

## 1 Identification

- **Product identifier**
- **Trade name:** Choline Control Diet, Modified
- **Article number:** 960414
- **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

- **Chemical characterization:** Mixtures
- **Description:**  
Mixture of substances listed below with nonhazardous additions.  
Mixture: consisting of the following components.

- **Dangerous components:**

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

Alphacel

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≥2.5-&lt;10%

## 4 First-aid measures

- **Description of first aid measures**

- **General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

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**

- **PAC-1:**

7778-77-0	Potassium Phosphate Monobasic Anhydrous	9.6 mg/m <sup>3</sup>
471-34-1	Calcium Carbonate	45 mg/m <sup>3</sup>
12167-74-7	Calcium Phosphate Tribasic	120 mg/m <sup>3</sup>
10034-99-8	Magnesium Sulfate Heptahydrate	33 mg/m <sup>3</sup>
10045-86-0	Ferric Phosphate	8.1 mg/m <sup>3</sup>
7631-86-9	silicon dioxide, chemically prepared	18 mg/m <sup>3</sup>

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150-13-0	<i>p</i> -Aminobenzoic Acid	15 mg/m <sup>3</sup>
7681-49-4	Sodium Fluoride	17 mg/m <sup>3</sup>
7758-99-8	Cupric Sulfate Pentahydrate	12 mg/m <sup>3</sup>
7784-24-9	Aluminum Potassium Sulfate Dodecahydrate	110 mg/m <sup>3</sup>
7681-11-0	Potassium Iodide	1.3 mg/m <sup>3</sup>
7788-99-0	Chromium Potassium Sulfate Dodecahydrate	14 mg/m <sup>3</sup>
10034-96-5	Manganese Sulfate Monohydrate	9.2 mg/m <sup>3</sup>
10102-18-8	Sodium Selenite	1.3 mg/m <sup>3</sup>
7646-85-7	Zinc Chloride	2 mg/m <sup>3</sup>

**· PAC-2:**

7778-77-0	Potassium Phosphate Monobasic Anhydrous	110 mg/m <sup>3</sup>
471-34-1	Calcium Carbonate	210 mg/m <sup>3</sup>
12167-74-7	Calcium Phosphate Tribasic	1,300 mg/m <sup>3</sup>
10034-99-8	Magnesium Sulfate Heptahydrate	370 mg/m <sup>3</sup>
10045-86-0	Ferric Phosphate	89 mg/m <sup>3</sup>
7631-86-9	silicon dioxide, chemically prepared	740 mg/m <sup>3</sup>
150-13-0	<i>p</i> -Aminobenzoic Acid	69 mg/m <sup>3</sup>
7681-49-4	Sodium Fluoride	90 mg/m <sup>3</sup>
7758-99-8	Cupric Sulfate Pentahydrate	32 mg/m <sup>3</sup>
7784-24-9	Aluminum Potassium Sulfate Dodecahydrate	1,200 mg/m <sup>3</sup>
7681-11-0	Potassium Iodide	15 mg/m <sup>3</sup>
7788-99-0	Chromium Potassium Sulfate Dodecahydrate	160 mg/m <sup>3</sup>
10034-96-5	Manganese Sulfate Monohydrate	15 mg/m <sup>3</sup>
10102-18-8	Sodium Selenite	2.3 mg/m <sup>3</sup>
7646-85-7	Zinc Chloride	800 mg/m <sup>3</sup>

**· PAC-3:**

7778-77-0	Potassium Phosphate Monobasic Anhydrous	630 mg/m <sup>3</sup>
471-34-1	Calcium Carbonate	1,300 mg/m <sup>3</sup>
12167-74-7	Calcium Phosphate Tribasic	7,900 mg/m <sup>3</sup>
10034-99-8	Magnesium Sulfate Heptahydrate	2,300 mg/m <sup>3</sup>
10045-86-0	Ferric Phosphate	530 mg/m <sup>3</sup>
7631-86-9	silicon dioxide, chemically prepared	4,500 mg/m <sup>3</sup>
150-13-0	<i>p</i> -Aminobenzoic Acid	410 mg/m <sup>3</sup>
7681-49-4	Sodium Fluoride	1,100 mg/m <sup>3</sup>
7758-99-8	Cupric Sulfate Pentahydrate	190 mg/m <sup>3</sup>
7784-24-9	Aluminum Potassium Sulfate Dodecahydrate	6,900 mg/m <sup>3</sup>
7681-11-0	Potassium Iodide	87 mg/m <sup>3</sup>
7788-99-0	Chromium Potassium Sulfate Dodecahydrate	950 mg/m <sup>3</sup>
10034-96-5	Manganese Sulfate Monohydrate	90 mg/m <sup>3</sup>
10102-18-8	Sodium Selenite	3.1 mg/m <sup>3</sup>
7646-85-7	Zinc Chloride	4,800 mg/m <sup>3</sup>

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### 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.*
- **Control parameters**

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

#### 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>

#### 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>

- **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.*

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· **Eye protection:** *Not required.*

## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**· **General Information**· **Appearance:**

<b>Form:</b>	<i>Pellets</i>
<b>Color:</b>	<i>According to product specification</i>
<b>Odor:</b>	<i>Characteristic</i>
<b>Odor threshold:</b>	<i>Not determined.</i>

· **pH-value:** *Not applicable.*· **Change in condition**· **Boiling point/Boiling range:** *Undetermined.*· **Flash point:** *Not applicable.*· **Flammability (solid, gaseous):** *Not determined.*· **Decomposition temperature:** *Not determined.*· **Auto igniting:** *Product is not selfigniting.*· **Danger of explosion:** *See section 10*· **Explosion limits:**

<b>Lower:</b>	<i>Not Applicable</i>
<b>Upper:</b>	<i>Not Applicable</i>

· **Vapor pressure:** *Not applicable.*

<b>Density:</b>	<i>Not Applicable</i>
<b>Relative density</b>	<i>Not determined.</i>
<b>Vapor density</b>	<i>Not applicable.</i>
<b>Evaporation rate</b>	<i>Not applicable.</i>

· **Solubility in / Miscibility with** *Not Determined*· **Water:** *Not determined.*· **Partition coefficient (n-octanol/water):** *Not determined.*· **Viscosity:**

<b>Dynamic:</b>	<i>Not applicable.</i>
<b>Kinematic:</b>	<i>Not applicable.</i>

· **Solvent content:**

<b>VOC content:</b>	<i>0.00 %</i>
	<i>0.0 g/l / 0.00 lb/gl</i>

· **Solids content:** *100.0 %*· **Other information** *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.*

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- **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.
- **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)**

7631-86-9	silicon dioxide, chemically prepared	3
150-13-0	p-Aminobenzoic Acid	3
7681-49-4	Sodium Fluoride	3
10102-18-8	Sodium Selenite	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 2 (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

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## 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

· <b>UN-Number</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	Not regulated
· <b>UN proper shipping name</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	Not regulated
· <b>Transport hazard class(es)</b>	
· <b>DOT, ADR, ADN, 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

· <b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b>	
· <b>Sara</b>	
· <b>Section 355 (extremely hazardous substances):</b>	
50-14-6	ergocalciferol
10102-18-8	Sodium Selenite
· <b>Section 313 (Specific toxic chemical listings):</b>	
10034-96-5	Manganese Sulfate Monohydrate
10102-18-8	Sodium Selenite
7646-85-7	Zinc Chloride
· <b>TSCA (Toxic Substances Control Act):</b>	
57-50-1	Sucrose
9000-71-9	Casein
9004-34-6	Alphacel
7778-77-0	Potassium Phosphate Monobasic Anhydrous
471-34-1	Calcium Carbonate

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7447-40-7	Potassium Chloride
67-48-1	choline chloride
7647-14-5	Sodium Chloride
50-81-7	L-Ascorbic Acid
9005-25-8	Corn Starch
10045-86-0	Ferric Phosphate
7695-91-2	DL-alpha-Tocopherol Acetate
7631-86-9	silicon dioxide, chemically prepared
87-89-8	D-myo-Inositol, cell culture reagent
150-13-0	p-Aminobenzoic Acid
59-67-6	nicotinic acid
137-08-6	D-Pantothenic Acid Calcium Salt
58-27-5	Menadione
127-47-9	Vitamin A Acetate
68-19-9	Vitamin B12
83-88-5	riboflavin
58-56-0	Pyridoxine Hydrochloride
67-03-8	Thiamine Hydrochloride
7681-49-4	Sodium Fluoride
59-30-3	Folic Acid
50-14-6	ergocalciferol
9000-01-5	Gum Arabic
7681-11-0	Potassium Iodide
58-85-5	D-Biotin
10102-18-8	Sodium Selenite

**· 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)**

10034-96-5	Manganese Sulfate Monohydrate	D
10102-18-8	Sodium Selenite	D
7646-85-7	Zinc Chloride	D, I, II

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

57-50-1	Sucrose	A4
9005-25-8	Corn Starch	A4

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7681-49-4 Sodium Fluoride

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.*

- **Department issuing SDS:** Quality Control Dept.
- **Date of preparation / last revision** 07/12/2018 / -
- **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