## Material Safety Data Sheet

### Product Number:

<table>
<thead>
<tr>
<th>Product Number</th>
<th>Product Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSK-0125-XuL</td>
<td>CFDA-AM Yeast Vitality Stain Kit</td>
</tr>
</tbody>
</table>

### Composition:

<table>
<thead>
<tr>
<th>CS1-0125</th>
<th>CFDA-AM Yeast Vitality Stain</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS0-0113</td>
<td>Phosphate Buffer Solution</td>
</tr>
</tbody>
</table>

If you have any further questions about this Material Safety Data Sheet, please contact us.

Nexcelom Bioscience | 360 Merrimack Street, Bldg 9 | Lawrence, MA 01843
T: 978.327.5340 | F: 978.327.5341 | E: info@nexcelom.com | www.nexcelom.com
8001672 Rev. C
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Section 1: Chemical Product and Company Identification

Product Number: CS1-0125
Product Name: Via Stain, CFDA-AM Yeast Vitality Stain
Supplier: Nexcelom Bioscience, LLC.
360 Merrimack St.
Lawrence, MA 01843

Section 2: Hazard Identification

a. Emergency Overview
   i. Caution—The toxicological properties of this material have not been thoroughly investigated. May be harmful if swallowed, inhaled or absorbed through skin. May cause eye and skin irritation. Handle with caution

b. HMIS Classification
   i. Health hazard: 0
   ii. Chronic Health Hazard: *
   iii. Flammability: 2
   iv. Physical hazards: 0

c. NFPA Rating
   i. Health hazard: 0
   ii. Fire: 2
   iii. Reactivity Hazard: 0

d. Potential Health Effects
   i. Inhalation May be harmful if inhaled.
   ii. Skin May cause skin irritation.
   iii. Eyes May cause eye irritation.
   iv. Ingestion May be harmful if swallowed.

e. Precautionary statement(s)
   i. P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
   ii. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
   iii. P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
   i. P403 + P235 Store in a well-ventilated place. Keep cool.
   ii. P501 Dispose of contents/ container to an approved waste disposal plant.

Section 3: Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-CFDA, AM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>124412-00-6</td>
<td>N/A</td>
<td></td>
<td>&gt;= 0.1 - &lt;= 10 %</td>
</tr>
<tr>
<td>Dimethyl sulfoxide</td>
<td>67-68-5</td>
<td>200-664-3</td>
<td>&gt;= 90 - &lt;= 99.9 %</td>
</tr>
</tbody>
</table>
**Section 4: First Aid Measures**

| If Inhaled: | If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician. |
| In Case of Skin Contact: | Wash off with soap and plenty of water for 15 minutes. Consult a physician. |
| In Case of Eye Contact: | Rinse thoroughly with plenty of water for at least 15 minutes. Consult a physician. |
| If Swallowed: | Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician. |

**Section 5: Fire Fighting Measures**

| Flammable Properties: | Flash point – no data available |
| Ignition temperature – no data available |
| Suitable Extinguishing Media: | For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water. |
| Special Protective Equipment for Fire-Fighters: | Wear self-contained breathing apparatus for fire-fighting if necessary. |
| Special hazards arising from the substance or mixture | Carbon oxides, Sulphur oxides |

**Section 6: Accidental Release Measures**

| Personal Precautions: | Avoid breathing vapours, mist or gas. Remove all sources of ignition. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. |
| Environmental Precautions: | Prevent further leakage or spillage if safe to do so. Do not let product enter drains. |
| Methods and Materials for Containment and Cleaning Up: | Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations. Keep in suitable, closed containers for disposal. |

**Section 7: Handling and Storage**

| Precautions for Safe Handling: | Avoid ingestion and inhalation of vapour or mist. Do not breathe dust. Avoid contact with skin, eyes and clothing. Avoid prolonged or repeated exposure. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. |
**Section 8: Exposure Controls and Personal Protection**

<table>
<thead>
<tr>
<th>Components</th>
<th>Cas-No.</th>
<th>Value</th>
<th>Control Parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide</td>
<td>67-68-5</td>
<td>TWA</td>
<td>250 ppm</td>
<td>USA, Workplace Environmental Exposure Levels</td>
</tr>
</tbody>
</table>

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Eye Protection: Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

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

Hygiene Measures: Wear compatible chemical-resistant gloves to prevent skin exposure.

**Engineering Controls**

Use adequate ventilation to keep airborne concentrations low. Safety shower and eye bath. Wash hands before breaks and at the end of workday.

**Section 9: Physical and Chemical Properties**

- **Appearance**
  - Form: Liquid
  - Color: None

- **Safety Data**
  - pH: No data available
  - Melting Point: Melting point/range: 16 - 19 °C (61 - 66 °F)
  - Boiling Point: 189 °C (372 °F)
  - Flash Point: 87 °C (189 °F) - closed cup
  - Evaporation: No data available
  - Rate
  - Flammability (solid, gas): No data available
  - Auto Ignition: No data available
  - Temperature:
    - Lower Explosion Limit: Upper explosion limit: 42 % (V)
    - Upper Explosion Limit: Lower explosion limit: 3.5 % (V)
  - Water Solubility: completely miscible
  - Vapour pressure: 0.55 hPa (0.41 mmHg) at 20 °C (68 °F)
  - Vapour density: 2.70 - (Air = 1.0)
  - Relative vapour density: 2.70 - (Air = 1.0)
  - Relative density: 1.1 g/mL
  - Partition coefficient: log Pow: -2.03

**Water**
Decomposition Temperature: No data available
Viscosity: No data available
Explosive properties: No data available
Oxidizing properties: No data available

Section 10: Stability and Reactivity
Storage Stability: Stable under recommended storage conditions.
Conditions to Avoid: Heat, flames and sparks
Materials to Avoid: Avoid moisture, strong bases, strong oxidizing agents, acid chlorides, phosphorus halides, strong acids, and strong reducing agents.
Hazardous Decomposition Products: No decomposition if used according to specifications

Section 11: Toxicological Information
Acute Toxicity: LD50 Oral – rat – 14,500 mg/kg
LD50 Inhalation – rat – 4 h – 40250 ppm
LD50 Dermal – rabbit – > 5,000mg/kg
Skin Corrosion/Irritation: No data available
Serious Eye Damage/Irritation: No data available
Respiratory or Skin Sensitization: No data available
Germ Cell Mutagenicity: Mouse lymphocyte Cytogenetic analysis
Rat Cytogenetic analysis
Mouse DNA damage
Chronic Exposure: Carcinogenicity - rat - Oral
Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Skin and Appendages: Other; Tumors.
Carcinogenicity - mouse - Oral
Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Leukaemia Skin and Appendages: Other; Tumors.
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 probable, possible, or confirmed human carcinogen by ACGIH.
NTP: 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 NTP.
OSHA: 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 OSHA.
Reproductive Toxicity: Reproductive toxicity - rat - Intraperitoneal
Effects on Fertility: Abortion.
Reproductive toxicity - rat - Intraperitoneal
Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).
Reproductive toxicity - rat - Subcutaneouseffects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).
Effects on Fertility: Litter size (e.g.; # fetuses per litter; measured before birth).
Reproductive toxicity - mouse - Oral
Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea). Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Musculoskeletal system.
Developmental Toxicity - mouse - Intraperitoneal
Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Musculoskeletal system.

Specific Target Organ Toxicity – Single Exposure:
No data available
Specific Target Organ Toxicity – Repeated Exposure:
No data available
Aspiration Hazard:
No data available

Additional Information:
RETECS: PV6210000
Effects due to ingestion may include: Nausea, Fatigue, Headache
Eyes – Eye disease – Based on Human Evidence

Section 12: Ecological Information
Toxicity:
LC50 - Pimephales promelas (fathead minnow) - 34,000 mg/l - 96 h
LC50 - Oncorhynchus mykiss (rainbow trout) - 35,000 mg/l - 96 h
EC50 - Daphnia pulex (Water flea) - 27,500 mg/l
Persistence and Degradability:
No data available
Bioaccumulative Potential:
No data available
Mobility in Soil:
No data available
PBT and vPvB Assessment:
No data available
Other Adverse Affects:
Do not allow product to reach ground water or water course

Section 13: Disposable Considerations
Product:
Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber.
Contaminated Packaging:
Dispose of as unused product.
Section 14: Transport Information

Proper shipping name: Combustible liquid, n.o.s. (Dimethyl sulfoxide)
Marine pollutant: No
Poison Inhalation Hazard: No
IMDG: Not dangerous goods
IATA: Not dangerous goods

Section 15: Regulatory Information

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: Acute Health Hazard, Chronic Health Hazard
Massachusetts Right to Know Components: No components are subject to the Massachusetts Right to Know Act.
Pennsylvania Right to Know Components: Dimethyl sulfoxide
CAS-No. 67-68-5
Revision Date: 2007-03-01
New Jersey Right to Know Components: Dimethyl sulfoxide
CAS-No. 67-68-5
Revision Date: 2007-03-01
California Prop. 65 Components: This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Section 16: Other Information

Copyright 2015 Nexelom Bioscience License to make unlimited paper copies for internal 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. Nexelom Bioscience, shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packaging slip for additional terms and conditions of sale.

Date Revised: 30 Nov 2015

END OF MSDS
Section 1: Chemical Product and Company Identification

**Product Number:** CS0-0113  
**Product Name:** Phosphate Buffered Saline (PBS)  
**Supplier:** Nexcelom Bioscience, LLC.  
360 Merrimack St.  
Lawrence, MA 01843

Section 2: Hazard Identification

a. Emergency Overview
   iv. OSHA Hazards
   v. Irritant, Mutagen

b. HMIS Classification
   vi. Health hazard: 1  
   vii. Chronic Health Hazard: *
   viii. Flammability: 0
   ix. Physical hazards: 0

c. NFPA Rating
   x. Health hazard: 1  
   xi. Fire: 0  
   xii. Reactivity Hazard: 0

Section 3: Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Chloride</td>
<td>7647-14-5</td>
<td></td>
<td>&gt;= 0.1 - &lt;= 30 %</td>
</tr>
<tr>
<td>Di-Sodium Hydrogen Phosphate Anhydrous</td>
<td>7558-79-4</td>
<td></td>
<td>&gt;= 0.1 - &lt;= 30 %</td>
</tr>
<tr>
<td>Potassium Phosphate, Monobasic</td>
<td>7778-77-0</td>
<td></td>
<td>&gt;= 0.1 - &lt;= 30 %</td>
</tr>
<tr>
<td>Potassium Chloride</td>
<td>231-211-8</td>
<td></td>
<td>&gt;= 0.1 - &lt;= 30 %</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5 231-791-2</td>
<td></td>
<td>&gt;= 70 - &lt;= 99.9 %</td>
</tr>
</tbody>
</table>

Section 4: First Aid Measures

**General Advice:** Consult a physician. Show this safety data sheet to the doctor in attendance.
**If Inhaled:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
**In Case of Skin Contact:** Wash off with soap and plenty of water. Consult a physician.
**If Swallowed:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Section 5: Fire Fighting Measures

<table>
<thead>
<tr>
<th>Flammable Properties:</th>
<th>Flash point – no data available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ignition temperature</td>
<td>no data available</td>
</tr>
<tr>
<td>Suitable Extinguishing Media:</td>
<td>Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.</td>
</tr>
<tr>
<td>Special Protective Equipment for Fire-Fighters:</td>
<td>Wear self-contained breathing apparatus for fire-fighting if necessary.</td>
</tr>
</tbody>
</table>

Section 6: Accidental Release Measures

| Personal Precautions: | Use personal protective equipment. Avoid dust formation. Avoid breathing dust. |
| Environmental Precautions: | Ensure adequate ventilation. |
| Methods and Materials for Containment and Cleaning Up: | Do not let product enter drains. Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal. |

Section 7: Handling and Storage

| Precautions for Safe Handling: | Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. |
| Conditions for Safe Storage: | Keep container tightly closed in a dry and well-ventilated Pace. |

Section 8: Exposure Controls and Personal Protection

Contains no substances with occupational exposure limit values.

| Respiratory Protection: | Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). |
| Hand Protection: | Handle with gloves. |
| Eye Protection: | Safety glasses with side-shields conforming to EN166. |
| Skin and Body Protection: | Choose body protection according to the amount and concentration of the dangerous substance at the work place. |
| Hygiene Measures: | Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday. |

Section 9: Physical and Chemical Properties

| Appearance | Liquid |
| Form: | Clear |
| Color: | Clear |
| Safety Data | |
| pH: | 7.4 |
| Melting Point: | No data available |
| Boiling Point: | No data available |
Flash Point: No data available
Ignition: No data available
Temperature: No data available
Lower Explosion Limit: No data available
Upper Explosion Limit: No data available
Water Solubility: No data available

**Section 10: Stability and Reactivity**

- **Storage Stability:** Stable under recommended storage conditions.
- **Conditions to Avoid:** No data available
- **Materials to Avoid:** Strong oxidizing agents, Strong acids
- **Hazardous Decomposition Products:** Other decomposition products - no data available

**Section 11: Toxicological Information**

- **Acute Toxicity:** No data available
- **Skin Corrosion/Irritation:** No data available
- **Serious Eye Damage/Irritation:** No data available
- **Respiratory or Skin Sensitization:** No data available
- **Germ Cell Mutagenicity:** No data available
- **Chronic Exposure:**
  - 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:** No data available
- **Specific Target Organ Toxicity – Single Exposure:** No data available
- **Specific Target Organ Toxicity – repeated Exposure:** No data available
- **Aspiration Hazard:** No data available
Section 12: Ecological Information

Toxicity: No data available
Persistence and Degradability: No data available
Bioaccumulative potential: No data available
Mobility in Soil: No data available
PBT and vPvB Assessment: No data available
Other Adverse Effects: No data available

Section 13: Disposable Considerations

Product: Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.
Contaminated Packaging: Dispose of as unused product.

Section 14: Transport Information

DOT (US): Not dangerous goods
IMDG: Not dangerous goods
IATA: Not dangerous goods

Section 15: Regulatory Information

OSHA Hazards: Irritant

DSL Status: All components of this product are on the Canadian DSL list.
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: Chronic Health Hazard
Massachusetts Right to Know Components: Disodium hydrogenorthophosphate
CAS-No. 7558-79-4
Revision Date: 2007-03-01

Pennsylvania Right to Know Components: Sodium chloride
CAS-No. 7647-14-5
Disodium hydrogenorthophosphate
CAS-No. 7558-79-4
Revision Date: 2007-03-01

New Jersey Right to Know Components: Sodium chloride
CAS-No. 7647-14-5
Disodium hydrogenorthophosphate
CAS-No. 7558-79-4
Revision Date: 2007-03-01
Potassium chloride
California Prop. 65 Components:

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Section 16: Other Information

Copyright 2015 Nexcelom Bioscience License to make unlimited paper copies for internal 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. Nexcelom Bioscience, shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packaging slip for additional terms and conditions of sale.

Date Revised: 30 Nov 2015

END OF MSDS