

**PRODUCT TECHNICAL DOSSIER**

**SERINE (L-)**

**Product Code:**

P1910

**Raw Material Full Name:**

Serine (L-)

**Vegan / Vegetarian Status:**

Suitable for both

**Limit/Range/Specification:**

98.5~101.5%

**Means of Identification:**

Infrared Absorption

**CAS Number:**

56-45-1

**EC/EINECS Number:**

206-130-6

**Molecular Formula for the raw material:**

C<sub>3</sub>H<sub>7</sub>NO<sub>3</sub>

**Average Molecular weight:**

105.09

**Specific Rotation:**

+13.6° - +15.6°

**Solubility in Water:**

Soluble

**Other Amino Acids:**

Max 0.30%

**Organic Volatile Impurities:**

Meet the Requirement



**Solubility in Alcohol:**

Insoluble

**Particle Size:**

More than 60% pass 60 mesh

More than 90% pass 20 mesh

**Bulk Density:**

0.6~0.9g/ml

**Tapped Density:**

0.8~1.1g/ml

**Base Source/Start Material:**

Glucose

**Origin of Product – Synthetic, Plant, Mineral, Animal, Fish or Fermented:**

Fermented

**Loss on Drying:**

≤0.30%

**Residue on Ignition:**

≤0.10%

**Country of Origin:**

China

**Country of Origin of the Manufacture:**

China

**Shelf Life from Date of Manufacture:**

Min 2 Years

**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.

**Appearance (Fine/Crystals/Crystalline/Hygroscopic):**

Crystals or crystalline powder

**Colour:**

White to off white



**Flavour/Taste:**

Characteristic

**Odour:**

Characteristic

**Texture:**

Crystalline Fine

**Microbiological Test**

**Total Viable Count:**

Max 1,000cfu/g

**Yeast & Moulds:**

Max 1,00cfu/g

**E. coli:**

<10cfu/g

**Salmonella:**

Negative/25g

**Heavy Metals**

**Lead (Pb):**

Max 3ppm

**Cadmium (Cd):**

Max 1ppm

**Mercury (Hg):**

Max 0.1ppm

**Arsenic (As):**

Max 1ppm

**Pharmacopeia Standard Used:**

USP28

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



Please note that surveillance testing may mean that not all the parameters stated on this specification are tested for every batch.

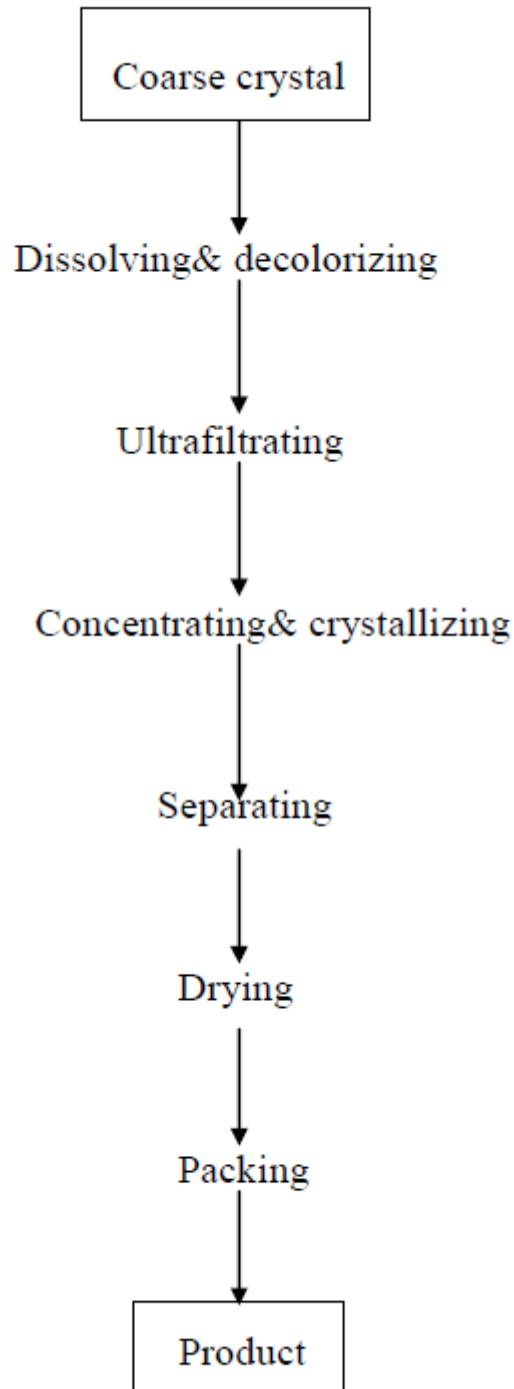
ALLERGENS	Product Contains YES/NO	Listed Item on Site at Manufacturer YES/NO	If YES, Please Comment
Peanuts and Peanut Derivatives (including possible cross contamination)	No	No	
Other Nut and Nut Derivatives <i>Almond (Amygdalus communis L.), Hazelnut (Corylus avellana), Walnut (Juglans regia), Cashew (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	
Other Seeds and Seed Derivatives (Poppy Seeds, Cotton Seeds, Sunflower Seeds)	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	Product Contains YES/NO	Listed Item on Site at Manufacturer YES/NO	If YES, Please Comment
Additives	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	
Dioxins	No	No	
MSG (Added and Naturally Occurring E621) or Glutamates (E620 to E625)	No	No	
Nucleotides (E627, E630, E631, E635)	No	No	
Polyols (sugar alcohols)	No	No	
Benzoates (E210 / E219)	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	



**PRODUCTION FLOW CHART**



**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.

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.

**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 regulations 1829/2003/EC and 1830/2003/EC.

**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 1999/3/EC.

**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.

**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.

**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 regulation 86/609/EEC.

**CONFIRMATION OF PESTICIDES STATUS**

This is to certify that the above-mentioned product complies with the regulation (EC) No.396/2005 of 23rd February 2005 and commission Regulation (EU) No. 559/2011 of 7th June 2011 amending annexes II and III of the above Regulation.

**CONFIRMATION OF NANOPARTICLE STATUS**

This is to certify that unless otherwise stated, the above-mentioned product is free of nanoparticles. Commission Recommendation 2011/696/EU, 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".



The 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

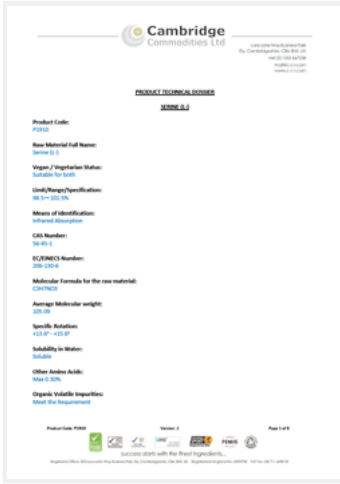
Version	Change	Customer Notification required Yes / No
1	First Issue,	N/A
2	Chloride, sulphate, iron and total heavy metals specifications removed. MSDS removed, now available on request. Flow chart updated. Format updated. Lead (Pb): Max 3ppm, Cadmium (Cd): Max 1ppm, Mercury (Hg):Max 0.1ppm specifications added. Yeast and moulds specification added and E.coli specification updated from negative to <10cfu/g. Particle size updated. Bulk and tapped density updated.	Yes.

### Document Approval

Originator Job Title	QC Technician	Approver Job Title	Assistant Quality Manager
<i>Emma Dane</i> Emma Dane (Nov 6, 2017)		<i>Richard Cecil</i>	













# P1910- Serine (L)- Technical Dossier

Adobe Sign Document History

11/09/2017

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