1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name: Rabbit Smooth Muscle Cell Growth Medium without FBS

Product Number: Rb311F-500

REACH No.: A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company: Cell Applications, Inc.
5820 Oberlin Dr. #101
San Diego, CA 92121
USA

Telephone: 858-453-0848
Fax: 858-453-2862

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Not a hazardous substance or mixture.

2.2 GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

No ingredients are hazardous according to OSHA criteria.
No components need to be disclosed according to the applicable regulations.

4. FIRST AID MEASURES

4.1 Description of first aid measures

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact
Wash off with soap and plenty of water.

In case of eye contact
Flush eyes with water as a precaution.
If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

5. FIREFIGHTING MEASURES
5.1 Extinguishing media
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides, nitrogen oxides (NOx), Sulphur oxides, Hydrogen chloride gas, Sodium oxides, Calcium oxide, silicon oxides

5.3 Advice for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information
No data available

6. ACCIDENTAL RELEASE MEASURES
6.1 Personal precautions, protective equipment and emergency procedures
Avoid breathing vapours, mist or gas.
For personal protection see section 8.

6.2 Environmental precautions
No special environmental precautions required.

6.3 Methods and materials for containment and cleaning up
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE
7.1 Precautions for safe handling
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place.

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
8.1 Control parameters
Components with workplace control parameters
Contains no substances with occupational exposure limit values.
8.2 Exposure controls

Appropriate engineering controls
General industrial hygiene practice.

Personal protective equipment

Eye/face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection
Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
No special environmental precautions required.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance          Form: liquid
b) Odour                no data available
c) Odour Threshold      no data available
d) pH                   no data available
e) Melting point/freezing point
f) Initial boiling point and boiling range
   no data available
g) Flash point          no data available
h) Evaporation rate     no data available
i) Flammability (solid, gas)
   no data available
j) Upper/lower flammability or explosive limits
   no data available
k) Vapour pressure      no data available
l) Vapour density       no data available
m) Relative density     no data available
n) Water solubility     no data available
9.2 Other safety information
no data available

10. STABILITY AND REACTIVITY
10.1 Reactivity
no data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
no data available

10.4 Conditions to avoid
no data available

10.5 Incompatible materials
Strong oxidizing agents

10.6 Hazardous decomposition products
Other decomposition products - no data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION
11.1 Information on toxicological effects

Acute toxicity
no data available

Dermal: no data available

Skin corrosion/irritation

Serious eye damage/eye irritation

Respiratory or skin sensitisation

Germ cell mutagenicity

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is
identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
Specific target organ toxicity - single exposure
Specific target organ toxicity - repeated exposure
Aspiration hazard

Additional Information
RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Liver - Irregularities - Based on Human Evidence (Ethanolamine)
Liver - Irregularities - Based on Human Evidence
Stomach - Irregularities - Based on Human Evidence
Stomach - Irregularities - Based on Human Evidence (Manganese Sulfate Monohydrate)
Stomach - Irregularities - Based on Human Evidence (Zinc sulfate heptahydrate)
Stomach - Irregularities - Based on Human Evidence (Ammonium trioxovanadate)
Stomach - Irregularities - Based on Human Evidence (Amphotericin B methyl ester)
Stomach - Irregularities - Based on Human Evidence (Nickel(II) chloride hexahydrate)
Stomach - Irregularities - Based on Human Evidence (Heparin)

12. ECOLOGICAL INFORMATION
12.1 Toxicity
12.2 Persistence and degradability
12.3 Bioaccumulative potential
12.4 Mobility in soil
12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
12.6 Other adverse effects

13. DISPOSAL CONSIDERATIONS
13.1 Waste treatment methods
Product
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods

15. REGULATORY INFORMATION
REACH No. : A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

**SARA 302 Components**
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**
No SARA Hazards

**Massachusetts Right To Know Components**
No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know Components**

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td></td>
</tr>
<tr>
<td>Sodium monohydrogen phosphate, heptahydrate</td>
<td>7782-85-6</td>
<td>2007-03-01</td>
</tr>
</tbody>
</table>

**New Jersey Right To Know Components**

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td></td>
</tr>
</tbody>
</table>

**California Prop. 65 Components**

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>WARNING! This product contains a chemical known to the State of California to cause cancer.</td>
<td>7791-20-0</td>
<td>2004-05-07</td>
</tr>
<tr>
<td>Nickel(II) chloride hexahydrate</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. Streptomycin sulphate</td>
<td>3810-74-0</td>
<td>2007-09-28</td>
</tr>
</tbody>
</table>

**Japan Components**

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molybdic Acid 4H2O (Ammonium)</td>
<td>12054-85-2</td>
<td></td>
</tr>
<tr>
<td>Copper (II) Sulfate / Cupric(II) Sulfate</td>
<td>7758-99-8</td>
<td></td>
</tr>
<tr>
<td>Ferrous Sulfate 7H2O</td>
<td>7782-63-0</td>
<td></td>
</tr>
<tr>
<td>Manganese (II) Sulfate H2O</td>
<td>10034-96-5</td>
<td></td>
</tr>
<tr>
<td>Nickel Chloride 6H2O</td>
<td>7791-20-0</td>
<td></td>
</tr>
<tr>
<td>Sodium Selenite</td>
<td>10102-18-8</td>
<td></td>
</tr>
<tr>
<td>Zinc Sulfate 7H2O</td>
<td>7733-02-0</td>
<td></td>
</tr>
<tr>
<td>Ammonium Metavanadate</td>
<td>7803-55-6</td>
<td></td>
</tr>
</tbody>
</table>

**16. OTHER INFORMATION**

**HMIS Rating**

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health hazard:</td>
<td>0</td>
</tr>
<tr>
<td>Chronic Health Hazard:</td>
<td></td>
</tr>
<tr>
<td>Flammability:</td>
<td>0</td>
</tr>
<tr>
<td>Physical Hazard:</td>
<td>0</td>
</tr>
</tbody>
</table>
NFPA Rating
Health hazard: 0
Fire Hazard: 0
Reactivity Hazard: 0

Further information
For research use only. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. All materials and mixtures may present unknown hazards and should be used with caution. Cell Applications, Inc. and its Affiliates shall not be held liable for any damage or loss from handling or from contact with the above products. The material in this MSDS does not constitute a warranty, express or implied, including any implied warranty.