Item on Site at Manufacturer YES/NO	Where applicable, is there risk of cross-contamination? YES/NO or N/A
Peanuts and Peanut Derivatives (including possible cross contamination)	No	No	
Nut and Nut Derivatives <i>Almond (Amygdalus communis L.), Hazelnut (Corylus avellana), Walnut (Juglans regia), Cashew (Anacardium occidentale), Pecan nut (Carya illinoensis (Wangenh.) K. Koch), Brazil nut (Bertholletia excelsa), Pistachio nut (Pistacia vera), Macadamia nut and Queensland nut (Macadamia ternifolia)</i>	No	No	
Sesame Seeds and Sesame Seed Derivatives	No	No	
Milk and Milk Derivatives (including lactose)	No	No	
Egg and Egg Derivatives	No	No	
Cereals and Derivatives containing OR POTENTIALLY CONTAMINATED WITH Gluten <i>(wheat, wheatgrass, faro, freekeh, spelt, kamut, rye, oats, barley, barley grass)</i>	No	No	
Soya and Soya Derivatives	No	No	
Lupin and Lupin Derivatives	No	No	
Mustard and Mustard Derivatives	No	No	
Celery or Celery Derivatives (including Celeriac)	No	No	
Fish and Fish Derivatives	No	No	
Molluscs and their Derivatives	No	No	
Crustaceans and their Derivatives	No	No	
Sulphur Dioxide and Sulphites (E220, E228) at levels > 10mg/kg or 10mg/litre	No	No	

Additives / Contaminants / Dietary Requirements / Intolerances	Product Contains YES/NO	Listed Item on Site at Manufacturer YES/NO	Where applicable, is there risk of cross-contamination? YES/NO or N/A
Additives / E Numbers	No	No	
Antioxidants	No	No	
Ethylene Oxide	No	No	
Gelatine	No	No	
Flavourings (Artificial / Nature Identical / Natural / Smoked)	No	No	
Maize / Corn and any Derivatives	No	No	
Legumes / Pulses	No	No	
Rice and Rice Derivatives	No	No	
Added Salt	No	No	
Added Sugar / artificial or natural sweeteners	No	No	
Aspartame	No	No	
BHA / BHT (E320 / E321)	No	No	
Caffeine	No	No	
Colours (Artificial / Nature Identical / Natural / Smoked)	No	No	
Dextrose	No	No	
other Seeds and Seed Derivatives (Poppy Seeds, Cotton Seeds, Sunflower Seeds)	No	No	
Kiwi fruit	No	No	
Polyols (sugar alcohols)	No	No	
grape fruit	No	No	
Sorbic Acid (E200, E203)	No	No	
Any other Preservatives	No	No	
Ethanol	No	No	
Honey	No	No	
Lactose	No	No	
Yeast and Yeast Derivatives	No	No	
All Animal Products (Beef, Pork, Poultry or other) and Derivatives (which may include growth/yield hormones, antibiotics etc.)	No	No	
Bovine Products or Derivatives (which may include growth/yield hormones, antibiotics etc.)	No	No	

Product Code: P19225

Version: 2

Page 3 of 12



FDA number: 16806073982

Statements

<p>Confirmation of BSE / TSE Status This is to certify that this product complies with all relevant current UK and EU Legislative requirements in regard to Transmissible Spongiform Encephalopathies (TSE) and Bovine Spongiform Encephalopathy (BSE) for human food, and so is free of TSE/BSE.</p>	Yes
<p>This is also to certify that, during the course of their manufacture, the above-mentioned product did not come into contact with any materials, which could be derived from TSE/BSE risk materials.</p>	Yes
<p>Confirmation of GM Status This is to certify that this product is not manufactured from GM raw materials and is therefore not subject to labelling under current regulations.</p>	Yes
<p>Confirmation of Non-Irradiation Status This is to certify that this product, whole or in part, has not been subjected to Ionising Radiation as per European Directives.</p>	Yes
<p>Confirmation of Nandrolone Status This is to certify that this product, whole or in part, has not come into contact with Nandrolone or any of its precursors in any way.</p>	Yes
<p>Confirmation of IOC Product Status This is to certify that this product, whole or in part, has not come into contact with any product/s, which is banned by the IOC (International Olympics Committee) and or WADA.</p>	Yes
<p>Confirmation of Animal Testing Status This is to certify that all the products sold by Cambridge Commodities have not been tested on animals in any part of its manufacture in accordance with current regulations.</p>	Yes
<p>Confirmation of Pesticides Status This is to certify that the above-mentioned product complies with the EU max residue limits (MRLs) on pesticides.</p>	Yes
<p>Confirmation of Nanoparticles Status This is to certify that unless otherwise stated, the above-mentioned product is free of nanoparticles. Commission Recommendation, defines as follows: "'Nanomaterial' means a natural, incidental or manufactured material containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for 50 % or more of the particles in the number size distribution, one or more external dimensions is in the size range 1 nm - 100 nm".</p>	Yes
<p>Packaging Status We hereby certify that the packaging used in the above mentioned material conforms to EU regulations and subsequent amendments on food grade packaging</p>	Yes

Product Code: P19225

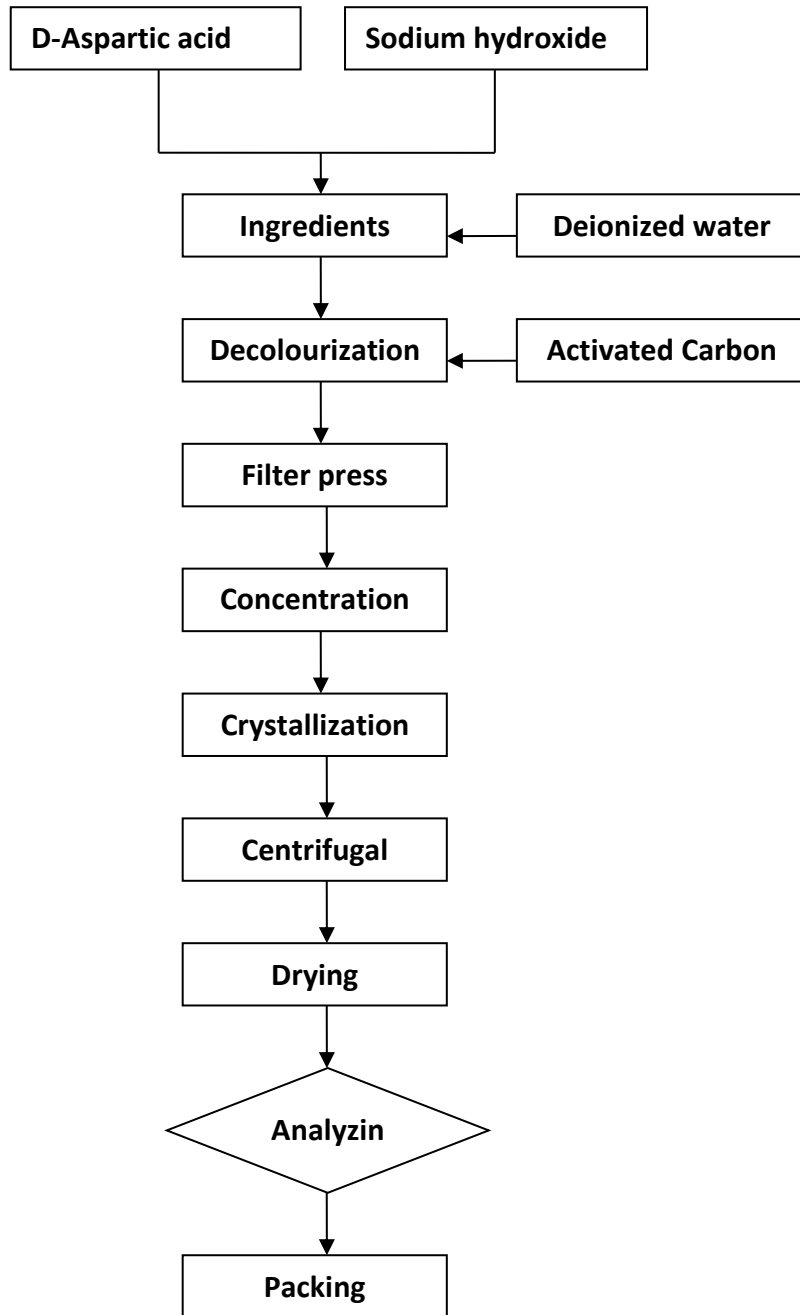
Version: 2

Page 4 of 12



FDA number: 16806073982

Product Flow Chart



Product Code: P19225

Version: 2

Page 5 of 12



FDA number: 16806073982

MATERIAL SAFETY DATA SHEET

Section 1 Identification of the Substance/Mixture and of the Company/Undertaking

Product name: Sodium D-Aspartic Acid
CCL Product Code: P19225
Company: Cambridge Commodities Limited
Lancaster Way, Ely, Cambridgeshire, CB6 3NX
Tel: 01353 667258. Email: qa@c-c-l.com

Section 2 Hazards Identification

2.1 Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008. This substance is not classified as dangerous according to Directive 67/548/EEC.

2.2 Label elements

The product does not need to be labelled in accordance with EC directives or respective national laws.

2.3 Other hazards - none

Section 3 Composition/Information on Ingredients

3.1 Substances

Synonyms: Sodium D-aspartate (R)-2-Aminobutanedioic acidsodium salt
Formula: $C_4H_6NNaO_4 \cdot H_2O$
Molecular Weight: 173.11 g/mol

Section 4 Emergency and First Aid Measures

4.1 Description of first aid measures

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact

Wash off with soap and plenty of water.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water.

Product Code: P19225

Version: 2

Page 6 of 12



FDA number: 16806073982

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

Section 5 Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

No data available

5.3 Advice for firefighters

Wear self-contained breathing apparatus for fire-fighting if necessary.

5.4 Further information

No data available

Section 6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing vapours, mist or gas. For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

Section 7 Handling and Storage

7.1 Precautions for safe handling

Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Moisture sensitive. Hygroscopic.

Product Code: P19225

Version: 2

Page 7 of 12



FDA number: 16806073982

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

Section 8 Exposure Controls/Personal Protection

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls

General industrial hygiene practice.

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

Product Code: P19225

Version: 2

Page 8 of 12



FDA number: 16806073982

Section 9 Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

- | | |
|---|-------------------------------|
| a) Appearance | Form: powder
Colour: white |
| b) Odour | no data available |
| c) Odour Threshold | no data available |
| d) pH | 6.0-7.5 |
| e) Melting point/freezing point | Melting point/range: 140 °C |
| f) Initial boiling point and boiling range | no data available |
| g) Flash point | no data available |
| h) Evaporation rate | no data available |
| i) Flammability (solid, gas) | no data available |
| j) Upper/lower flammability or explosive limits | no data available |
| k) Vapour pressure | no data available |
| l) Vapour density | no data available |
| m) Relative density | no data available |
| n) Water solubility | no data available |
| o) Partition coefficient: n-octanol/water | no data available |
| p) Auto-ignition temperature | no data available |
| q) Decomposition temperature | 140-142 °C |
| r) Viscosity | no data available |
| s) Explosive properties | no data available |
| t) Oxidizing properties | no data available |

9.2 Other safety information

No data available

Section 10 Stability and Reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

Product Code: P19225

Version: 2

Page 9 of 12



FDA number: 16806073982

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Other decomposition products - no data available

In the event of fire: see section 5

Section 11 Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Product Code: P19225

Version: 2

Page 10 of 12



FDA number: 16806073982

Additional Information RTECS

Not available

Section 12 Ecological Information

12.1 Toxicity

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

No data available

Section 13 Disposal Considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

Section 14 Transport Information

14.1 UN number

ADR/RID: - IMDG: - IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

Product Code: P19225

Version: 2

Page 11 of 12



FDA number: 16806073982

14.4 Packaging group

ADR/RID: - IMDG: - IATA: -

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user

No data available

Section 15 Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

No data available

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

Section 16 Other Information

This advice is given by Cambridge Commodities Ltd who accepts no legal liability for it. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.

Individuals working with chemicals should consider all chemicals to be potentially hazardous even if their individual hazards may be uncharacterised or unknown.

This Information provided in this document is subject to change and the batch specific Certificate of Analysis should always be referenced.

To be used as per local legislation.

Change History

Version	Change	Customer Notification required Yes / No
1	First Issue	N/A
2	Added compliance statements	No

Document Approval

Originator Job Title	Quality Specialist	Approver Job Title	Quality Manager
<u>Casey White</u> Casey White (Jan 29, 2018)		<u>P Barnhill</u> P Barnhill (Jan 29, 2018)	

Product Code: P19225

Version: 2

Page 12 of 12



FDA number: 16806073982



P19225 - Sodium D-Aspartic Acid - Technical Dossier

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