**SECTION 1: IDENTIFICATION**

1.1. **Product Identifier**
   - **Product Name:** QuanTtest® Red Reagent
   - **Product Code:** 5210-12
   - **Synonyms:** Pyrogallol Red Molybdate Dye

1.2. **Intended Use of the Product**
   - Laboratory Reagent. For professional use only.

1.3. **Name, Address, and Telephone of the Responsible Party**
   - **Company:** Quantimetrix Corp.
   - **Address:** 2005 Manhattan Beach Blvd.
   - **City/State:** Redondo Beach, CA 90278
   - **Telephone:** 310-536-0006
   - **Website:** www.quantimetrix.com

1.4. **Emergency Telephone Number**
   - **Emergency Number:** 310-536-0006

**SECTION 2: HAZARDS IDENTIFICATION**

2.1. **Classification of the Substance or Mixture**
   - **GHS-US classification:** Not classified

2.2. **Label Elements**
   - **GHS-US Labeling:** No labeling applicable

2.3. **Other Hazards**
   - **No additional information available**

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>Hydrochloric acid</td>
<td>(CAS No) 7647-01-0</td>
<td>0.15</td>
<td>Met. Corr. 1, H290</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Corr. 1B, H314</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Dam. 1, H318</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STOT SE 3, H335</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aquatic Acute 2, H401</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.
   - **Skin Contact:** Remove contaminated clothing. Drench affected area with water for at least 15 minutes.
   - **Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
   - **Ingestion:** Rinse mouth. Do NOT induce vomiting.

4.2. **Most Important Symptoms and Effects Both Acute and Delayed**
   - **General:** None expected under normal conditions of use.
   - **Inhalation:** Not expected to present a significant inhalation hazard under anticipated conditions of normal use.
Skin Contact: May cause minor irritation.

Eye Contact: Direct contact with the eyes is likely irritating.

Ingestion: If a large quantity has been ingested: May cause nausea, vomiting, and diarrhea.

Chronic Symptoms: Not available

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed
If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Carbon dioxide, dry chemical powder, alcohol foam, polymer foam, water spray, fog.

Unsuitable Extinguishing Media: None known.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: 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. Under fire conditions, hazardous fumes will be present.

Firefighting Instructions: Exercise caution when fighting any chemical fire.

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

Hazardous Combustion Products: The product is not flammable. However, under fire conditions, decomposition may produce carbon monoxide, carbon dioxide, chloride and hydrocarbons.

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: Avoid breathing vapor, mist, or spray. Avoid contact with skin, eyes, or 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.

Emergency Procedures: Ventilate area.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Absorb and/or contain spill with inert material, then place in suitable container.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely.

6.4. Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use.


7.3. Specific End Use(s)

Laboratory Reagent. For professional use only.
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.

| Substance                  | Mexico OEL Ceiling (mg/m³) | Mexico OEL Ceiling (ppm) | USA ACGIH ACGIH Ceiling (ppm) | USA ACGIH ACGIH chemical category | USA OSHA OSHA PEL (Ceiling) (mg/m³) | USA OSHA OSHA PEL (Ceiling) (ppm) | USA NIOSH NIOSH REL (ceiling) (mg/m³) | USA NIOSH NIOSH REL (ceiling) (ppm) | USA IDLH US IDLH (ppm) | Alberta OEL Ceiling (mg/m³) | Alberta OEL Ceiling (ppm) | British Columbia OEL Ceiling (ppm) | Manitoba OEL Ceiling (ppm) | New Brunswick OEL Ceiling (mg/m³) | New Brunswick OEL Ceiling (ppm) | Newfoundland & Labrador OEL Ceiling (ppm) | Nova Scotia OEL Ceiling (ppm) | Nunavut OEL Ceiling (mg/m³) | Nunavut OEL Ceiling (ppm) | Northwest Territories OEL Ceiling (ppm) | Ontario OEL Ceiling (ppm) | Prince Edward Island OEL Ceiling (ppm) | Québec PLAFOND (mg/m³) | Québec PLAFOND (ppm) | Saskatchewan OEL Ceiling (ppm) | Yukon OEL Ceiling (mg/m³) | Yukon OEL Ceiling (ppm) |
|----------------------------|-----------------------------|---------------------------|-------------------------------|----------------------------------|-----------------------------------|-----------------------------------|---------------------------------------|----------------------------------|-------------------------------|-----------------------------|---------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------------|-----------------------------------|---------------------------------|---------------------------------|--------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------------|
| Hydrochloric acid (7647-01-0) | 7 mg/m³                    | 5 ppm                     | 2 ppm                         | Not Classifiable as a Human Carcinogen | 7 mg/m³                           | 5 ppm                             | 7 mg/m³                               | 5 ppm                            | 50 ppm                         | 3 mg/m³                     | 2 ppm                      | 2 ppm                       | 2 ppm                           | 7.5 mg/m³                       | 5 ppm                             | 2 ppm                                | 2 ppm                           | 7.5 mg/m³                       | 5 ppm                         | 2 ppm                      | 2 ppm                           | 7 mg/m³                         | 5 ppm                          |

8.2. Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

Personal Protective Equipment: Gloves. Protective clothing.

Materials for Protective Clothing: Chemically resistant fabrics and materials.

Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: None required under normal conditions of use.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

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

Physical State: Liquid

12/14/2015 EN (English US)
QuanTtest® Red Reagent
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>Appearance</td>
<td>Brownish-red</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>1.5</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>
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<tr>
<td>Lower Flammable Limit</td>
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<tr>
<td>Upper Flammable Limit</td>
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<td>Vapor Pressure</td>
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<tr>
<td>Relative Vapor Density at 20 °C</td>
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<tr>
<td>Relative Density</td>
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</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: Product is stable.
10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not occur.
10.4. Conditions to Avoid: Direct sunlight. Extremely high or low temperatures.
10.6. Hazardous Decomposition Products: The product is not flammable. However, under fire conditions, decomposition may produce carbon monoxide, carbon dioxide, chloride and hydrocarbons.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects - Product
Acute Toxicity: Not classified
LD50 and LC50 Data: Not available
Skin Corrosion/Irritation: Not classified
Serious Eye Damage/Irritation: Not classified
Respiratory or Skin Sensitization: Not classified
Germ Cell Mutagenicity: Not classified
Teratogenicity: Not available
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: Not expected to present a significant inhalation hazard under anticipated conditions of normal use.
Symptoms/Injuries After Skin Contact: May cause minor irritation.
Symptoms/Injuries After Eye Contact: Direct contact with the eyes is likely irritating.
Symptoms/Injuries After Ingestion: If a large quantity has been ingested: May cause nausea, vomiting, and diarrhea.

11.2. Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>LD50 Dermal Rabbit</th>
<th>LC50 Fish 1</th>
<th>EC50 Daphnia 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric acid (7647-01-0)</td>
<td>&gt; 5010 mg/kg</td>
<td>3.25 - 3.5 mg/l</td>
<td>4.92 mg/l</td>
</tr>
</tbody>
</table>

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity  No additional information available

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>LC50 Fish 1</th>
<th>EC50 Daphnia 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric acid (7647-01-0)</td>
<td>3.25 - 3.5 mg/l</td>
<td>4.92 mg/l</td>
</tr>
</tbody>
</table>

12.2. Persistence and Degradability

QuanTtest® Red Reagent

Persistence and Degradability  Not established.

12.3. Bioaccumulative Potential

QuanTtest® Red Reagent

Bioaccumulative Potential  Not established.

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, and international regulations.

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>Ingredient</th>
<th>SARA Section 302 Threshold Planning Quantity (TPQ)</th>
<th>SARA Section 311/312 Hazard Classes</th>
<th>SARA Section 313 - Emission Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric acid (7647-01-0)</td>
<td>500 (gas only)</td>
<td>Immediate (acute) health hazard</td>
<td>1.0 % (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)</td>
</tr>
</tbody>
</table>

15.2. US State Regulations

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Subject to reporting requirements of United States SARA Section 313</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric acid (7647-01-0)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
</tbody>
</table>

15.3. Canadian Regulations

QuanTtest® Red Reagent
QuantTtest® Red Reagent

Safety Data Sheet

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Hydrochloric acid (7647-01-0)

- Listed on the Canadian DSL (Domestic Substances List)
- Listed on the Canadian IDL (Ingredient Disclosure List)

IDL Concentration 1%

<table>
<thead>
<tr>
<th>WHMIS Classification</th>
<th>Uncontrolled product according to WHMIS classification criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class E - Corrosive Material</td>
<td></td>
</tr>
<tr>
<td>Class D Division 2 Subdivision B - Toxic material causing other toxic effects</td>
<td></td>
</tr>
</tbody>
</table>

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: 12/14/2015
- 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:

| Aquatic Acute 2 | Hazardous to the aquatic environment - Acute Hazard Category 2 |
| Eye Dam. 1     | Serious eye damage/eye irritation Category 1 |
| Met. Corr. 1   | Corrosive to metals Category 1 |
| Skin Corr. 1B  | Skin corrosion/irritation Category 1B |
| STOT SE 3      | Specific target organ toxicity (single exposure) Category 3 |
| H290           | May be corrosive to metals |
| H314           | Causes severe skin burns and eye damage |
| H318           | Causes serious eye damage |
| H335           | May cause respiratory irritation |
| H401           | Toxic to aquatic life |

Party Responsible for the Preparation of This Document

Quantimetrix Corp.
2005 Manhattan Beach Blvd.
Redondo Beach, CA 90278
310-536-0006

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.