SAFETY DATA SHEET

Vitrification Thaw Kit (Vit Kit - Thaw), Thawing Solution-TS

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Vitrification Thaw Kit (Vit Kit - Thaw), Thawing Solution-TS
Product code: 90137, 90134
Recommended use: Laboratory chemicals.

Manufactured by:
FUJIFILM Irvine Scientific, Inc.
2511 Daimler Street
Santa Ana, CA 92705
U.S.A.

SDSs are available at the following website(s):
http://www.irvinesci.com

Company Phone Number:
Technical: 800-437-5706
Fax: 949-261-6522

Emergency Telephone:
Transport-CHEMTREC Inside NA: 800-424-9300
Transport-CHEMTREC Outside NA: 703-527-3887
Transport-CANUTEC Inside Canada: 613-996-6666
Medical Emergency (24 hour): 877-935-7987

E-mail: tmrequest@irvinesci.com

2. HAZARDS IDENTIFICATION

Classification:
Not a dangerous substance or mixture according to the Globally Harmonised System (GHS)

GHS Label elements, including precautionary statements:
Not classified
Precautionary Statements

Prevention
Not applicable

Response
Not applicable

Storage
Not applicable

Disposal
Not applicable

Hazards not otherwise classified (HNOC)
Not classified

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disaccharide</td>
<td>Proprietary</td>
<td>15-40%</td>
</tr>
</tbody>
</table>

*The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

First aid measures for different exposure routes

General advice
Immediate medical attention is not required.

Eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin contact
Wash off immediately with plenty of water. Get medical attention if irritation develops and persists.

Inhalation
Move to fresh air. If symptoms persist, call a doctor.

Ingestion
If swallowed, do not induce vomiting - seek medical advice.

Most important symptoms/effects, acute and delayed
None known.

Indication of immediate medical attention and special treatment needed, if necessary
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Dry chemical, CO₂, water spray or alcohol-resistant foam.

Unsuitable Extinguishing Media
None known.

**Specific hazards arising from the chemical**

None known.

**Hazardous Combustion Products**
Carbon oxides.

**Explosion Data**

Sensitivity to Mechanical Impact  none
Sensitivity to Static Discharge  none

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

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### 6. ACCIDENTAL RELEASE MEASURES

#### Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid contact with the skin and the eyes.

#### Environmental precautions

Prevent product from entering drains.

#### Methods and materials for containment and cleaning up

- **Methods for Containment**: Prevent further leakage or spillage if safe to do so.
- **Methods for cleaning up**: Use personal protective equipment. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers. Clean contaminated surface thoroughly. After cleaning, flush away traces with water.

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### 7. HANDLING AND STORAGE

#### Precautions for safe handling

Wear personal protective equipment. Avoid contact with skin, eyes or clothing. Avoid breathing vapours or mists. Ensure adequate ventilation.

#### Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Keep at temperatures between 2 and 8 °C (35 and 46 °F).

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### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control parameters

**Exposure Guidelines**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
<th>AIHA - Workplace Environmental Exposure Levels (WEELs) - TWAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disaccharide</td>
<td>TWA: 10 mg/m³</td>
<td>TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable</td>
<td>TWA: 10 mg/m³ total dust</td>
<td></td>
</tr>
</tbody>
</table>

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Exposure controls

Engineering Measures  Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection  If splashes are likely to occur, wear safety glasses with side-shields.

Skin and body protection  Wear protective gloves/clothing.

Respiratory protection  None required under normal usage. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

General Hygiene Considerations  When using do not eat, drink or smoke. Take off contaminated clothing and wash it before reuse. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>7.1 - 7.4</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting point / melting range</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td>Not available</td>
</tr>
<tr>
<td>Odour</td>
<td>Characteristic</td>
</tr>
<tr>
<td>Physical state @20°C</td>
<td>Liquid</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>Not available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>Not available</td>
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<tr>
<td>Boiling point / boiling range</td>
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</tr>
<tr>
<td>Freezing Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Oxidising Properties</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not available</td>
</tr>
<tr>
<td>VOC (lb/gal)</td>
<td>Not available</td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>Not available</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>Not available</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapour Pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Density</td>
<td>Not available</td>
</tr>
<tr>
<td>VOC (g/l)</td>
<td>Not available</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Reactivity

Stable under recommended storage conditions.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to Avoid

Freezing. Protect from light.
Incompatible Materials


Hazardous Decomposition Products

None known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Acute toxicity
- Inhalation: Non-irritating during normal use.
- Eyes: Non-irritating during normal use.
- Skin: Non-irritating during normal use.
- Ingestion: Ingestion may cause stomach discomfort.

Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>LC50 (lethal concentration)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disaccharide</td>
<td>= 29700 mg/kg ( Rat )</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Information on toxicological effects

No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

- Irritation: Non-irritating during normal use.
- Corrosivity: No information available.
- Sensitisation: No information available.
- Mutagenic Effects: No information available.
- Reproductive Toxicity: No information available.
- Carcinogenicity: None known.

STOT - single exposure: No information available.

STOT - repeated exposure: No information available.

Target Organ Effects: None known.

Aspiration hazard: No information available.

Numerical measures of toxicity - Product Information

- ATEmix (oral) >5000 mg/kg

ATE: Acute toxicity estimate

12. ECOLOGICAL INFORMATION

Ecotoxicity
The environmental impact of this product has not been fully investigated.

**Persistence and degradability**

No information available.

**Bioaccumulation**

No information available.

**Mobility**

No information available.

**Other adverse effects**

No information available.

### 13. DISPOSAL CONSIDERATIONS

**Waste disposal methods**

Dispose of in accordance with local regulations.

**Contaminated packaging**

Do not re-use empty containers.

### 14. TRANSPORT INFORMATION

**DOT**

Not regulated

**TDG**

Not regulated.

**MEX**

Not regulated

**ICAO**

Not regulated

**IATA**

Not regulated

**IMDG**

Not regulated

**ADR/RID**

Not regulated

**ADN**

Not regulated

### 15. REGULATORY INFORMATION

**International Inventories**

**TSCA**

No
Vitrification Thaw Kit (Vit Kit - Thaw), Thawing Solution-TS

<table>
<thead>
<tr>
<th></th>
<th>DSL/NDSL</th>
<th>PICCS</th>
<th>EINECS/ELINCS</th>
<th>ENCS</th>
<th>IECSC</th>
<th>KECL</th>
<th>AICS</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

*Yes - All component(s) of this product are included or are exempt from listing on the inventory.*

*No - Indicates the component(s) of this product are either not listed or have not been determined to be listed on the inventory.*

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
**ENCS** - Japan Existing and New Chemical Substances
**IECSC** - China Inventory of Existing Chemical Substances
**KECL** - Korean Existing and Evaluated Chemical Substances
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances
**AICS** - Australian Inventory of Chemical Substances

**Federal Regulations**

**TSCA Sections 4, 5 and 12(b)**
This product does not contain any chemicals regulated by TSCA Sections 4, 5 or 12(b).

**SARA 313**
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazard Categories**
Classification is shown in section 2 of this SDS

**Clean Water Act**
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CERCLA**
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**State Regulations**

**California Proposition 65**
This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disaccharide</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
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</tbody>
</table>

**International Regulations**
Canada - NDSL

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>NDSL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium salt compound</td>
<td>X</td>
</tr>
<tr>
<td>Amino acid</td>
<td>X</td>
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</tbody>
</table>

Mexico - Grade
No information available

Mexico - Carcinogen Status and Exposure Limits

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Carcinogen Status</th>
<th>Exposure Limits</th>
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</thead>
<tbody>
<tr>
<td>Disaccharide</td>
<td></td>
<td>Mexico: TWA 10 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mexico: STEL 20 mg/m³</td>
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</table>

Other Regulations
No information available

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health hazard</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical and chemical hazards</th>
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</thead>
<tbody>
<tr>
<td></td>
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<td>0</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health hazard</th>
<th>Flammability</th>
<th>Physical Hazard</th>
<th>Personal protection</th>
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<tbody>
<tr>
<td></td>
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<td>1</td>
<td>0</td>
<td>B</td>
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</tbody>
</table>

Prepared By    FUJIFILM Environment, Health and Safety, phone: 800-473-3854
Revision Date  22-May-2019
Revision Note  No information available
Disclaimer      The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

end