

## 1 Identification

- **Product identifier**
- **Trade name:** Calcium Deficient Diet, Rat
- **Article number:** 960177
- **Application of the substance / the mixture** For Research Use Only
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
MP Biomedicals, LLC  
29525 Fountain Parkway  
Solon, OH 44139  
United States  
www.mpbio.com
- **Information department:** Quality Control Department
- **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
The product is not classified according to the Globally Harmonized System (GHS).
- **Label elements**
- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

## 3 Composition/information on ingredients

- **Description:** Mixture: consisting of the following components.

· **Dangerous components:**

CAS: 9005-25-8	Corn Starch	10-50%
EINECS: 232-679-6		
RTECS: GM5090000		

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CAS: 9004-34-6 EINECS: 232-674-9 RTECS: FJ5691460	Alphacel	2.5-10%
CAS: 57-50-1 EINECS: 200-334-9 RTECS: WN6500000	Sucrose	1-2.5%

## 4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Flush eyes with running water as a precaution.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.  
For personal protection see section 8.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:** Pick up mechanically.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· <b>PAC-1:</b>		
7778-77-0	Potassium Phosphate Monobasic Anhydrous	9.6 mg/m <sup>3</sup>
6100-05-6	Potassium citrate monohydrate	30 mg/m <sup>3</sup>
7778-80-5	potassium sulphate	20 mg/m <sup>3</sup>
1309-48-4	magnesium oxide	30 mg/m <sup>3</sup>
598-62-9	Manganese Carbonate	6.3 mg/m <sup>3</sup>
3486-35-9	Zinc Carbonate	12 mg/m <sup>3</sup>

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7788-99-0	Chromium Potassium Sulfate Dodecahydrate	14 mg/m <sup>3</sup>
12069-69-1	Cupric Carbonate	5.2 mg/m <sup>3</sup>
7758-05-6	potassium iodate	0.45 mg/m <sup>3</sup>
10102-18-8	Sodium Selenite	1.3 mg/m <sup>3</sup>

**· PAC-2:**

7778-77-0	Potassium Phosphate Monobasic Anhydrous	110 mg/m <sup>3</sup>
6100-05-6	Potassium citrate monohydrate	330 mg/m <sup>3</sup>
7778-80-5	potassium sulphate	220 mg/m <sup>3</sup>
1309-48-4	magnesium oxide	120 mg/m <sup>3</sup>
598-62-9	Manganese Carbonate	10 mg/m <sup>3</sup>
3486-35-9	Zinc Carbonate	130 mg/m <sup>3</sup>
7788-99-0	Chromium Potassium Sulfate Dodecahydrate	160 mg/m <sup>3</sup>
12069-69-1	Cupric Carbonate	45 mg/m <sup>3</sup>
7758-05-6	potassium iodate	4.9 mg/m <sup>3</sup>
10102-18-8	Sodium Selenite	2.3 mg/m <sup>3</sup>

**· PAC-3:**

7778-77-0	Potassium Phosphate Monobasic Anhydrous	630 mg/m <sup>3</sup>
6100-05-6	Potassium citrate monohydrate	2,000 mg/m <sup>3</sup>
7778-80-5	potassium sulphate	1,300 mg/m <sup>3</sup>
1309-48-4	magnesium oxide	730 mg/m <sup>3</sup>
598-62-9	Manganese Carbonate	60 mg/m <sup>3</sup>
3486-35-9	Zinc Carbonate	750 mg/m <sup>3</sup>
7788-99-0	Chromium Potassium Sulfate Dodecahydrate	950 mg/m <sup>3</sup>
12069-69-1	Cupric Carbonate	270 mg/m <sup>3</sup>
7758-05-6	potassium iodate	29 mg/m <sup>3</sup>
10102-18-8	Sodium Selenite	3.1 mg/m <sup>3</sup>

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** No special requirements.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** 2-8°C
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Further information about storage conditions:**
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see Section 7.

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- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

**9005-25-8 Corn Starch**

PEL Long-term value: 15\* 5\*\* mg/m<sup>3</sup>  
\*total dust \*\*respirable fraction

REL Long-term value: 10\* 5\*\* mg/m<sup>3</sup>  
\*total dust \*\*respirable fraction

TLV Long-term value: 10 mg/m<sup>3</sup>

**9004-34-6 Alphacel**

PEL Long-term value: 15\* 5\*\* mg/m<sup>3</sup>  
\*total dust \*\*respirable fraction

REL Long-term value: 10\* 5\*\* mg/m<sup>3</sup>  
\*total dust \*\*respirable fraction

TLV Long-term value: 10 mg/m<sup>3</sup>

**57-50-1 Sucrose**

PEL Long-term value: 15\* 5\*\* mg/m<sup>3</sup>  
\*total dust \*\*respirable fraction

REL Long-term value: 10\* 5\*\* mg/m<sup>3</sup>  
\*total dust \*\*respirable fraction

TLV Long-term value: 10 mg/m<sup>3</sup>

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

- **Breathing equipment:** Not required.

- **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:** Not required.

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

**Form:** Pellets

**Color:** According to product specification

· **Odor:** Indeterminate

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· <b>Odor threshold:</b>	Not determined.
· <b>pH-value:</b>	Not applicable.
· <b>Change in condition</b> <b>Boiling point/Boiling range:</b>	Undetermined.
· <b>Flash point:</b>	Not applicable.
· <b>Flammability (solid, gaseous):</b>	Not determined.
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	See section 10
· <b>Explosion limits:</b> <b>Lower:</b> <b>Upper:</b>	Not Applicable Not Applicable
· <b>Vapor pressure:</b>	Not applicable.
· <b>Density:</b> · <b>Relative density</b> · <b>Vapor density</b> · <b>Evaporation rate</b>	Not Applicable Not determined. Not applicable. Not applicable.
· <b>Solubility in / Miscibility with</b> · <b>Water:</b>	Not Determined Not determined.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b> <b>Dynamic:</b> <b>Kinematic:</b>	Not applicable. Not applicable.
· <b>Solvent content:</b> <b>VOC content:</b>	0.00 % 0.0 g/l / 0.00 lb/gl
· <b>Other information</b>	No further relevant information available.

### 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **on the skin:** No irritant effect.

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- **on the eye:** Irritant and potentially harmful
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product is not subject to classification according to internally approved calculation methods for preparations:  
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

10102-18-8	Sodium Selenite	3
11032-49-8	Vitamin K2	3

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Can not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Discard must be made according to official regulations.

## 14 Transport information

- **UN-Number**
- **DOT, ADR, IMDG, IATA** Not regulated

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· <b>UN proper shipping name</b> · <b>DOT, ADR, IMDG, IATA</b>	Not regulated
· <b>Transport hazard class(es)</b> · <b>DOT, ADR, IMDG, IATA</b> · <b>Class</b>	Not regulated
· <b>Packing group</b> · <b>DOT, ADR, IMDG, IATA</b>	Not regulated
· <b>Environmental hazards:</b>	Not applicable.
· <b>Special precautions for user</b>	Not applicable.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>UN "Model Regulation":</b>	Not regulated

## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

· **Section 355 (extremely hazardous substances):**

10102-18-8	Sodium Selenite
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· **Section 313 (Specific toxic chemical listings):**

598-62-9	Manganese Carbonate
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3486-35-9	Zinc Carbonate
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12069-69-1	Cupric Carbonate
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10102-18-8	Sodium Selenite
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· **TSCA (Toxic Substances Control Act):**

50-99-7	D-(+)-Dextrose, Anhydrous
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9000-71-9	Casein
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9005-25-8	Corn Starch
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9004-34-6	Alphacel
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8001-30-7	Corn Oil
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57-50-1	Sucrose
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7778-77-0	Potassium Phosphate Monobasic Anhydrous
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7558-80-7	Sodium Phosphate Monobasic
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59-51-8	DL-methionine
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7647-14-5	Sodium Chloride
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87-67-2	Choline Bitartrate
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7778-80-5	potassium sulphate
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1309-48-4	magnesium oxide
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7695-91-2	DL-alpha-Tocopherol Acetate
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598-62-9	Manganese Carbonate
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3486-35-9	Zinc Carbonate
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58-27-5	Menadione
59-67-6	nicotinic acid
137-08-6	D-Pantothenic Acid Calcium Salt
79-81-2	Retinyl palmitate
12069-69-1	Cupric Carbonate
58-56-0	Pyridoxine Hydrochloride
83-88-5	riboflavin
67-03-8	Thiamine Hydrochloride
67-97-0	colecalfiferol
59-30-3	Folic Acid
7758-05-6	potassium iodate
10102-18-8	Sodium Selenite
58-85-5	D-Biotin
68-19-9	Vitamin B12

- TSCA new (21st Century Act) (Substances not listed)
- Proposition 65

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

598-62-9	Manganese Carbonate	D
10102-18-8	Sodium Selenite	D

· **TLV (Threshold Limit Value established by ACGIH)**

9005-25-8	Corn Starch	A4
57-50-1	Sucrose	A4
1309-48-4	magnesium oxide	A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements** Void

· **Hazard pictograms** Void

· **Signal word** Void

· **Hazard statements** Void

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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- **Department issuing SDS:** Quality Control Dept.
- **Date of preparation / last revision** 05/04/2018 / -
- **Abbreviations and acronyms:**

*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*

*IMDG: International Maritime Code for Dangerous Goods*

*DOT: US Department of Transportation*

*IATA: International Air Transport Association*

*ACGIH: American Conference of Governmental Industrial Hygienists*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*ELINCS: European List of Notified Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*NFPA: National Fire Protection Association (USA)*

*HMIS: Hazardous Materials Identification System (USA)*

*VOC: Volatile Organic Compounds (USA, EU)*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*NIOSH: National Institute for Occupational Safety*

*OSHA: Occupational Safety & Health*

*TLV: Threshold Limit Value*

*PEL: Permissible Exposure Limit*

*REL: Recommended Exposure Limit*

US