

PRODUCT TECHNICAL DOSSIER

MAGNESIUM OROTATE

Product Code:

P13048

Raw Material Full Name:

Magnesium Orotate

This material is Food Grade:

Yes

Vegan / Vegetarian Status:

Suitable for Both

Limit/Range/Specification:

7% - 8% (as Mg)

Molecular Formula for the raw material:

Mg (C₅H₃N₂O₄)₂

Particle Size/Percentage passed through:

20 Mesh: 90% - 100%

60 Mesh: 20% - 100%

140 Mesh: 0% - 90%

Tapped Density:

0.5g/cc - 1g/cc

pH:

7 - 9

Loss on Drying:

Max 6%

Country of Origin:

China & USA

Country of Origin of the Manufacture:

China & USA

Base Source/Start Material:

Magnesium Salt Orotic Acid

Product Code: P13048

Version: 2

Page 1 of 10



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Material is:

100%

Compound Ingredients Origin, Function and Percentages:

None

Shelf Life from Date of Manufacture:

Min 2 Years

Storage Conditions:

Store in a cool dry place.

Appearance (Fine/Crystals/Crystalline/Hygroscopic):

Crystalline Powder

Colour:

White/Off White

Flavour/Taste:

Characteristic

Odour:

Characteristic

Microbiological Test

Total Viable Count:

Max 3,000cfu/g

Yeast & Moulds:

Max 100cfu/g

E.Coli:

Negative/10g

Salmonella:

Negative/25g

Coliforms:

Max 100cfu/g

Staphylococcus aureus:

Negative/10g



Heavy Metals

Lead (Pb):
Max 3ppm

Cadmium (Cd):
Max 1ppm

Mercury (Hg):
Max 0.1ppm

Arsenic (As):
Max 1ppm

Pharmacopeia Standard Used:
CP

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 Free From YES/NO	Listed Item on Site at Manufacturer YES/NO	If YES, Please Comment
Free from Peanuts and Peanut Derivatives (including possible cross contamination)	YES	NO	
Free from 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>	YES	NO	
Free from Sesame Seeds and Sesame Seed Derivatives	YES	NO	
Free from other Seeds and Seed Derivatives (Poppy Seeds, Cotton Seeds, Sunflower Seeds)	YES	NO	
Free from Milk and Milk Derivatives (including lactose)	YES	NO	
Free from Egg and Egg Derivatives	YES	NO	
Free from Cereals and Derivatives containing OR POTENTIALLY CONTAMINATED WITH Gluten (<i>wheat, wheatgrass, fero, freekeh, spelt, kamut, rye, oats, barley, barley grass</i>)	YES	NO	
Free from Soya and Soya Derivatives	YES	NO	
Free from Lupin and Lupin Derivatives	YES	NO	
Free from Mustard and Mustard Derivatives	YES	NO	
Free from Celery or Celery Derivatives (including Celeriac)	YES	NO	
Free from Fish and Fish Derivatives	YES	NO	
Free from Molluscs and their Derivatives	YES	NO	
Free from Crustaceans and their Derivatives	YES	NO	
Free from Sulphur Dioxide and Sulphites (E220, E228) at levels > 10mg/kg or 10mg/litre	YES	NO	

Product Code: P13048

Version: 2

Page 3 of 10

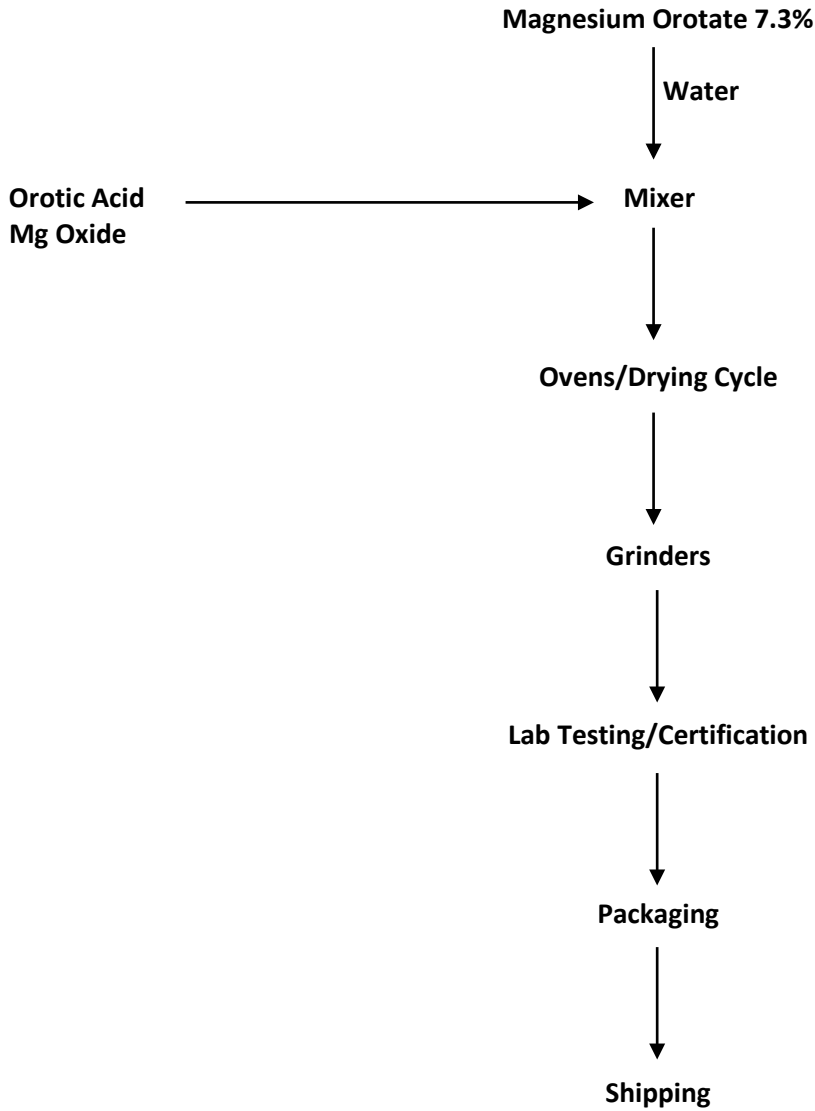


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ADDITIVES / CONTAMINANTS / DIETARY REQUIREMENTS	Product Free From YES/NO	Listed Item on Site at Manufacturer YES/NO	If YES, Please Comment
Free from Additives	YES	NO	
Free from Antioxidants	YES	NO	
Free from Ethylene Oxide	YES	NO	
Free from Gelatine	YES	NO	
Free from Flavourings (Artificial / Nature Identical / Natural / Smoked)	YES	NO	
Free from Maize / Corn and any Derivatives	YES	NO	
Free from Legumes / Pulses	YES	NO	
Free from Rice and Rice Derivatives	YES	NO	
Free from Added Salt	YES	NO	
Free from Added Sugar / artificial or natural sweeteners	YES	NO	
Free from Aspartame	YES	NO	
Free from BHA / BHT (E320 / E321)	YES	NO	
Free from Caffeine	YES	NO	
Free from Colours (Artificial / Nature Identical / Natural / Smoked)	YES	NO	
Free from Dextrose	YES	NO	
Free from Dioxins	YES	NO	
Free from MSG (Added and Naturally Occurring E621) or Glutamates (E620 to E625)	YES	NO	
Free from Nucleotides (E627, E630, E631, E635)	YES	NO	
Free from Polyols (sugar alcohols)	YES	NO	
Free from Benzoates (E210 / E219)	YES	NO	
Free from Sorbic Acid (E200, E203)	YES	NO	
Free from any other Preservatives	YES	NO	
Free from Ethanol	YES	NO	
Free from Honey	YES	NO	
Free from Lactose	YES	NO	
Free from Yeast and Yeast Derivatives	YES	NO	
Free from All Animal Products (Beef, Pork, Poultry or other) and Derivatives (which may include growth/yield hormones, antibiotics etc.)	YES	NO	
Free from Bovine Products or Derivatives (which may include growth/yield hormones, antibiotics etc.)	YES	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".



MATERIAL SAFETY DATA SHEET

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

Product name: Magnesium Orotate
 Chemical formula: Mg (C₅H₃N₂O₄)₂
 Company: Cambridge Commodities Limited
 Lancaster Way, Ely, Cambridgeshire, CB6 3NX
 Tel: 01353 667258. Email: qa@c-c-l.com

Section 2 Hazards Identification

May be harmful by inhalation, ingestion or skin absorption. May cause irritation.

Section 3 Composition/Information on Ingredients

Components	% in Product	Chemical Formula
Magnesium salts & Orotic Acid	100	Mg (C ₅ H ₃ N ₂ O ₄) ₂

Section 4 Emergency and First Aid Measures

Eyes: If symptoms develop, immediately move individual away from exposure and into fresh air. Rinse with plenty of water for at least 15 minutes while holding eyelids apart. Seek medical attention if irritation persists.

Skin: Remove contaminated clothing. Wash with soap and copious amounts of water.

Swallowing: Wash out mouth and drink water if conscious. Never give anything by mouth to an unconscious person. Seek medical attention if irritation persists.

Inhalation: Remove to fresh air. If breathing is difficult, administer oxygen.

Section 5 Fire-fighting measures

Fire and Explosion Hazards: Emits toxic fumes under fire conditions. Organic dusts can form explosive mixtures in the air.

Extinguishing Media: Foam, water spray, carbon dioxide, dry chemical powder.

Fire Fighting Instructions: Wear a self-contained breathing apparatus with a full-face piece operated in the positive pressure demand mode. Use chemical resistant personal protective equipment.

Section 6 Accidental Release Measures

Procedures of personal precaution: Wear respirator, chemical safety goggles, rubber boots and heavy rubber gloves.

Cleaning up Methods: Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 Handling and Storage

Handling: Avoid creating dust. Avoid contact with eyes, skin and clothing, avoid prolonged or repeated exposure.

Storage: Keep containers tightly closed in a cool and dry place for quality reasons. Protect from humidity and light.

Section 8 Exposure Controls/Personal Protection

Engineering Measures: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below level of overexposure.

Respiratory Protection: Avoid inhalation. 3M Dust respirator No. 8710 or 9900 is recommended, or a NIOSH/MSHA jointly approved dust respirator.

Hand/Body Protection: Avoid contact and prolonged or repeated exposure. Wear resistant gloves. Wash thoroughly after handling. Protective clothing recommended.

Eye Protection: Wear safety glasses in compliance with OSHA regulations.

Section 9 Physical and Chemical Properties

Physical state: Crystalline Powder

Colour: White/Off White

Odour: Characteristic

Sieve Analysis: 20 Mesh: 90% - 100%, 60 Mesh: 20% - 100%, 140 Mesh: 0% - 90%

Section 10 Stability and Reactivity

Chemical Stability: Stable under conditions mentioned in section 7. May decompose when exposed to light.

Hazardous Polymerisation: Product will not undergo hazardous polymerisation.

Incompatibility: Strong oxidising agents.

Hazardous Decomposition Products: May form Carbon Dioxide, Carbon Monoxide and Nitrogen oxides.



Section 11 Toxicological Information

**Toxicity Data: LD50 (IVN–RAT): 500mg/kg, LD50 (ORAL–MUS): 10g/kg, LD50 (IVN–MUS): 282mg/kg,
LD50 (IPR–MUS): 85mg/kg**

Carcinogenicity NTP: NO, IARC: NO, ZLIST: NO

See Registry of Toxic Effects of Chemical Substances (RTECS) for complete information.

Skin Contact: Causes Skin Irritation

Skin Absorption: May be harmful if absorbed through skin

Eye Contact: Causes Eye irritation

Inhalation: May be harmful in inhaled, Material is irritation to mucous membranes and upper respiratory tract.

Ingestion: Harmful if swallowed in large amounts

Other Information: This product is not believed to be hazardous when consumed in normal amounts as part of a diet or dietary supplement.

Section 12 Ecological Information

Eco-toxicity: No Data Available

Air pollution: Observe local/national regulations

Section 13 Disposal Considerations

Waste from residues: Dispose of in accordance with all applicable local and national regulations.

Section 14 Transport Information

Transport classification: Not classified as dangerous for any mode of UK or International transport.

Section 15 Regulatory Information

**European Regulation: Irritant R 36/37/38, May be irritating to respiratory system and skin S 22/24/28/37,
May be irritating to eyes S 25/26/36.**

**Reviews, Standards and Regulations: Health & Safety at work act 1974, COSHH Regulations (1994), EH40
Occupational exposure limits.**



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 pH specification. Updated shelf life from 2 years to minimum 2 years after date of manufacture. Added production flowchart. Updated Format.	No

Document Approval

Originator Job Title	QC Technician	Approver Job Title	Quality Specialist
<i>Ash Bean</i> Ash Bean (Jul 19, 2016)		<i>Nanci-Marie Smith</i> Nanci-Marie Smith (Jul 19, 2016)	











P13048-Magnesium Orotate-Technical Dossier

Adobe Sign Document History

07/19/2016

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By:	Ash Bean (ash.bean@c-c-l.com)
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