



גדות תעשיות ביוכימיה בע"מ  
Gadot Biochemical Industries Ltd.

# Tri Magnesium Citrate

## Nonahydrate

U.S.P./EP

### Description:

A highly bioavailable source of Magnesium for food fortification.

### General Characteristics:

<b>Formula:</b>	$Mg_3(C_6H_5O_7)_2 \cdot 9H_2O$
<b>Molecular weight:</b>	613.3
<b>Appearance:</b>	White crystalline powder
<b>Odor:</b>	Practically odorless
<b>Solubility:</b>	Slightly soluble in water
<b>CAS Number:</b>	153531-96-5
<b>EINECS No.:</b>	222-093-9

### Standard Specifications:

Gadot's Tri Magnesium Citrate Nonahydrate meets the standards of the United States Pharmacopoeia and the European Pharmacopoeia.

Identification	Meets USP/ EP Tests
Loss on drying ( 180 C ,5 Hrs)	25.0 – 27.5%
Assay as Mg (dry basis)	15.0 – 16.5%
Assay Mg (as is)	10.5 – 12.3%
Heavy metals (as Pb)	5 ppm max.
Arsenic (as As)	0.5 ppm max.
pH (5% solution w/v)	5 - 8.5
Lead	0.5 ppm max.
Chlorides	500 ppm max.
Sulphate	0.2% max.
Calcium	0.2% max.
Iron	100 ppm max.
Mercury	0.1 ppm max.
Cadmium	0.5 ppm max.
Oxalate	100 ppm max.



## גדות תעשיות ביוכימיה בע"מ Gadot Biochemical Industries Ltd.

### Organic Volatile Impurities

Gadot's Tri Magnesium Citrate Nonaahydrate contains no tridodecylamin nor any polynuclear hydrocarbons or volatile organic impurities. These compounds are not used in the manufacturing process of the above product and if tested they will comply with the required specified limits of U.S.P and E.P.

<u>Impurities</u>	<u>Limit</u>
Benzene	2 PPM
Carbon tetrachloride	4 PPM
1,2 - Dichloroethane	5 PPM
1,1 – Dichloroethene	8 PPM
Chloroform	60 PPM
1,4 - Dioxane	380 PPM
Ethylen Oxide	10 PPM
Methylen Chloride	600 PPM
Tri Chloroethylene	80 PPM

### Nutritional Values:

<u>Nutrient</u>		<u>Nutrient quantity</u>
Protein	-	none
Carbohydrates	-	none
Fat	-	None
Vitamin A	-	None
Vitamin C	-	None
Thiamin	-	None
Riboflavin	-	None
Niacin	-	None
Magnesium	-	10.5% – 12.3%
Vitamin D	-	None
Vitamin B-6	-	None
Vitamin B-12	-	None
Heavy metals	-	5 ppm max.
Lead	-	0.5 ppm max.
Fluoride	-	30 ppm max.
Caloric Value	-	152 Kcal/100 gr.
Artificial colors	-	product does not contain artificial color

### Allergens:

Gadot's Tri Magnesium Citrate doesn't contain any food allergens according to annex 3a of EU directive 2003/89.



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### Standard Granulation:

**Regular:** d (90)  $\geq$  180 microns  
d (50)  $\geq$  88 microns

**M-5:** d(50) less than 7 microns.

Particle size distribution is analyzed by laser diffraction after ultrasonic treatment of sample.

### Other requirements:

Foreign Bodies: In compliance with the FDA/ORA compliance policy guide section 555.425.

### BSE/TSE

No raw materials from bovine origin are used nor are any bovine constituents present in the product.

### Hormones and Antibiotics

No antibiotics or hormones are present in the product.

### Mycotoxines:

Total Aflatoxines	- less than 4	ppb
Aflatoxins B1	- less than 2	ppb
Aflatoxins M1	- less than 0.05	ppb

### Pesticides and Insecticides:

Complies with United States and European food health regulations.

### GMO - Status:

The product is a non GMO product and is free from any recombinant DNA technology involvement.



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### **Irradiation / Radioactivity:**

Gadot's Tri Magnesium Citrate Nonahydrate was never subjected to any kind of ionized irradiation and contains no radioactivity not even in minor amounts.

### **Microbiological Specification:**

Total viable count	-	500 CFU/gr. max.
Yeast	-	10 CFU/gr. max
Molds	-	10 CFU/gr. max.
E. Coli	-	Absent in 10 gr.
Staphylococcus Aureus	-	Absent in 10 gr.
Pseudomonas Aeruginosa	-	Absent in 10 gr.
Salmonella	-	Absent in 25 gr.
Coliforms	-	10 CFU/gr. max.
Listeria Monocytogenes	-	Absent in 25 gr.

### **Main Uses:**

- Food fortification..
- Dietary supplements.
- Skin care products.
- Plant nutrition.
- Not for use in the preparation of injectable solutions.

### **Packaging:**

25 kg. or 50 lb. polyethylene-lined multi-wall paper bags, palletized and stretch-wrapped. Big bags and other packaging available on request.

All packaging materials used are suitable for food applications according to FDA and EU regulations.

### **Expiry Date:**

Tri Magnesium Citrate Nonahydrate has a shelf life of two years from production date. The production date is printed on the bags.

### **Kosher / Halal:**

Tri Magnesium Citrate Nonahydrate produced by Gadot is strictly Kosher and Halal. Certificates are available upon request.



## גדות תעשיות ביוכימיה בע"מ Gadot Biochemical Industries Ltd.

### Vegetarians / Vegans:

Tri Magnesium Citrate Nonahydrate produced by Gadot is suitable for consumption by vegetarians and vegans.

### ISO 9000:

Gadot is ISO-9001 : 2008 certified.

### HACCP:

Gadot Biochemical Industries Ltd. Food Safety Management System - HACCP comply with:

1. CODEX ALIMENTARIUS – Annex to CRC/RCP – 1969 Rev.3 (1997).
2. Health Ministry Guide for HACCP, March 2002 Edition.

### GMP:

Gadot Biochemical Industries is GMP certified.

Gadot manufacture its Tri Magnesium Citrate under strict supervision and full compliance with all GMP rules, and therefore permitted to label it's product with official GMP symbol as laid down in the public health regulations.

### Storage Recommendations:

Store in a cool and dry place.

Updated: July 16, 2016