SECTION 1: IDENTIFICATION

1.1. Product Identifier
Product Name: Tris Wash Buffer (10x)
Product Code: R61TX

1.2. Intended Use of the Product
Laboratory chemicals

1.3. Name, Address, and Telephone of the Responsible Party
Company
Meso Scale Diagnostics
1601 Research Blvd
Rockville, MD 20850-3128
T 240-314-2600

1.4. Emergency Telephone Number
Emergency Number: Within the U.S. and Canada (24 hours, toll-free)
CHEMTREC: 1-800-424-9300

International (Hours of operation: Monday – Friday, 1230 – 2130 UTC or 0830 – 1730 ET)
MSD direct dial: +1-240-314-2799

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture
GHS-US classification
Skin Irrit. 2  H315
Eye Irrit. 2A  H319
Full text of H-phrases: see section 16

2.2. Label Elements
GHS-US Labeling
Hazard Pictograms (GHS-US) : 

Signal Word (GHS-US) : Warning

Hazard Statements (GHS-US) : H315 - Causes skin irritation.
H319 - Causes serious eye irritation.

Precautionary Statements (GHS-US) : P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P280 - Wear protective gloves, protective clothing, and eye protection.
P302+P352 - If on skin: Wash with plenty of water.
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 - Specific treatment (see section 4 on this SDS).
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.

2.3. Other Hazards
Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US)
No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances
Not applicable
3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>% (w/w)</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride</td>
<td>(CAS No) 1185-53-1</td>
<td>3.17 - 8.81</td>
<td>Comb. Dust</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Irrit. 2, H315</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Irrit. 2A, H319</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STOT SE 3, H335</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Obtain medical attention if irritation persists.

Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

General: Causes skin irritation. Causes serious eye irritation.

Inhalation: Prolonged exposure may cause irritation.

Skin Contact: Redness, pain, swelling, itching, burning, dryness, and dermatitis.

Eye Contact: Contact causes severe irritation with redness and swelling of the conjunctiva.

Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: None known.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Water spray, dry chemical, foam, carbon dioxide.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Product is not flammable.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.


Other Information: Do not allow run-off from fire fighting to enter drains or water courses.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not breathe vapor, mist or spray. Do not get in eyes, on skin, or on clothing.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).


6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.
Tris Wash Buffer (10x)

Safety Data Sheet

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Avoid the formation of mists in the atmosphere. This material may present a combustible dust hazard in its dried form.

Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid breathing vapors, mist, spray. Do not get in eyes, on skin, or on clothing.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.


7.3. Specific End Use(s)

Laboratory chemicals

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

8.2. Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.


Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear protective gloves.

Eye Protection: Chemical safety goggles.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Not available</td>
</tr>
</tbody>
</table>
Tris Wash Buffer (10x)
Safety Data Sheet
According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor</td>
<td>Not available</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available</td>
</tr>
<tr>
<td>Lower Flammable Limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Upper Flammable Limit</td>
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</tr>
<tr>
<td>Vapor Pressure</td>
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</tr>
<tr>
<td>Relative Vapor Density at 20 °C</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative Density</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Not available</td>
</tr>
<tr>
<td>Partition Coefficient: N-Octanol/Water</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
<tr>
<td>Explosion Data – Sensitivity to Mechanical Impact</td>
<td>Not expected to present an explosion hazard due to mechanical impact.</td>
</tr>
<tr>
<td>Explosion Data – Sensitivity to Static Discharge</td>
<td>Not expected to present an explosion hazard due to static discharge.</td>
</tr>
</tbody>
</table>

SECTION 10: STABILITY AND REACTIVITY
10.1. Reactivity: Hazardous reactions will not occur under normal conditions.
10.2. Chemical Stability: Stable under recommended handling and storage conditions (see section 7).
10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not occur.
10.4. Conditions to Avoid: Direct sunlight, extremely high or low temperatures, and incompatible materials.
10.6. Hazardous Decomposition Products: None known.

SECTION 11: TOXICOLOGICAL INFORMATION
11.1. Information on Toxicological Effects - Product
   Acute Toxicity: Not classified
   LD50 and LC50 Data: Not available
   Skin Corrosion/Irritation: Causes skin irritation.
   Serious Eye Damage/Irritation: Causes serious eye irritation.
   Respiratory or Skin Sensitization: Not classified
   Germ Cell Mutagenicity: Not classified
   Teratogenicity: Not classified
   Carcinogenicity: Not classified
   Specific Target Organ Toxicity (Repeated Exposure): Not classified
   Reproductive Toxicity: Not classified
   Specific Target Organ Toxicity (Single Exposure): Not classified
   Aspiration Hazard: Not classified
   Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation.
   Symptoms/Injuries After Skin Contact: Redness, pain, swelling, itching, burning, dryness, and dermatitis.
   Symptoms/Injuries After Eye Contact: Contact causes severe irritation with redness and swelling of the conjunctiva.
   Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.
   Chronic Symptoms: None known.
11.2. Information on Toxicological Effects - Ingredient(s)
   LD50 and LC50 Data: Not available
Tris Wash Buffer (10x)

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity
Ecology - General: Not classified.

12.2. Persistence and Degradability

<table>
<thead>
<tr>
<th>Material</th>
<th>Persistence and Degradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tris Wash Buffer (10x)</td>
<td>Not established.</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative Potential

<table>
<thead>
<tr>
<th>Material</th>
<th>Bioaccumulative Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tris Wash Buffer (10x)</td>
<td>Not established.</td>
</tr>
</tbody>
</table>

12.4. Mobility in Soil
Not available

12.5. Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

Additional Information: Container may remain hazardous when empty. Continue to observe all precautions.


SECTION 14: TRANSPORT INFORMATION

14.1. In Accordance with DOT  Not regulated for transport

14.2. In Accordance with IMDG  Not regulated for transport

14.3. In Accordance with IATA  Not regulated for transport

14.4. In Accordance with TDG  Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

<table>
<thead>
<tr>
<th>Material</th>
<th>Hazard Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tris Wash Buffer (10x)</td>
<td>Immediate (acute) health hazard</td>
</tr>
</tbody>
</table>

SARA Section 311/312 Hazard Classes

1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride (1185-53-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. US State Regulations

Neither this product nor its chemical components appear on any US state lists.

15.3. Canadian Regulations

<table>
<thead>
<tr>
<th>Material</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tris Wash Buffer (10x)</td>
<td>Class D Division 2 Subdivision B - Toxic material causing other toxic effects</td>
</tr>
</tbody>
</table>

1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride (1185-53-1)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification  Uncontrolled product according to WHMIS classification criteria

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date  26Jul2018

Other Information  This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

<table>
<thead>
<tr>
<th>Combustible Dust</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combustible Dust</td>
</tr>
</tbody>
</table>

26Jul2018  EN (English US)  5/6
Tris Wash Buffer (10x)

Safety Data Sheet
According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Irrit. 2A</td>
<td>Serious eye damage/eye irritation Category 2A</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>Skin corrosion/irritation Category 2</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity (single exposure) Category 3</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
</tbody>
</table>

Party Responsible for the Preparation of This Document
Meso Scale Diagnostics
T 240-314-2600

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

NA GHS SDS