

## Sodium Thiosulfate Solution 5%


### 1. Identification

<b>1.1 Product Identifier</b>	Product Name: Sodium Thiosulfate Solution (5%) Product Number: SSC1131	
<b>1.2 Intended use</b>	EN: Laboratory reagent. For professional use only. DA: Laboratoriereagens. Kun til professionelt brug. DE: Laboratoriumreagens. Alleen voor professioneel gebruik. EL: Αντιδραστήριο εργαστηρίου. Για επαγγελματική χρήση μόνο. ES: Reactivo de laboratorio. Sólo para uso profesional. FR: Réactif de laboratoire. Pour un usage professionnel uniquement. IT: Laboratorio di reagente. Solo per uso professionale. NL: Laboratoriumreagens. Alleen voor professioneel gebruik. PT: Reagente de laboratório. Para uso profissional. SV: Laboratoriereagens. Endast för yrkesmässig användning.	
<b>1.3 Details of the supplier of the safety data sheet</b>	<b>Manufacturer</b>	Cancer Diagnostics, Inc.
	<b>Address</b>	116 Page Point Circle Durham, NC 27703
	<b>Phone Number</b>	1-877-846-5393
	<b>Fax Number</b>	1-877-817-1716
	<b>e-mail</b>	<a href="mailto:compliance@cancerdiagnostics.com">compliance@cancerdiagnostics.com</a>
	<b>Website</b>	<a href="http://www.cancerdiagnostics.com">www.cancerdiagnostics.com</a>

### 2. Hazards Identification

<b>2.1 Classification: Regulation (EC) No 1272/2008 (CLP)</b>	Not a hazardous mixture as classified by Regulation (EC) No 1272/2008 (CLP)
<b>Classification: OSHA 29 CFR 1910.1200 HCS</b>	Not a hazardous mixture as classified by OSHA 29 CFR 1910.1200 HCS (GHS)
<b>Classification: Directive 1999/45/EC</b>	Not a hazardous mixture as classified by Directive 1999/45/EC For full text of R- & S- phrases: see Section 15.

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<b>2.2 Label Elements</b>	Pictogram: Not a hazardous mixture Signal word: Not a hazardous mixture. Hazard Statement(s): Not a hazardous mixture Precautionary Statements(s): Not a hazardous mixture			
<b>NFPA</b> Scale: 0-4				
<b>HMIS (U.S.A.)</b> Scale: 0-4	HEALTH	1		
	FLAMMABILITY	0		
	PHYSICAL HAZARD	0		
	PERSONAL PROTECTION	B		
<b>2.3 Other Hazards</b>	<b>PBT:</b> This mixture does not contain any substances that are assessed to be a PBT. <b>vPvB:</b> This mixture does not contain any substances that are assessed to be a vPvB.			

### 3. Composition and Information on Ingredients

#### 3.2 Chemical Description: Mixture

\*May contain additional non-hazardous proprietary ingredients.

\*May contain additional active ingredients at concentrations <0.1%/w/v.

Hazardous Ingredients:	CAS#	EC#	GHS Symbols	%
Sodium Thiosulfate	7772-98-7	231-867-5	N/A	≤5

### 4. First Aid Measures

#### 4.1 Description of first aid measures

**Eye Contact:** Check for and remove contact lenses. Immediately flush eyes with copious amounts of water. Get medical attention if irritation persists.

**Skin Contact:** Remove contaminated clothing and wash contact area with mild soap and copious amounts of water. Get medical attention if irritation develops.

**Inhalation:** If inhaled, remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms worsen.

**Ingestion:** Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as collar, tie, belt or waistband. Get immediate medical attention.

#### 4.2 Most important symptoms and effects, both acute and delayed

See section 2.2 and 11.

#### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

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### 5. Fire Fighting Measures

<b>5.1 Extinguishing Media</b>	Extinguish fire using water spray, carbon dioxide, chemical foam, or dry chemical.
<b>5.2 Special hazards arising from the substance or mixture</b>	No unusual fire or explosion hazards expected.
<b>5.3 Advice for firefighters</b>	As with any fire, wear personal protection equipment, including a self-contained breathing apparatus (S.C.B.A.)

### 6. Accidental Release Measures

<p><b>6.1 Personal precautions, protective equipment and emergency procedures</b> Wear chemical resistant clothing, gloves, and eye protection. Wear NIOSH/MSHA approved breathing apparatus.</p> <p><b>6.2 Environmental precautions</b> Keep material away from heat, flame, ignition sources, and reactive materials. Don't allow product to enter drain.</p> <p><b>6.3 Methods and materials for containment and cleaning up</b> Wipe up or absorb spill using inert absorbent and place in a suitable waste container for disposal.</p>
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### 7. Handling and Storage

<p><b>7.1 Precautions for safe handling.</b> Avoid contact with skin and eyes. Wash thoroughly after handling. Avoid breathing vapor.</p> <p><b>7.2 Conditions for safe storage, including any incompatibilities.</b> Store in well ventilated area. Keep container tightly closed. Store at 15-30°C.</p> <p><b>7.3 Specific end use(s).</b> See section 1.2</p>
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### 8. Exposure Controls / Personal Protection

<b>8.1 Control parameters</b>	<b>Exposure Limits:</b> N/A
<b>8.2 Exposure controls</b>	<p><b>Personal Protective Equipment (PPE):</b></p> <p><b>Eye/Face protection.</b> Safety glasses or goggles are required.</p> <p><b>Skin protection.</b> Protective clothing is required.</p> <p><b>Hand protection.</b> Chemical resistant gloves are required. Glove material must be resistant to the components of this product. Consult glove manufacturer for specific recommendations of appropriate material and thickness of glove.</p> <p><b>Respiratory protection.</b> Avoid breathing vapor. <b>Environmental exposure controls.</b> Avoid releasing large quantities into the environment. No additional information.</p>
<b>Engineering Controls</b>	Working area should be adequately large and well ventilated to prevent concentration of vapors. Provide mechanical exhaust ventilation or other engineering controls to keep airborne concentrations of vapors below their respective threshold limits.

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### 9. Physical and Chemical Properties

<b>Physical State</b>	Liquid
<b>Color</b>	Colorless
<b>Odor</b>	Odorless
<b>Odor Threshold</b>	Unknown
<b>pH</b>	Neutral
<b>Melting Point/ Freezing Point</b>	Unknown
<b>Initial Boiling Point</b>	Unknown
<b>Flash Point</b>	Unknown
<b>Evaporation Rate</b>	Unknown
<b>Flammability (solid, gas)</b>	Unknown
<b>Upper/Lower Flammability Limits</b>	Unknown
<b>Vapor Pressure</b>	Unknown
<b>Vapor Density</b>	Unknown
<b>Relative Density</b>	Unknown
<b>Solubility(ies)</b>	Water
<b>Partition Coefficient: n-octanol/water</b>	Unknown
<b>Auto-Ignition Temperature</b>	Unknown
<b>Decomposition Temperature</b>	Unknown
<b>Viscosity</b>	Unknown
<b>Explosive Properties</b>	Not explosive.
<b>Oxidizing Properties</b>	Unknown

### 10. Stability and Reactivity

<b>10.1 Reactivity</b>	No relevant data available.
<b>10.2 Chemical Stability</b>	Stable under normal temperatures and pressures.
<b>10.3 Possibility of Hazardous Reactions</b>	No hazardous reactions known.
<b>10.4 Conditions to Avoid</b>	Fire, static electricity, direct sunlight.
<b>10.5 Incompatible Materials</b>	Sodium nitrate, oxidizing agents, acids, alkalis.
<b>10.6 Hazardous Decomposition Materials</b>	Sodium oxide, Hydrogen sulfide.

### 11. Toxicological Information

<b>11.1 Information on Toxicological Effects.</b>	<b>Acute Toxicity.</b> No relevant data available <b>Skin Corrosion/Irritation.</b> May be irritating to skin and mucous membranes. <b>Serious Eye Damage/Irritation.</b> May be irritating to the eyes. <b>Respiratory or skin sensitization.</b> No relevant data available.
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	<b>Germ Cell Mutagenicity.</b> No relevant data available.
<b>Carcinogenicity.</b>	<b>International Agency for Research on Cancer (IARC).</b> None of the components are listed. <b>National Toxicology Program (NTP).</b> None of the components are listed.

### 12. Ecological Information

<b>12.1 Toxicity</b>	<b>Fish:</b> No relevant studies identified. <b>Crustacea:</b> No relevant studies identified. <b>Algae/Aquatic Plants:</b> No relevant studies identified. <b>Other Organisms:</b> No relevant studies identified.
<b>12.2 Persistence and Degradability.</b>	No relevant studies identified.
<b>12.3 Bioaccumulative Potential.</b>	No relevant studies identified.
<b>12.4 Mobility in Soil.</b>	Miscible in water. May spread in water systems. This component is non-volatile.
<b>Additional Remarks</b>	None.
<b>12.5 Results of PBT and vPvB Assessment.</b>	<b>PBT:</b> This mixture does not contain any substances that are assessed to be a PBT. <b>vPvB:</b> This mixture does not contain any substances that are assessed to be a vPvB.

### 13. Disposal Considerations

<b>13.1 Waste Disposal Methods.</b>	Sewage disposal is discouraged. Waste should not be disposed of by release to sewers. Dispose waste in accordance with federal, state and local environmental control regulations.
<b>Product/Packaging Disposal.</b>	Final decisions on the appropriate waste management method must be in line with local, regional and national regulations.
<b>Other Disposal Recommendations.</b>	No relevant data available.

### 14. Transport Information

<b>14.1 UN Number DOT, IATA,IMDG, ADR</b>	<b>DOT:</b> Not dangerous goods. <b>ADR/RID:</b> Not dangerous goods. <b>IMDG:</b> Not dangerous goods. <b>IATA:</b> Not dangerous goods.
<b>14.2 UN Proper Shipping Name DOT, IATA,IMDG, ADR</b>	<b>ADR/RID:</b> Not dangerous goods. <b>IMDG:</b> Not dangerous goods. <b>IATA:</b> Not dangerous goods. <b>DOT:</b> Not dangerous goods.
<b>14.3 Transport Hazard Class(es)</b>	<b>DOT:</b> Not dangerous goods. <b>IATA:</b> Not dangerous goods. <b>IMDG:</b> Not dangerous goods. <b>ADR/RID:</b> Not dangerous goods.
<b>14.4 Packing Group DOT, IATA,IMDG, ADR</b>	<b>ADR/RID:</b> Not dangerous goods. <b>IMDG:</b> Not dangerous goods. <b>IATA:</b> Not dangerous goods. <b>DOT:</b> Not dangerous goods.
<b>14.5 Environmental Hazards</b>	<b>Marine Pollutant:</b> No
<b>14.6 Special Precautions for User</b>	Not applicable.

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### 15. Regulatory Information

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture.	
<b>Extremely Hazardous Substances; Section 355</b>	None of the components in this mixture are listed.
<b>Toxic Substances Control Act; TSCA</b>	All of the components in this mixture are listed.
<b>California Proposition 65</b>	None of the components in this mixture are listed.
<b>Right To Know Components</b>	None of the components in this mixture are listed.
<b>15.2 Chemical Safety Assessment</b>	No Chemical Safety Assessment has been carried out for this substance/mixture by Cancer Diagnostics, Inc.
<b>R phrases</b>	<b>R36/38</b> EN: Irritating to eyes and skin. DA: Irriterer øjnene og huden DE: Reizt die Augen und die Haut. EL: Ερεθίζει τα μάτια και το δέρμα. ES: Irrita los ojos y la piel. FR: Irritant pour les yeux et la peau. IT: Irritante per gli occhi e la pelle. NL: Irriterend voor de ogen en de huid. PT: Irritante para os olhos e pele. SV: Irriterar ögonen och huden.
<b>S phrases</b>	<b>S2</b> EN: Keep out of the reach of children. DA: Opbevares utilgængeligt for børn. DE: Darf nicht in die Hände von Kindern gelangen. EL: Μακριά από παιδιά. ES: Manténgase fuera del alcance de los niños. FR: Conserver hors de la portee des enfants. IT: Conservare fuori della portata dei bambini. NL: Buiten bereik van kinderen bewaren. PT: Manter fora do alcance das crianças. SV: Förvaras oåtkomligt för barn.  <b>S24/25</b> EN: Avoid contact with skin and eyes. DA: Undgå kontakt med huden og øjnene. DE: Berührung mit den Augen und der Haut vermeiden. EL: Αποφεύγετε επαφή με το δέρμα και με τα μάτια. ES: Evítase el contacto con los ojos y la piel. FR: Éviter le contact avec la peau et les yeux. IT: Evitare il contatto con gli occhi e con la pelle. NL: Aanraking met de ogen en de huid vermijden. PT: Evitar o contacto com a pele e os olhos. SV: Undvik kontakt med huden och ögonen.

### 16. Other Information

**Revision Date:** 2019-01-11


**Notice to Reader:**




*To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.*

**Section 1. Identification**

<b>1.1 Product Identifier</b>	Product Name: Silver Nitrate Solution (20%) Product Number: SSC1199	
<b>1.2 Intended use</b>	EN: Laboratory reagent. For professional use only. DA: Laboratoriereagens. Kun til professionelt brug. DE: Laboratoriumreagens. Alleen voor professioneel gebruik. EL: Αντιδραστήριο εργαστηρίου. Για επαγγελματική χρήση μόνο. ES: Reactivo de laboratorio. Sólo para uso profesional. FR: Réactif de laboratoire. Pour un usage professionnel uniquement. IT: Laboratorio di reagente. Solo per uso professionale. NL: Laboratoriumreagens. Alleen voor professioneel gebruik. PT: Reagente de laboratório. Para uso profissional. SV: Laboratoriereagens. Endast för yrkesmässig användning.	
<b>1.3 Details of the supplier of the safety data sheet</b>	<b>Manufacturer</b>	Cancer Diagnostics, Inc.
	<b>Address</b>	116 Page Point Circle Durham, NC 27703
	<b>Phone Number</b>	1-877-846-5393
	<b>Fax Number</b>	1-877-817-1716
	<b>e-mail</b>	<a href="mailto:compliance@cancerdiagnostics.com">compliance@cancerdiagnostics.com</a>
	<b>Website</b>	<a href="http://www.cancerdiagnostics.com/sds">www.cancerdiagnostics.com/sds</a>

**Section 2. Hazards Identification**

<b>2.1 GHS Classification</b>	Skin corrosion (Category 1B) – H314 Serious eye damage (Category 1) – H318 Acute aquatic toxicity (Category 1) – H400 Chronic aquatic toxicity (Category 1) – H410	
<b>Classification: Directive 1999/45/EC</b>		<b>C R34, R50/53; S26, S45, S60, S61</b> EN: Corrosive DA: Ætsende DE: Ätzend EL: Διαβρωτικό ES: Corrosivo FR: Corrosif IT: Corrosivo NL: Bijtend PT: Corrosivo SV: Frätande





	 <p><b>N:</b>          EN: Dangerous for the environment          DA: Miljøfarlig          DE: Umweltgefährlich          EL: Επικίνδυνο για το περιβάλλον          ES: Peligroso para el medio ambiente          FR: Dangereux pour l'environnement          IT: Pericoloso per l'ambiente          NL: Milieugevaarlijk          PT: Perigoso para o ambiente          SV: Miljöfarlig'</p> <p>For full text of R- &amp; S- phrases: see Section 15.</p>								
<b>2.2 Label Elements</b>	<p>Pictogram(s):</p>  <p>Signal word: Danger</p> <p>Hazard statement(s):          H314 – Causes severe skin burns and eye damage          H318 – Causes serious eye damage.          H410 – Very toxic to aquatic life with long lasting effects.</p> <p>Precautionary statement(s):          P302+ P352 - IF ON SKIN: Wash with plenty of soap and water          P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Get immediate medical advice/attention          P308 + P311 – IF exposed or concerned: Call a poison center/ doctor.</p>								
<b>NFPA</b> <b>Scale: 0-4</b>									
<b>HMIS (U.S.A.)</b> <b>Scale: 0-4</b>	<table border="1"> <tr> <td>HEALTH</td> <td>2</td> </tr> <tr> <td>FLAMMABILITY</td> <td>0</td> </tr> <tr> <td>PHYSICAL HAZARD</td> <td>0</td> </tr> <tr> <td>PERSONAL PROTECTION</td> <td>B</td> </tr> </table>	HEALTH	2	FLAMMABILITY	0	PHYSICAL HAZARD	0	PERSONAL PROTECTION	B
HEALTH	2								
FLAMMABILITY	0								
PHYSICAL HAZARD	0								
PERSONAL PROTECTION	B								
<b>2.3 Other Hazards</b>	<p><b>PBT:</b> This mixture does not contain any substances that are assessed to be a PBT.  <b>vPvB:</b> This mixture does not contain any substances that are assessed to be a vPvB.</p>								



**3.2 Chemical Description:** Mixture

\*May contain additional non-hazardous proprietary ingredients.

\*May contain additional active ingredients at concentrations &lt;0.1%w/v.

Hazardous Ingredients:	CAS#	EC#	GHS Symbols	%
Silver Nitrate	7761-88-8	231-853-9	 Danger. 2. H272 May intensify fire; oxidizer.  Warning. 4 H302 Harmful if swallowed.  Danger. 1B H314 Causes severe skin burns and eye damage.  Warning. H410 Very toxic to aquatic life with long lasting effects.	≤ 20

**Section 4. First Aid Measures**
**4.1 Description of first aid measures**

**Eye Contact:** Check for and remove contact lenses. Immediately flush eyes with copious amounts of water and get immediate medical attention.

**Skin Contact:** Remove contaminated clothing and wash contact area with mild soap and copious amounts of water. Get medical attention if irritation develops.

**Inhalation:** If inhaled, remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms worsen.

**Ingestion:** Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as collar, tie, belt or waistband. Get immediate medical attention.

**4.2 Most important symptoms and effects, both acute and delayed**

See section 2.2 and 11.

**4.3 Indication of any immediate medical attention and special treatment needed**

No data available

**Section 5. Fire Fighting Measures**

<b>5.1 Extinguishing Media</b>	Extinguish fire using water spray, carbon dioxide, chemical foam, or dry chemical.
<b>5.2 Special hazards arising from the substance or mixture</b>	None known
<b>5.3 Advice for firefighters</b>	As with any fire, wear personal protection equipment, including a self-contained breathing apparatus (S.C.B.A.)

**Section 6. Accidental Release Measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

Wear chemical resistant clothing, gloves, and eye protection. Wear NIOSH/MSHA approved breathing apparatus.

**6.2 Environmental precautions**

Keep material away from heat, flame, ignition sources, and reactive materials. Don't allow product to enter drain.

**6.3 Methods and materials for containment and cleaning up**

Wipe up or absorb spill using inert absorbent and place in a suitable waste container for disposal.

**Section 7. Handling and Storage**
**7.1 Precautions for safe handling.**

Avoid contact with skin and eyes.

Wash thoroughly after handling.

Avoid breathing vapor.

**7.2 Conditions for safe storage, including any incompatibilities.**

Store in well ventilated area.

Keep container tightly closed.

Store at 2-8°C.

**7.3 Specific end use(s).**

See section 1.2

**Section 8. Exposure Controls / Personal Protection**

<b>8.1 Control parameters</b>	<b>Exposure Limits:</b> N/A
<b>8.2 Exposure controls</b>	<b>Personal Protective Equipment (PPE):</b> <b>Eye/Face protection.</b> Safety glasses or goggles are required. <b>Skin protection.</b> Protective clothing is required. <b>Hand protection.</b> Chemical resistant gloves are required. Glove material must be resistant to the components of this product. Consult glove manufacturer for specific recommendations of appropriate material and thickness of glove. <b>Respiratory protection.</b> Avoid breathing vapor. <b>Environmental exposure controls.</b> Avoid releasing large quantities into the environment. No additional information.
<b>Engineering Controls</b>	Working area should be adequately large and well ventilated to prevent concentration of vapors. Provide mechanical exhaust ventilation or other engineering controls to keep airborne concentrations of vapors below their respective threshold limits.

**Section 9. Physical and Chemical Properties**

<b>Physical State</b>	Liquid
<b>Color</b>	Transparent, colorless
<b>Odor</b>	Unknown
<b>Odor Threshold</b>	Unknown
<b>pH</b>	Unknown
<b>Melting Point/ Freezing Point</b>	Unknown
<b>Initial Boiling Point</b>	Unknown
<b>Flash Point</b>	Unknown
<b>Evaporation Rate</b>	Unknown

<b>Flammability (solid, gas)</b>	Unknown
<b>Upper/Lower Flammability Limits</b>	Unknown
<b>Vapor Pressure</b>	Unknown
<b>Vapor Density</b>	Unknown
<b>Relative Density</b>	Unknown
<b>Solubility(ies)</b>	Water
<b>Partition Coefficient: n-octanol/water</b>	Unknown
<b>Auto-Ignition Temperature</b>	Unknown
<b>Decomposition Temperature</b>	Unknown
<b>Viscosity</b>	Unknown
<b>Explosive Properties</b>	Not explosive.
<b>Oxidizing Properties</b>	Unknown

## Section 10. Stability and Reactivity

<b>10.1 Reactivity</b>	No relevant data available.
<b>10.2 Chemical Stability</b>	Stable under normal temperatures and pressures.
<b>10.3 Possibility of Hazardous Reactions</b>	No hazardous reactions known.
<b>10.4 Conditions to Avoid</b>	Fire, static electricity, direct sunlight.
<b>10.5 Incompatible Materials</b>	Oxidizers, alkalis, antimony salts, arsenates, carbonates and phosphates.
<b>10.6 Hazardous Decomposition Materials</b>	Carbon oxides, nitrogen oxides, oxides of silver.

## Section 11. Toxicological Information

<b>11.1 Information on Toxicological Effects.</b>	<b>Acute Toxicity.</b> No relevant data available <b>Skin Corrosion/Irritation.</b> Corrosive to skin and mucous membranes. <b>Serious Eye Damage/Irritation.</b> Corrosive to eye. <b>Respiratory or skin sensitization.</b> No relevant data available. <b>Germ Cell Mutagenicity.</b> No relevant data available.
<b>Carcinogenicity.</b>	<b>International Agency for Research on Cancer (IARC).</b> None of the components are listed. <b>National Toxicology Program (NTP).</b> None of the components are listed.

## Section 12. Ecological Information

<b>12.1 Toxicity</b>	<b>Fish:</b> No relevant studies identified.
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	<b>Crustacea:</b> No relevant studies identified. <b>Algae/Aquatic Plants:</b> No relevant studies identified. <b>Other Organisms:</b> No relevant studies identified.
<b>12.2 Persistence and Degradability.</b>	No relevant studies identified.
<b>12.3 Bioaccumulative Potential.</b>	No relevant studies identified.
<b>12.4 Mobility in Soil.</b>	Miscible in water. May spread in water systems. This component is non-volatile.
<b>Additional Remarks</b>	None.
<b>12.5 Results of PBT and vPvB Assessment.</b>	<b>PBT:</b> This mixture does not contain any substances that are assessed to be a PBT. <b>vPvB:</b> This mixture does not contain any substances that are assessed to be a vPvB.

### Section 13. Disposal Considerations

<b>13.1 Waste Disposal Methods.</b>	Sewage disposal is discouraged. Waste should not be disposed of by release to sewers. Dispose waste in accordance with federal, state and local environmental control regulations.
<b>Product/Packaging Disposal.</b>	Final decisions on the appropriate waste management method must be in line with local, regional and national regulations.
<b>Other Disposal Recommendations.</b>	No relevant data available.

### Section 14. Transport Information

<b>14.1 UN Number DOT, IATA,IMDG, ADR</b>	DOT: 3082 ADR/RID: 3082 IMDG: 3082 IATA: 3082
<b>14.2 UN Proper Shipping Name DOT, IATA,IMDG, ADR</b>	ADR/RID: Environmentally hazardous substance, liquid, n.o.s.(Silver nitrate) IMDG: Environmentally hazardous substance, liquid, n.o.s.(Silver nitrate) IATA: Environmentally hazardous substance, liquid, n.o.s.(Silver nitrate) DOT: Environmentally hazardous substance, liquid, n.o.s.(Silver nitrate)
<b>14.3 Transport Hazard Class(es)</b>	<b>DOT:</b> 9 <b>IATA:</b> 9 <b>IMDG:</b> 9 <b>ADR/RID:</b> 9
<b>14.4 Packing Group DOT, IATA,IMDG, ADR</b>	ADR/RID: III IMDG: III IATA: III DOT: III
<b>14.5 Environmental Hazards</b>	<b>Marine Pollutant:</b> Yes
<b>14.6 Special Precautions for User</b>	Not applicable.

### Section 15. Regulatory Information

**15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture.**

<b>Extremely Hazardous Substances; Section 355</b>	None of the components in this mixture are listed.
<b>Toxic Substances Control Act; TSCA</b>	All of the components in this mixture are listed.
<b>California Proposition 65</b>	None of the components in this mixture are listed.
<b>Right To Know Components</b>	None of the components in this mixture are listed.
<b>15.2 Chemical Safety Assessment</b>	No Chemical Safety Assessment has been carried out for this substance/mixture by Cancer Diagnostics, Inc.
<b>R phrases</b>	<p><b>R34</b>            EN: Causes burns.            DA: Ætsningsfare.            DE: Verursacht Verätzungen.            EL: Προκαλεί εγκαύματα.            ES: Provoca quemaduras.            FR: Provoque des brulures.            IT: Provoca ustioni.            NL: Veroorzaakt brandwonden.            PT: Provoca queimaduras.            SV: Frätande.</p> <p><b>R50/53</b>            EN: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.            DA: Meget giftig for organismer, der lever i vand; kan forårsage uønskede langtidsvirkninger i vandmiljøet.            DE: Sehr giftig für Wasserorganismen, kann in Gewässern längerfristig schädliche Wirkungen haben.            EL: Πολύ τοξικό για τους υδρόβιους οργανισμούς, μπορεί να προκαλέσει μακροχρόνιες δυσμενείς επιπτώσεις στο υδάτινο περιβάλλον.            ES: Muy tóxico para los organismos acuáticos, puede provocar a largo plazo efectos negativos en el medio ambiente acuático.            FR: Tres toxique pour les organismes aquatiques, peut entraîner des effets nefastes a long terme pour l'environnement aquatique.            IT: Altamente tossico per gli organismi acquatici, può provocare a lungo termine effetti negativi per l'ambiente acquatico.            NL: Zeer vergiftig voor in het water levende organismen; kan in het aquatisch milieu op lange termijn schadelijke effecten veroorzaken.            PT: Muito tóxico para os organismos aquáticos, podendo causar efeitos nefastos a longo prazo no ambiente aquático.            SV: Mycket giftigt för vattenlevande organismer, kan orsaka skadliga långtidseffekter i vattenmiljön.</p>
<b>S phrases</b>	<p><b>S26</b>            EN: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.            DA: Kommer stoffet i øjnene, skylles straks grundigt med vand og læge kontaktes.            DE: Bei Berührung mit den Augen sofort gründlich mit Wasser abspülen und Arzt konsultieren.            EL: Σε περίπτωση επαφής με τα μάτια πλύνετε τα αμέσως με άφθονο νερό και ζητήστε ιατρική συμβουλή.            ES: En caso de contacto con los ojos, lávense inmediata y abundantemente con agua y acúdase a un médico.            FR: En cas de contact avec les yeux, laver immédiatement et abondamment avec de l'eau et consulter un spécialiste.            IT: In caso di contatto con gli occhi, lavare immediatamente e abbondantemente con acqua e consultare un medico.            NL: Bij aanraking met de ogen onmiddellijk met overvloedig water afspoelen en deskundig medisch advies inwinnen.            PT: Em caso de contacto com os olhos, lavar imediata e abundantemente com água e consultar um especialista.            SV: id kontakt med ögonen, spola genast med mycket vatten och kontakta läkare.</p> <p><b>S45</b>            EN: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).</p>

	<p>DA: Ved ulykkestilfælde eller ved ildebefindende er omgående lægebehandling nødvendig; vis etiketten, hvis det er muligt.</p> <p>DE: Bei Unfall oder Unwohlsein sofort Arzt zuziehen (wenn möglich, dieses Etikett vorzeigen).</p> <p>EL: Σε περίπτωση ατυχήματος ή αν αισθανθείτε αδιαθεσία ζητήστε αμέσως ιατρική συμβουλή (δείξτε την επικέτα αν είναι δυνατό).</p> <p>ES: En caso de accidente o malestar, acúdase inmediatamente al médico (si es posible, muéstresele la etiqueta).</p> <p>FR: En cas d'accident ou de malaise, consulter immédiatement un medecin (si possible lui montrer l'etiquette).</p> <p>IT: In caso di incidente o di malessere consultare immediatamente il medico (se possibile, mostrargli l'etichetta).</p> <p>NL: Bij een ongeval of indien men zich onwel voelt, onmiddellijk een arts raadplegen (indien mogelijk hem dit etiket tonen).</p> <p>PT: Em caso de acidente ou de indisposição, consultar imediatamente o médico (se possível mostrar-lhe o rótulo).</p> <p>SV: Vid olycksfall, illamående eller annan påverkan, kontakta omedelbart läkare. Visa om möjligt etiketten.</p> <p><b>S60</b></p> <p>EN: This material and its container must be disposed of as hazardous waste.</p> <p>DA: Undgå udledning til miljøet. Se særlig vejledning/leverandørbrugsanvisning.</p> <p>DE: Dieses Produkt und sein Behälter sind als gefährlicher Abfall zu entsorgen.</p> <p>EL: Αποφύγετε την ελευθέρωσή του στο περιβάλλον. Αναφερθείτε σε ειδικές οδηγίες/.ελτίο δεδομένων ασφαλείας.</p> <p>ES: Elimínense el producto y su recipiente como residuos peligrosos.</p> <p>FR: Eliminer le produit et son récipient comme un déchet dangereux.</p> <p>IT: Questo materiale e il suo contenitore devono essere smaltiti come rifiuti pericolosi.</p> <p>NL: Deze stof en de verpakking als gevaarlijk afval afvoeren.</p> <p>PT: Este produto e o seu recipiente devem ser eliminados como resíduos perigosos.</p> <p>SV: Detta material och dess behållare skall tas om hand som farligt avfall.</p> <p><b>S61</b></p> <p>EN: Avoid release to the environment. Refer to special instructions/Safety data sheets.</p> <p>DA: Undgå udledning til miljøet. Se særlig vejledning/leverandørbrugsanvisning.</p> <p>DE: Freisetzung in die Umwelt vermeiden. Besondere Anweisungen einholen/Sicherheitsdatenblatt zu Rate ziehen.</p> <p>EL: Αποφύγετε την ελευθέρωσή του στο περιβάλλον. Αναφερθείτε σε ειδικές οδηγίες/.ελτίο δεδομένων ασφαλείας.</p> <p>ES: Evítense su liberación al medio ambiente. Recábense instrucciones específicas de la ficha de datos de seguridad.</p> <p>FR: Eviter le rejet dans l'environnement. Consulter les instructions spéciales/la fiche de données de sécurité.</p> <p>IT: Non disperdere nell'ambiente. Riferirsi alle istruzioni speciali/ schede informative in materia di sicurezza.</p> <p>NL: Voorkom lozing in het milieu. Vraag om speciale instructies/veiligheidskaart.</p> <p>PT: Evitar a libertação para o ambiente. Obter instruções específicas/fichas de segurança.</p> <p>SV: Undvik utsläpp till miljön. Läs särskilda instruktioner/varuinformationsblad.</p>
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## Section 16. Other Information

Revision Date: 2019-01-11

### Notice to Reader:



To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

## Nitric Acid Solution 1%



### Section 1. Identification

<b>1.1 Product Identifier</b>	Product Name: Nitric Acid Solution (1%) Product Number: SSC1201	
<b>1.2 Intended use</b>	EN: Laboratory reagent. For professional use only. DA: Laboratoriereagens. Kun til professionelt brug. DE: Laboratoriumreagens. Alleen voor professioneel gebruik. EL: Αντιδραστήριο εργαστηρίου. Για επαγγελματική χρήση μόνο. ES: Reactivo de laboratorio. Sólo para uso profesional. FR: Réactif de laboratoire. Pour un usage professionnel uniquement. IT: Laboratorio di reagente. Solo per uso professionale. NL: Laboratoriumreagens. Alleen voor professioneel gebruik. PT: Reagente de laboratório. Para uso profissional. SV: Laboratoriereagens. Endast för yrkesmässig användning.	
<b>1.3 Details of the supplier of the safety data sheet</b>	<b>Manufacturer</b>	Cancer Diagnostics, Inc.
	<b>Address</b>	116 Page Point Circle Durham, NC 27703
	<b>Phone Number</b>	1-877-846-5393
	<b>Fax Number</b>	1-877-817-1716
	<b>e-mail</b>	<a href="mailto:compliance@cancerdiagnostics.com">compliance@cancerdiagnostics.com</a>
	<b>Website</b>	<a href="http://www.cancerdiagnostics.com">www.cancerdiagnostics.com</a>

### Section 2. Hazards Identification

<b>2.1 GHS Classification</b>	Oxidizing liquids (Category 3) – H272 Skin corrosion (Category 1A) – H314 Serious eye damage (Category 1) – H 318	
<b>Classification: Directive 1999/45/EC</b>	 <b>C R34, R41; S25, S26 S36/37/39</b> EN: Corrosive DA: Ætsende DE: Ätzend EL: Διαβρωτικό ES: Corrosivo FR: Corrosif IT: Corrosivo NL: Bijtend PT: Corrosivo SV: Frätande	 <b>O:</b>

## Nitric Acid Solution 1%


	EN: Oxidizing DA: Brandnærende DE: Brandfördernd EL: Οξειδωτικό ES: Comburente FR: Comburant IT: Comburente NL: Oxyderend PT: Comburente SV: Oxiderande  For full text of R- & S- phrases: see Section 15.								
<b>2.2 Label Elements</b>	Pictogram(s):   Signal word: Danger  Hazard statement(s): H314 – Causes severe skin burns and eye damage H272 – May intensify fire; oxidizer  Precautionary statement(s): P302+ P352 - IF ON SKIN: Wash with plenty of soap and water P305 + P351 + P335 - IF IN EYES: Rinse cautiously with water for several minutes. Get immediate medical advice/attention.								
<b>NFPA Scale: 0-4</b>									
<b>HMIS (U.S.A.) Scale: 0-4</b>	<table border="1"> <tr> <td>HEALTH</td> <td>2</td> </tr> <tr> <td>FLAMMABILITY</td> <td>0</td> </tr> <tr> <td>PHYSICAL HAZARD</td> <td>1</td> </tr> <tr> <td>PERSONAL PROTECTION</td> <td>B</td> </tr> </table>	HEALTH	2	FLAMMABILITY	0	PHYSICAL HAZARD	1	PERSONAL PROTECTION	B
HEALTH	2								
FLAMMABILITY	0								
PHYSICAL HAZARD	1								
PERSONAL PROTECTION	B								
<b>2.3 Other Hazards</b>	<b>PBT:</b> This mixture does not contain any substances that are assessed to be a PBT. <b>vPvB:</b> This mixture does not contain any substances that are assessed to be a vPvB.								

### Section 3. Composition and Information on Ingredients

#### 3.2 Chemical Description: Mixture

\*May contain additional non-hazardous proprietary ingredients.

\*May contain additional active ingredients at concentrations <0.1%w/v.

Hazardous Ingredients:	CAS#	EC#	GHS Symbols	%
Nitric Acid	7697-37-2	231-714-2	 Danger. 3 H272 May intensify fire; oxidizer. 1 H314 Causes severe skin burns and eye damage. 1 H318 Causes serious eye damage.	≤ 1.0



# Nitric Acid Solution 1%

## Section 4. First Aid Measures

### 4.1 Description of first aid measures

**Eye Contact:** Check for and remove contact lenses. Immediately flush eyes with copious amounts of water and get immediate medical attention.

**Skin Contact:** Remove contaminated clothing and wash contact area with mild soap and copious amounts of water. Get medical attention if irritation develops.

**Inhalation:** If inhaled, remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms worsen.

**Ingestion:** Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as collar, tie, belt or waistband. Get immediate medical attention.

### 4.2 Most important symptoms and effects, both acute and delayed

See section 2.2 and 11.

### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

## Section 5. Fire Fighting Measures

<b>5.1 Extinguishing Media</b>	Extinguish fire using water spray, carbon dioxide, chemical foam, or dry chemical.
<b>5.2 Special hazards arising from the substance or mixture</b>	No unusual fire or explosion hazards expected.
<b>5.3 Advice for firefighters</b>	As with any fire, wear personal protection equipment, including a self-contained breathing apparatus (S.C.B.A.)

## Section 6. Accidental Release Measures

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

Wear chemical resistant clothing, gloves, and eye protection. Wear NIOSH/MSHA approved breathing apparatus.

### 6.2 Environmental precautions

Keep material away from heat, flame, ignition sources, and reactive materials. Don't allow product to enter drain.

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

Wipe up or absorb spill using inert absorbent and place in a suitable waste container for disposal.

## Section 7. Handling and Storage

### 7.1 Precautions for safe handling.

Avoid contact with skin and eyes.

Wash thoroughly after handling.

Avoid breathing vapor.

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

Store in well ventilated area.

Keep container tightly closed.

Store at 15-30°C.

### 7.3 Specific end use(s).

See section 1.2

## Section 8. Exposure Controls / Personal Protection

<b>8.1 Control parameters</b>	<b>Exposure Limits:</b> N/A
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## Nitric Acid Solution 1%

<b>8.2 Exposure controls</b>	<p><b>Personal Protective Equipment (PPE):</b></p> <p><b>Eye/Face protection.</b> Safety glasses or goggles are required.</p> <p><b>Skin protection.</b> Protective clothing is required.</p> <p><b>Hand protection.</b> Chemical resistant gloves are required. Glove material must be resistant to the components of this product. Consult glove manufacturer for specific recommendations of appropriate material and thickness of glove.</p> <p><b>Respiratory protection.</b> Avoid breathing vapor.</p> <p><b>Environmental exposure controls.</b> Avoid releasing large quantities into the environment. No additional information.</p>
<b>Engineering Controls</b>	<p>Working area should be adequately large and well ventilated to prevent concentration of vapors. Provide mechanical exhaust ventilation or other engineering controls to keep airborne concentrations of vapors below their respective threshold limits.</p>

### Section 9. Physical and Chemical Properties

<b>Physical State</b>	Liquid
<b>Color</b>	Colorless
<b>Odor</b>	Odorless
<b>Odor Threshold</b>	Unknown
<b>pH</b>	Acidic
<b>Melting Point/ Freezing Point</b>	Unknown
<b>Initial Boiling Point</b>	Unknown
<b>Flash Point</b>	Unknown
<b>Evaporation Rate</b>	Unknown
<b>Flammability (solid, gas)</b>	Unknown
<b>Upper/Lower Flammability Limits</b>	Unknown
<b>Vapor Pressure</b>	Unknown
<b>Vapor Density</b>	Unknown
<b>Relative Density</b>	Unknown
<b>Solubility(ies)</b>	Water
<b>Partition Coefficient: n-octanol/water</b>	Unknown
<b>Auto-Ignition Temperature</b>	Unknown
<b>Decomposition Temperature</b>	Unknown
<b>Viscosity</b>	Unknown
<b>Explosive Properties</b>	Not explosive.
<b>Oxidizing Properties</b>	Unknown

### Section 10. Stability and Reactivity

<b>10.1 Reactivity</b>	Stable under normal temperatures and pressures.
<b>10.2 Chemical Stability</b>	Stable under normal temperatures and pressures.
<b>10.3 Possibility of Hazardous Reactions</b>	No hazardous reactions known.

## Nitric Acid Solution 1%

<b>10.4 Conditions to Avoid</b>	Fire, static electricity, direct sunlight.
<b>10.5 Incompatible Materials</b>	Strong acids, bases and oxidizers
<b>10.6 Hazardous Decomposition Materials</b>	None known.

### Section 11. Toxicological Information

<b>11.1 Information on Toxicological Effects.</b>	<b>Acute Toxicity.</b> No relevant data <b>Skin Corrosion/Irritation.</b> Corrosive to skin and mucous membranes. <b>Serious Eye Damage/Irritation.</b> Corrosive to the eye. <b>Respiratory or skin sensitization.</b> No relevant data available. <b>Germ Cell Mutagenicity.</b> No relevant data.
<b>Carcinogenicity.</b>	<b>International Agency for Research on Cancer (IARC).</b> None of the components are listed. <b>National Toxicology Program (NTP).</b> None of the components are listed.

### Section 12. Ecological Information

<b>12.1 Toxicity</b>	<b>Fish:</b> No relevant studies identified. <b>Crustacea:</b> No relevant studies identified. <b>Algae/Aquatic Plants:</b> No relevant studies identified. <b>Other Organisms:</b> No relevant studies identified.
<b>12.2 Persistence and Degradability.</b>	No relevant studies identified.
<b>12.3 Bioaccumulative Potential.</b>	No relevant studies identified.
<b>12.4 Mobility in Soil.</b>	Miscible in water. May spread in water systems. This component is non-volatile.
<b>Additional Remarks</b>	None.
<b>12.5 Results of PBT and vPvB Assessment.</b>	<b>PBT:</b> This mixture does not contain any substances that are assessed to be a PBT. <b>vPvB:</b> This mixture does not contain any substances that are assessed to be a vPvB.

### Section 13. Disposal Considerations

<b>13.1 Waste Disposal Methods.</b>	Sewage disposal is discouraged. Waste should not be disposed of by release to sewers. Dispose waste in accordance with federal, state and local environmental control regulations.
<b>Product/Packaging Disposal.</b>	Final decisions on the appropriate waste management method must be in line with local, regional and national regulations.
<b>Other Disposal Recommendations.</b>	No relevant data available.

### Section 14. Transport Information

<b>14.1 UN Number DOT, IATA, IMDG, ADR</b>	DOT: 2031 ADR/RID: 2031 IMDG: 2031 IATA: 2031
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## Nitric Acid Solution 1%

<b>14.2 UN Proper Shipping Name</b> DOT, IATA, IMDG, ADR	ADR/RID: NITRIC ACID IMDG: NITRIC ACID IATA: NITRIC ACID DOT: NITRIC ACID
<b>14.3 Transport Hazard Class(es)</b>	DOT: 8 IATA: 8 IMDG: 8 ADR/RID: 8
<b>14.4 Packing Group</b> DOT, IATA, IMDG, ADR	ADR/RID: II IMDG: II IATA: II DOT: II
<b>14.5 Environmental Hazards</b>	<b>Marine Pollutant:</b> No
<b>14.6 Special Precautions for User</b>	Not applicable.

### Section 15. Regulatory Information

<b>15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture.</b>	
<b>Extremely Hazardous Substances; Section 355</b>	None of the components in this mixture are listed.
<b>Toxic Substances Control Act; TSCA</b>	All of the components in this mixture are listed.
<b>California Proposition 65</b>	None of the components in this mixture are listed.
<b>Right To Know Components</b>	Nitric Acid Massachusetts Pennsylvania New Jersey
<b>15.2 Chemical Safety Assessment</b>	No Chemical Safety Assessment has been carried out for this substance/mixture by Cancer Diagnostics, Inc.
<b>R phrases</b>	<b>R34</b> EN: Causes burns. DA: Ætsningsfare. DE: Verursacht Verätzungen. EL: Προκαλεί εγκαύματα. ES: Provoca quemaduras. FR: Provoque des brulures. IT: Provoca ustioni. NL: Veroorzaakt brandwonden. PT: Provoca queimaduras. SV: Frätande.  <b>R41</b> EN: Risk of serious damage to eyes. DA: Risiko for alvorlig øjenskade. DE: Gefahr ernster Augenschäden. EL: Κίνδυνος σοβαρών οφθαλμικών βλαβών. ES: Riesgo de lesiones oculares graves. FR: Risque de lésions oculaires graves. IT: Rischio di gravi lesioni oculari. NL: Gevaar voor ernstig oogletsel. PT: Risco de lesões oculares graves. SV: Risk för allvarliga ögonskador.
<b>S phrases</b>	<b>S25</b> EN: Avoid contact with eyes. DA: Undgå kontakt med øjnene.

## Nitric Acid Solution 1%

	<p>DE: Berührung mit den Augen vermeiden. EL: Αποφεύγετε την επαφή με τα μάτια. ES: Evítese el contacto con los ojos. FR: Éviter le contact avec les yeux. IT: Evitare il contatto con gli occhi. NL: Aanraking met de ogen vermijden. PT: Evitar o contacto com os olhos. SV: Undvik kontakt med ögonen.</p> <p><b>S26</b> EN: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. DA: Kommer stoffet i øjnene, skylles straks grundigt med vand og læge kontaktes. DE: Bei Berührung mit den Augen sofort gründlich mit Wasser abspülen und Arzt konsultieren. EL: Σε περίπτωση επαφής με τα μάτια πλύνετε τα αμέσως με άφθονο νερό και ζητήστε ιατρική συμβουλή. ES: En caso de contacto con los ojos, lávense inmediata y abundantemente con agua y acúdase a un médico. FR: En cas de contact avec les yeux, laver immédiatement et abondamment avec de l'eau et consulter un spécialiste. IT: In caso di contatto con gli occhi, lavare immediatamente e abbondantemente con acqua e consultare un medico. NL: Bij aanraking met de ogen onmiddellijk met overvloedig water afspoelen en deskundig medisch advies inwinnen. PT: Em caso de contacto com os olhos, lavar imediata e abundantemente com água e consultar um especialista. SV: id kontakt med ögonen, spola genast med mycket vatten och kontakta läkare.</p> <p><b>S36/37/39</b> EN: Wear suitable protective clothing, gloves and eye/face protection. DA: Brug særligt arbejdstøj, egnede beskyttelseshandsker og -briller/ansigtsskærm. DE: Bei der Arbeit geeignete Schutzkleidung, Schutzhandschuhe und Schutzbrille/Gesichtsschutz tragen. EL: Φοράτε κατάλληλη προστατευτική ενδυμασία, γάντια και συσκευή προστασίας ματιών/προσώπου ES: Úsense indumentaria y guantes adecuados y protección para los ojos/la cara. FR: Porter un vêtement de protection approprié, des gants et un appareil de protection des yeux/du visage. IT: Usare indumenti protettivi e guanti adatti e proteggersi gli occhi/la faccia. NL: Draag geschikte beschermende kleding, handschoenen en een beschermingsmiddel voor de ogen/het gezicht. PT: Usar vestuário de protecção, luvas e equipamento protector para os olhos /face adequados. SV: Använd lämpliga skyddskläder, skyddshandskar samt skyddsglasögon eller ansiktsskydd.</p>
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### Section 16. Other Information

Revision Date: 2019-01-11

**Notice to Reader:**




*To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.*

# Formalin Solution 20%



## 1. Identification

<b>1.1 Product Identifier</b>	Product Name: Formalin Solution (20%) Product Number: SSC1161-125, SSC1161-1000	
<b>1.2 Intended use</b>	EN: Laboratory reagent. For professional use only. DA: Laboratoriereagens. Kun til professionelt brug. DE: Laboratoriumreagens. Alleen voor professioneel gebruik. EL: Αντιδραστήριο εργαστηρίου. Για επαγγελματική χρήση μόνο. ES: Reactivo de laboratorio. Sólo para uso profesional. FR: Réactif de laboratoire. Pour un usage professionnel uniquement. IT: Laboratorio di reagente. Solo per uso professionale. NL: Laboratoriumreagens. Alleen voor professioneel gebruik. PT: Reagente de laboratório. Para uso profissional. SV: Laboratoriereagens. Endast för yrkesmässig användning.	
<b>1.3 Details of the supplier of the safety data sheet</b>	<b>Manufacturer</b>	Cancer Diagnostics, Inc.
	<b>Address</b>	116 Page Point Circle Durham, NC 27703
	<b>Phone Number</b>	1-877-846-5393
	<b>Fax Number</b>	1-877-817-1716
	<b>e-mail</b>	<a href="mailto:compliance@cancerdiagnostics.com">compliance@cancerdiagnostics.com</a>
	<b>Website</b>	<a href="http://www.cancerdiagnostics.com">www.cancerdiagnostics.com</a>

## 2. Hazards Identification

<b>2.1 GHS Classification</b>	Flammable liquids (Category 4) – H227 Acute Toxicity, Oral (Category 3) – H301 Acute Toxicity, Dermal (Category 4) – H311 Skin irritation (Category 2) – H315 Serious eye damage (Category 1) H318 Skin sensitization (Category 1) – H317 Carcinogenicity (Category 2) – H351 Specific target organ toxicity (Category 1) – H370		
<b>Classification: Directive 1999/45/EC</b>	 <p><b>T</b></p> EN: Toxic DA: Giftig DE: Giftig EL: Τοξικό ES: Tóxico FR: Toxique IT: Tossico NL: Vergiftig PT: Tóxico SV: Giftig	 <p><b>C</b></p> EN: Corrosive DA: Ætsende DE: Ätzend EL: Διαβρωτικό ES: Corrosivo FR: Corrosif IT: Corrosivo NL: Bijtend PT: Corrosivo SV: Frätande	 <p><b>Xn</b></p> EN: Harmful DA: Sundhedsskadelig DE: Gesundheitsschädlich EL: Επιβλαβές ES: Nocivo FR: Nocif IT: Nocivo NL: Schadelijk PT: Nocivo SV: Hälsoskadlig
	For full text of R- & S- phrases: see Section 15.		

## Formalin Solution 20%

<b>2.2 Label Elements</b>	<p>Pictogram(s):</p>  <p>Signal word:</p> <p>Danger</p> <p>Hazard statement(s):</p> <p>H301 – Toxic if swallowed        H311 – Toxic in contact with skin        H318 – Causes serious eye damage        H351 – Suspected of causing cancer        H370 – Causes damage to organs</p> <p>Hazard statement(s) not listed on label:</p> <p>H317 – May Cause an allergic skin reaction        H227 – Combustible Liquid        H315 – Causes skin irritation</p> <p>Precautionary statement(s):</p> <p>P201: Obtain special instructions before use.        P202: Do not handle until all safety precautions [on SDS] have been read and understood.        P308 + P315 – If exposed or concerned: Get immediate medical advice/attention.</p> <p>Precautionary statement(s) not listed on label:</p> <p>P301 + P315 - IF SWALLOWED: Get immediate medical advice/attention        P280 – Wear protective gloves/protective clothing/eye protection/face protection        P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.        P333 + P313 – If skin irritation or rash occurs: Get medical advice/attention.        P403 + P235 – Store in a well-ventilated place. Keep container tightly closed.</p>		
<b>NFPA</b> <b>Scale: 0-4</b>			
<b>HMIS (U.S.A.)</b> <b>Scale: 0-4</b>	<b>HEALTH</b>	<b>3</b>	
	<b>FLAMMABILITY</b>	<b>1</b>	
	<b>PHYSICAL HAZARD</b>	<b>0</b>	
	<b>PERSONAL PROTECTION</b>	<b>H</b>	
<b>2.3 Other Hazards</b>	<p><b>PBT:</b> This mixture does not contain any substances that are assessed to be a PBT.  <b>vPvB:</b> This mixture does not contain any substances that are assessed to be a vPvB.</p>		







## Formalin Solution 20%

### 3. Composition and Information on Ingredients

#### 3.2 Chemical Description: Mixture

\*May contain additional non-hazardous proprietary ingredients.

\*May contain additional active ingredients at concentrations <0.1%w/v.

Hazardous Ingredients:	CAS#	EC#	GHS Symbols	%
Formalin (37-40% Formaldehyde)	50-00-0	200-001-8	 Danger. 1 H318 Causes serious eye damage. 1B 314 Causes severe skin burns and eye damage.  Danger. 3. H301 Toxic if swallowed. 3 H311 Toxic in contact with skin. 3 H331 Toxic if inhaled.  Danger. 2. H351 Suspected of causing cancer. 1. H370. Causes damage to organs.	≤ 18
Methanol	67-56-1	200-659-6	 Danger. 3 H225 Highly flammable liquid and vapour.  Danger. 3. H301 Toxic if swallowed. 3 H311 Toxic in contact with skin. 3 H331 Toxic if inhaled.  Danger. 1 H370 Causes damage to organs.	≤ 3

### 4. First Aid Measures

#### 4.1 Description of first aid measures

**Eye Contact:** Check for and remove contact lenses. Immediately flush eyes with copious amounts of water and get immediate medical attention.

**Skin Contact:** Remove contaminated clothing and wash contact area with mild soap and copious amounts of water. Get medical attention if irritation develops.

**Inhalation:** If inhaled, remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms worsen.

**Ingestion:** Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as collar, tie, belt or waistband. Get immediate medical attention.

#### 4.2 Most important symptoms and effects, both acute and delayed

See section 2.2 and 11.

#### 4.3 Indication of any immediate medical attention and special treatment needed

No data available



## Formalin Solution 20%

### 5. Fire Fighting Measures

<b>5.1 Extinguishing Media</b>	Extinguish fire using water spray, carbon dioxide, chemical foam, or dry chemical.
<b>5.2 Special hazards arising from the substance or mixture</b>	Emits acrid smoke and irritating fumes.
<b>5.3 Advice for firefighters</b>	As with any fire, wear personal protection equipment, including a self-contained breathing apparatus (S.C.B.A.)

### 6. Accidental Release Measures

<b>6.1 Personal precautions, protective equipment and emergency procedures</b>	Wear chemical resistant clothing, gloves, and eye protection. Wear NIOSH/MSHA approved breathing apparatus.
<b>6.2 Environmental precautions</b>	Keep material away from heat, flame, ignition sources, and reactive materials. Don't allow product to enter drain.
<b>6.3 Methods and materials for containment and cleaning up</b>	Wipe up or absorb spill using inert absorbent and place in a suitable waste container for disposal.

### 7. Handling and Storage

<b>7.1 Precautions for safe handling.</b>	Avoid contact with skin and eyes. Wash thoroughly after handling. Avoid breathing vapor.
<b>7.2 Conditions for safe storage, including any incompatibilities.</b>	Store in well ventilated area. Keep container tightly closed. Store at 15-30°C.
<b>7.3 Specific end use(s).</b>	See section 1.2

### 8. Exposure Controls / Personal Protection

<b>8.1 Control parameters</b>	<b>Exposure Limits:</b> Formaldehyde: <b>NIOSH REL:</b> Ca TWA 0.016 ppm C 0.1 ppm <b>OSHA PEL:</b> [1910.1048] TWA 0.75 ppm ST 2 ppm <b>ACGIH TLV:</b> 0.3 ppm C Methanol: <b>NIOSH REL:</b> TWA 200 ppm (260 mg/m <sup>3</sup> ) ST 250 ppm (325 mg/m <sup>3</sup> ) [skin] <b>OSHA PEL:</b> TWA 200 ppm (260 mg/m <sup>3</sup> ) <b>ACGIH TLV:</b> TWA 200 ppm (262 mg/m <sup>3</sup> ) STEL 250 ppm (328 mg/m <sup>3</sup> )
<b>8.2 Exposure controls</b>	<b>Personal Protective Equipment (PPE):</b> <b>Eye/Face protection.</b> Safety glasses or goggles are required. <b>Skin protection.</b> Protective clothing is required. <b>Hand protection.</b> Chemical resistant gloves are required. Glove material must be resistant to the components of this product. Consult glove manufacturer for specific recommendations of appropriate material and thickness of glove. <b>Respiratory protection.</b> Avoid breathing vapor.

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	<b>Environmental exposure controls.</b> Avoid releasing large quantities into the environment. No additional information.
<b>Engineering Controls</b>	Working area should be adequately large and well ventilated to prevent concentration of vapors. Provide mechanical exhaust ventilation or other engineering controls to keep airborne concentrations of vapors below their respective threshold limits.

### 9. Physical and Chemical Properties

<b>Physical State</b>	Liquid
<b>Color</b>	Colorless
<b>Odor</b>	Strong formalin odor
<b>Odor Threshold</b>	Unknown
<b>pH</b>	Unknown
<b>Melting Point/ Freezing Point</b>	Unknown
<b>Initial Boiling Point</b>	Unknown
<b>Flash Point</b>	Unknown
<b>Evaporation Rate</b>	Unknown
<b>Flammability (solid, gas)</b>	Unknown
<b>Upper/Lower Flammability Limits</b>	Unknown
<b>Vapor Pressure</b>	Unknown
<b>Vapor Density</b>	Unknown
<b>Relative Density</b>	Unknown
<b>Solubility(ies)</b>	Water
<b>Partition Coefficient: n-octanol/water</b>	Unknown
<b>Auto-Ignition Temperature</b>	Unknown
<b>Decomposition Temperature</b>	Unknown
<b>Viscosity</b>	Unknown
<b>Explosive Properties</b>	Not explosive.
<b>Oxidizing Properties</b>	Unknown

### 10. Stability and Reactivity

<b>10.1 Reactivity</b>	No relevant data available.
<b>10.2 Chemical Stability</b>	Stable under normal temperatures and pressures.
<b>10.3 Possibility of Hazardous Reactions</b>	No hazardous reactions known.
<b>10.4 Conditions to Avoid</b>	Fire, static electricity, direct sunlight.
<b>10.5 Incompatible Materials</b>	Slightly reactive with oxidizing agents.
<b>10.6 Hazardous Decomposition Materials</b>	Carbon Monoxide, Carbon Dioxide

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### 11. Toxicological Information

<b>11.1 Information on Toxicological Effects.</b>	<p><b>Acute Toxicity.</b>          Methanol:          Oral LD50          LDLO Oral - Human - 143 mg/kg          Remarks: Lungs, Thorax, or Respiration: Dyspnea. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.          LD50 Oral - rat - 1,187 - 2,769 mg/kg          Inhalation LC50          LC50 Inhalation - rat - 4 h - 128.2 mg/l          LC50 Inhalation - rat - 6 h - 87.6 mg/l          Dermal LD50          LD50 Dermal - rabbit - 17,100 mg/kg</p> <p><b>Skin Corrosion/Irritation.</b>          Irritating to skin and mucous membranes.</p> <p><b>Serious Eye Damage/Irritation.</b>          Corrosive to eye.</p> <p><b>Respiratory or skin sensitization.</b>          No relevant data available.</p> <p><b>Germ Cell Mutagenicity.</b>          No relevant data available.</p>
<b>Carcinogenicity.</b>	<p><b>International Agency for Research on Cancer (IARC).</b>          Formaldehyde is listed as a known human carcinogen.</p> <p><b>National Toxicology Program (NTP).</b>          Formaldehyde is listed as "Known to be a human carcinogen" in the Thirteenth Report.</p>

### 12. Ecological Information


<b>12.1 Toxicity</b>	<p><b>Fish:</b> No relevant studies identified. <b>Crustacea:</b> No relevant studies identified. <b>Algae/Aquatic Plants:</b> No relevant studies identified. <b>Other Organisms:</b> No relevant studies identified.</p>
<b>12.2 Persistence and Degradability.</b>	No relevant studies identified.
<b>12.3 Bioaccumulative Potential.</b>	No relevant studies identified.
<b>12.4 Mobility in Soil.</b>	Miscible in water. May spread in water systems. This component is non-volatile.
<b>Additional Remarks</b>	None.
<b>12.5 Results of PBT and vPvB Assessment.</b>	<p><b>PBT:</b> This mixture does not contain any substances that are assessed to be a PBT.  <b>vPvB:</b> This mixture does not contain any substances that are assessed to be a vPvB.</p>

### 13. Disposal Considerations

<b>13.1 Waste Disposal Methods.</b>	Sewage disposal is discouraged. Waste should not be disposed of by release to sewers. Dispose waste in accordance with federal, state and local environmental control regulations.
<b>Product/Packaging Disposal.</b>	Final decisions on the appropriate waste management method must be in line with local, regional and national regulations.
<b>Other Disposal Recommendations.</b>	No relevant data available.

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### 14. Transport Information

<b>14.1 UN Number DOT, IATA,IMDG, ADR</b>	DOT: 1198 ADR/RID: 1198 IMDG: 1198 IATA: 1198
<b>14.2 UN Proper Shipping Name DOT, IATA,IMDG, ADR</b>	ADR/RID: Formaldehyde Solution IMDG: Formaldehyde Solution IATA: Formaldehyde Solution DOT: Formaldehyde Solution
<b>14.3 Transport Hazard Class(es)</b>	DOT: 3 IATA: 3 IMDG: 3 ADR/RID:3  
<b>14.4 Packing Group DOT, IATA,IMDG, ADR</b>	ADR/RID: III IMDG: III IATA: III DOT: III
<b>14.5 Environmental Hazards</b>	<b>Marine Pollutant:</b> No
<b>14.6 Special Precautions for User</b>	Not applicable.

### 15. Regulatory Information

<b>15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture.</b>	
<b>Extremely Hazardous Substances; Section 355</b>	None of the components in this mixture are listed.
<b>Toxic Substances Control Act; TSCA</b>	All of the components in this mixture are listed.
<b>California Proposition 65</b>	Methanol is listed as a having developmental toxicity.
<b>Right To Know Components</b>	None of the components in this mixture are listed.
<b>Other Regulations</b>	SARA 302 Components: Formaldehyde 50-00-0 SARA 313 Components: Methanol 67-56-1 Formaldehyde 50-00-0
<b>15.2 Chemical Safety Assessment</b>	No Chemical Safety Assessment has been carried out for this substance/mixture by Cancer Diagnostics, Inc.
<b>R phrases</b>	<b>R24/25</b> EN: Toxic in contact with skin and if swallowed. DA: Giftig ved hudkontakt og ved indtagelse. DE: Giftig bei Berührung mit der Haut und beim Verschlucken. EL: Τοξικό σε επαφή με το δέρμα και σε περίπτωση καταπόσεως. ES: Tóxico en contacto con la piel y por ingestión.

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	<p>FR: Toxique par contact avec la peau et par ingestion.  IT: Tossico a contatto con la pelle e per ingestione.  NL: Vergiftig bij aanraking met de huid en bij opname door de mond.  PT: Tóxico em contacto com a pele e por ingestão.  SV: Giftigt vid hudkontakt och förtäring.</p> <p><b>R38</b>  EN: Irritating to skin.  DA: Irriterer huden.  DE: Reizt die Haut.  EL: Ερεθίζει το δέρμα.  ES: Irrita la piel.  FR: Irritant pour la peau.  IT: Irritante per la pelle.  NL: Irriterend voor de huid.  PT: Irriterend voor de huid.  SV: Irriterar huden.</p> <p><b>R45</b>  EN: May cause cancer.  DA: Kan fremkalde kræft.  DE: Kann Krebs erzeugen.  FR: Peut provoquer le cancer.  IT: Può provocare il cancro.  ES: Puede causar cáncer.  FR: Risque de lésions oculaires graves.  IT: Rischio di gravi lesioni oculari.  NL: Gevaar voor ernstig oogletsel.  PT: Risco de lesões oculares graves.  SV: Risk för allvarliga ögonskador.</p> <p><b>R41</b>  EN: Risk of serious damage to eyes.  DA: Risiko for alvorlig øjensskade.  DE: Gefahr ernster Augenschäden.  EL: Κίνδυνος σοβαρών οφθαλμικών βλαβών.  ES: Riesgo de lesiones oculares graves.  FR: Risque de lésions oculaires graves.  IT: Rischio di gravi lesioni oculari.  NL: Gevaar voor ernstig oogletsel.  PT: Risco de lesões oculares graves.  SV: Risk för allvarliga ögonskador.</p> <p><b>R43</b>  EN: May cause sensitisation by skin contact.  DA: Kan give overfølsomhed ved kontakt med huden.  DE: Sensibilisierung durch Hautkontakt möglich.  EL: Μπορεί να προκαλέσει ευαισθητοποίηση σε επαφή με το δέρμα.  ES: Posibilidad de sensibilización en contacto con la piel.  FR: Peut entraîner une sensibilisation par contact avec la peau.  IT: Può provocare sensibilizzazione per contatto con la pelle.  NL: Kan overgevoeligheid veroorzaken bij contact met de huid.  PT: Pode causar sensibilização em contacto com a pele.  SV: Kan ge allergi vid hudkontakt.</p> <p><b>R60</b>  EN: This material and its container must be disposed of as hazardous waste.  DA: Kan skade forplantningsevnen.  DE: Dieses Produkt und sein Behälter sind als gefährlicher Abfall zu entsorgen.  EL: Μπορεί να εξασθενήσει τη γονιμότητα.  ES: Elimínense el producto y su recipiente como residuos peligrosos.  FR: Eliminer le produit et son récipient comme un déchet dangereux.  IT: Questo materiale e il suo contenitore devono essere smaltiti come rifiuti pericolosi.</p>
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	<p>NL: Kan de vruchtbaarheid schaden.          PT: Pode comprometer a fertilidade.          SV: Kan ge nedsatt fortplantningsförmåga.</p>
<p><b>S phrases</b></p>	<p><b>S7</b>          EN: Keep container tightly closed.          DA: Emballagen skal holdes tæt lukket.          DE: Behälter dicht geschlossen halten.          EL: Το δοχείο να διατηρείται ερμητικά κλεισμένο.          ES: Manténgase el recipiente bien cerrado.          FR: Conserver le récipient bien fermé.          IT: Conservare il recipiente ben chiuso.          NL: In goed gesloten verpakking bewaren.          PT: Manter o recipiente bem fechado.          SV: Förpackningen förvaras väl tillsluten.</p> <p><b>S16</b>          EN: Keep away from sources of ignition - No smoking.          DA: Holdes væk fra antændelseskilder - Rygning forbudt.          DE: Von Zündquellen fernhalten - Nicht rauchen.          EL: Μακριά από πηγές ανάφλεξης - Απαγορεύεται το κάπνισμα.          ES: Conservar alejado de toda llama o fuente de chispas - No fumar.          FR: Conserver a l'ecart de toute flamme ou source d'étincelles - Ne pas fumer.          IT: Conservare lontano da fiamme e scintille - Non fumare.          NL: Verwijderd houden van ontstekingsbronnen - Niet roken.          PT: Manter afastado de qualquer chama ou fonte de ignição - Não fumar.          SV: Förvaras åtskilt från antändningskällor - Rökning förbjuden.</p> <p><b>S26</b>          EN: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.          DA: Kommer stoffet i øjnene, skylles straks grundigt med vand og læge kontaktes.          DE: Bei Berührung mit den Augen sofort gründlich mit Wasser abspülen und Arzt konsultieren.          EL: Σε περίπτωση επαφής με τα μάτια πλύνετε τα αμέσως με άφθονο νερό και ζητήστε ιατρική συμβουλή.          ES: En caso de contacto con los ojos, lávense inmediata y abundantemente con agua y acúdase a un médico.          FR: En cas de contact avec les yeux, laver immédiatement et abondamment avec de l'eau et consulter un spécialiste.          IT: In caso di contatto con gli occhi, lavare immediatamente e abbondantemente con acqua e consultare un medico.          NL: Bij aanraking met de ogen onmiddellijk met overvloedig water afspoelen en deskundig medisch advies inwinnen.          PT: Em caso de contacto com os olhos, lavar imediata e abundantemente com água e consultar um especialista.          SV: id kontakt med ögonen, spola genast med mycket vatten och kontakta läkare.</p> <p><b>S36/37/39</b>          EN: Wear suitable protective clothing, gloves and eye/face protection.          DA: Brug særligt arbejdstøj, egnede beskytteshandsker og -briller/ansigtsskærm.          DE: Bei der Arbeit geeignete Schutzkleidung, Schutzhandschuhe und Schutzbrille/Gesichtsschutz tragen.          EL: Φοράτε κατάλληλη προστατευτική ενδυμασία, γάντια και συσκευή προστασίας ματιών/προσώπου          ES: Úsense indumentaria y guantes adecuados y protección para los ojos/la cara.          FR: Porter un vêtement de protection appropriée, des gants et un appareil de protection des yeux/du visage.          IT: Usare indumenti protettivi e guanti adatti e proteggersi gli occhi/la faccia.          NL: Draag geschikte beschermende kleding, handschoenen en een beschermingsmiddel voor de ogen/het gezicht.          PT: Usar vestuário de protecção, luvas e equipamento protector para os olhos /face adequados.          SV: Använd lämpliga skyddskläder, skyddshandskar samt skyddsglasögon eller ansiktsskydd.</p> <p><b>S45</b></p>

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	<p>EN: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).</p> <p>DA: Ved ulykkestilfælde eller ved ildebefindende er omgående lægebehandling nødvendig; vis etiketten, hvis det er muligt.</p> <p>DE: Bei Unfall oder Unwohlsein sofort Arzt zuziehen (wenn möglich, dieses Etikett vorzeigen).</p> <p>EL: Σε περίπτωση ατυχήματος ή αν αισθανθείτε αδιαθεσία ζητήστε αμέσως ιατρική συμβουλή (δείξτε την ετικέτα αν είναι δυνατό).</p> <p>ES: En caso de accidente o malestar, acúdase inmediatamente al médico (si es posible, muéstresele la etiqueta).</p> <p>FR: En cas d'accident ou de malaise, consulter immédiatement un medecin (si possible lui montrer l'étiquette).</p> <p>IT: In caso di incidente o di malessere consultare immediatamente il medico (se possibile, mostrargli l'etichetta).</p> <p>NL: Bij een ongeval of indien men zich onwel voelt, onmiddellijk een arts raadplegen (indien mogelijk hem dit etiket tonen).</p> <p>PT: Em caso de acidente ou de indisposição, consultar imediatamente o médico (se possível mostrar-lhe o rótulo).</p> <p>SV: Vid olycksfall, illamående eller annan påverkan, kontakta omedelbart läkare. Visa om möjligt etiketten.</p> <p><b>S51</b></p> <p>EN: Use only in well-ventilated areas.</p> <p>DA: Må kun bruges på steder med god ventilation.</p> <p>DE: Nur in gut gelüfteten Bereichen verwenden.</p> <p>EL: Να χρησιμοποιείται μόνο σε καλά αεριζόμενο χώρο.</p> <p>ES: Úsese únicamente en lugares bien ventilados.</p> <p>FR: Utiliser seulement dans des zones bien ventilées.</p> <p>IT: Usare soltanto in luogo ben ventilato.</p> <p>NL: Uitsluitend op goed geventileerde plaatsen gebruiken.</p> <p>PT: Utilizar somente em locais bem ventilados.</p> <p>SV: Sörj för god ventilation.</p>
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### 16. Other Information

**Revision Date:** 2019-01-11


**Notice to Reader:**

*To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.*



**Section 1. Identification**

<b>1.1 Product Identifier</b>	Product Name: Citric Acid Solution (1%) Product Number: SSC1200	
<b>1.2 Intended use</b>	EN: Laboratory reagent. For professional use only. DA: Laboratoriereagens. Kun til professionelt brug. DE: Laboratoriumreagens. Alleen voor professioneel gebruik. EL: Αντιδραστήριο εργαστηρίου. Για επαγγελματική χρήση μόνο. ES: Reactivo de laboratorio. Sólo para uso profesional. FR: Réactif de laboratoire. Pour un usage professionnel uniquement. IT: Laboratorio di reagente. Solo per uso professionale. NL: Laboratoriumreagens. Alleen voor professioneel gebruik. PT: Reagente de laboratório. Para uso profissional. SV: Laboratoriereagens. Endast för yrkesmässig användning.	
<b>1.3 Details of the supplier of the safety data sheet</b>	<b>Manufacturer</b>	Cancer Diagnostics, Inc.
	<b>Address</b>	116 Page Point Circle Durham, NC 27703
	<b>Phone Number</b>	1-877-846-5393
	<b>Fax Number</b>	1-877-817-1716
	<b>e-mail</b>	<a href="mailto:compliance@cancerdiagnostics.com">compliance@cancerdiagnostics.com</a>
	<b>Website</b>	<a href="http://www.cancerdiagnostics.com/sds">www.cancerdiagnostics.com/sds</a>

**Section 2. Hazards Identification**

<b>2.1 GHS Classification</b>	Eye irritation (Category 2A) – H319
<b>Classification: Directive 1999/45/EC</b>	 <p> <b>Xi</b>            EN: Irritant            DA: Lokalirriterende            DE: Reizend            EL: Ερεθιστικό            ES: Irritante            FR: Irritant            IT: Irritante            NL: Irriterend            PT: Irritante            SV: Irriterande         </p> <p>For full text of R- &amp; S- phrases: see Section 15.</p>




<b>2.2 Label Elements</b>	Pictogram(s):   Signal word: Warning  Hazard statement(s): H319 – Causes serious eye irritation   Precautionary statement(s): P302+ P352 - IF ON SKIN: Wash with plenty of soap and water P305 + P351 - IF IN EYES: Rinse cautiously with water for several minutes.			
<b>NFPA Scale: 0-4</b>				
<b>HMIS (U.S.A.) Scale: 0-4</b>	HEALTH	1		
	FLAMMABILITY	0		
	PHYSICAL HAZARD	0		
	PERSONAL PROTECTION	B		
<b>2.3 Other Hazards</b>	<b>PBT:</b> This mixture does not contain any substances that are assessed to be a PBT. <b>vPvB:</b> This mixture does not contain any substances that are assessed to be a vPvB.			

### Section 3. Composition and Information on Ingredients

#### 3.2 Chemical Description: Mixture

\*May contain additional non-hazardous proprietary ingredients.

\*May contain additional active ingredients at concentrations <0.1%w/v.

Hazardous Ingredients:	CAS#	EC#	GHS Symbols	%
Citric Acid	77-92-9	201-069-1	 Warning. 2 H319 Causes serious eye irritation.	≤ 1.0

### Section 4. First Aid Measures

#### 4.1 Description of first aid measures

**Eye Contact:** Check for and remove contact lenses. Immediately flush eyes with copious amounts of water. Get medical attention if irritation persists.

**Skin Contact:** Remove contaminated clothing and wash contact area with mild soap and copious amounts of water. Get medical attention if irritation develops.

**Inhalation:** If inhaled, remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms worsen.

**Ingestion:** Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as collar, tie, belt or waistband. Get immediate medical attention.

#### 4.2 Most important symptoms and effects, both acute and delayed

See section 2.2 and 11.

#### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

## Section 5. Fire Fighting Measures

<b>5.1 Extinguishing Media</b>	Extinguish fire using water spray, carbon dioxide, chemical foam, or dry chemical.
<b>5.2 Special hazards arising from the substance or mixture</b>	No unusual fire or explosion hazards expected.
<b>5.3 Advice for firefighters</b>	As with any fire, wear personal protection equipment, including a self-contained breathing apparatus (S.C.B.A.)

## Section 6. Accidental Release Measures

<p><b>6.1 Personal precautions, protective equipment and emergency procedures</b> Wear chemical resistant clothing, gloves, and eye protection. Wear NIOSH/MSHA approved breathing apparatus.</p> <p><b>6.2 Environmental precautions</b> Keep material away from heat, flame, ignition sources, and reactive materials. Don't allow product to enter drain.</p> <p><b>6.3 Methods and materials for containment and cleaning up</b> Wipe up or absorb spill using inert absorbent and place in a suitable waste container for disposal.</p>
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## Section 7. Handling and Storage

<p><b>7.1 Precautions for safe handling.</b> Avoid contact with skin and eyes. Wash thoroughly after handling. Avoid breathing vapor.</p> <p><b>7.2 Conditions for safe storage, including any incompatibilities.</b> Store in well ventilated area. Keep container tightly closed. Store at 15-30°C.</p> <p><b>7.3 Specific end use(s).</b> See section 1.2</p>
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## Section 8. Exposure Controls / Personal Protection

<b>8.1 Control parameters</b>	<b>Exposure Limits:</b> N/A
<b>8.2 Exposure controls</b>	<p><b>Personal Protective Equipment (PPE):</b></p> <p><b>Eye/Face protection.</b> Safety glasses or goggles are required.</p> <p><b>Skin protection.</b> Protective clothing is required.</p> <p><b>Hand protection.</b> Chemical resistant gloves are required. Glove material must be resistant to the components of this product. Consult glove manufacturer for specific recommendations of appropriate material and thickness of glove.</p> <p><b>Respiratory protection.</b> Avoid breathing vapor.</p> <p><b>Environmental exposure controls.</b></p>



	Avoid releasing large quantities into the environment. No additional information.
<b>Engineering Controls</b>	Working area should be adequately large and well ventilated to prevent concentration of vapors. Provide mechanical exhaust ventilation or other engineering controls to keep airborne concentrations of vapors below their respective threshold limits.

### Section 9. Physical and Chemical Properties

<b>Physical State</b>	Liquid
<b>Color</b>	Colorless
<b>Odor</b>	Odorless
<b>Odor Threshold</b>	Unknown
<b>pH</b>	Acidic
<b>Melting Point/ Freezing Point</b>	Unknown
<b>Initial Boiling Point</b>	Unknown
<b>Flash Point</b>	Unknown
<b>Evaporation Rate</b>	Unknown
<b>Flammability (solid, gas)</b>	Unknown
<b>Upper/Lower Flammability Limits</b>	Unknown
<b>Vapor Pressure</b>	Unknown
<b>Vapor Density</b>	Unknown
<b>Relative Density</b>	Unknown
<b>Solubility(ies)</b>	Water
<b>Partition Coefficient: n-octanol/water</b>	Unknown
<b>Auto-Ignition Temperature</b>	Unknown
<b>Decomposition Temperature</b>	Unknown
<b>Viscosity</b>	Unknown
<b>Explosive Properties</b>	Not explosive.
<b>Oxidizing Properties</b>	Unknown

### Section 10. Stability and Reactivity

<b>10.1 Reactivity</b>	Stable under normal temperatures and pressures.
<b>10.2 Chemical Stability</b>	Stable under normal temperatures and pressures.
<b>10.3 Possibility of Hazardous Reactions</b>	No hazardous reactions known.
<b>10.4 Conditions to Avoid</b>	Fire, static electricity, direct sunlight.
<b>10.5 Incompatible Materials</b>	Strong acids, bases and oxidizers
<b>10.6 Hazardous Decomposition Materials</b>	None known.

### Section 11. Toxicological Information

<b>11.1 Information on Toxicological Effects.</b>	<b>Acute Toxicity.</b> Citric Acid: Rat LD50 Oral – 5400mg/kg Dermal - > 2000mg/kg
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	<b>Skin Corrosion/Irritation.</b> May be irritating to skin and mucous membranes. <b>Serious Eye Damage/Irritation.</b> Seriously irritating to the eye. <b>Respiratory or skin sensitization.</b> No relevant data available. <b>Germ Cell Mutagenicity.</b> No relevant data.
<b>Carcinogenicity.</b>	<b>International Agency for Research on Cancer (IARC).</b> None of the components are listed. <b>National Toxicology Program (NTP).</b> None of the components are listed.

## Section 12. Ecological Information

<b>12.1 Toxicity</b>	<b>Fish:</b> No relevant studies identified. <b>Crustacea:</b> No relevant studies identified. <b>Algae/Aquatic Plants:</b> No relevant studies identified. <b>Other Organisms:</b> No relevant studies identified.
<b>12.2 Persistence and Degradability.</b>	No relevant studies identified.
<b>12.3 Bioaccumulative Potential.</b>	No relevant studies identified.
<b>12.4 Mobility in Soil.</b>	Miscible in water. May spread in water systems. This component is non-volatile.
<b>Additional Remarks</b>	None.
<b>12.5 Results of PBT and vPvB Assessment.</b>	<b>PBT:</b> This mixture does not contain any substances that are assessed to be a PBT. <b>vPvB:</b> This mixture does not contain any substances that are assessed to be a vPvB.

## Section 13. Disposal Considerations

<b>13.1 Waste Disposal Methods.</b>	Sewage disposal is discouraged. Waste should not be disposed of by release to sewers. Dispose waste in accordance with federal, state and local environmental control regulations.
<b>Product/Packaging Disposal.</b>	Final decisions on the appropriate waste management method must be in line with local, regional and national regulations.
<b>Other Disposal Recommendations.</b>	No relevant data available.

## Section 14. Transport Information

<b>14.1 UN Number DOT, IATA,IMDG, ADR</b>	<b>DOT:</b> Not dangerous goods. <b>ADR/RID:</b> Not dangerous goods. <b>IMDG:</b> Not dangerous goods. <b>IATA:</b> Not dangerous goods.
<b>14.2 UN Proper Shipping Name DOT, IATA,IMDG, ADR</b>	<b>ADR/RID:</b> Not dangerous goods. <b>IMDG:</b> Not dangerous goods. <b>IATA:</b> Not dangerous goods. <b>DOT:</b> Not dangerous goods.
<b>14.3 Transport Hazard Class(es)</b>	<b>DOT:</b> Not dangerous goods. <b>IATA:</b> Not dangerous goods. <b>IMDG:</b> Not dangerous goods. <b>ADR/RID:</b> Not dangerous goods.
<b>14.4 Packing Group DOT, IATA,IMDG, ADR</b>	<b>ADR/RID:</b> Not dangerous goods. <b>IMDG:</b> Not dangerous goods.



	IATA: Not dangerous goods. DOT: Not dangerous goods.
<b>14.5 Environmental Hazards</b>	<b>Marine Pollutant:</b> No
<b>14.6 Special Precautions for User</b>	Not applicable.

## Section 15. Regulatory Information

<b>15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture.</b>	
<b>Extremely Hazardous Substances; Section 355</b>	None of the components in this mixture are listed.
<b>Toxic Substances Control Act; TSCA</b>	All of the components in this mixture are listed.
<b>California Proposition 65</b>	None of the components in this mixture are listed.
<b>Right To Know Components</b>	None of the components in this mixture are listed.
<b>15.2 Chemical Safety Assessment</b>	No Chemical Safety Assessment has been carried out for this substance/mixture by Cancer Diagnostics, Inc.
<b>R phrases</b>	<p><b>R36</b> EN: Irritating to eyes. DE: Reizt die Augen. FR: Irritant pour les yeux. IT: Irritante per gli occhi. ES: Irrita los ojos. FR: Irritant pour les yeux. IT: Irritante per gli occhi. NL: Irriterend voor de ogen. PT: Irritante para os olhos. SV: Irriterar ögonen.</p>
<b>S phrases</b>	<p><b>S25</b> EN: Avoid contact with eyes. DA: Undgå kontakt med øjnene. DE: Berührung mit den Augen vermeiden. EL: Αποφεύγετε την επαφή με τα μάτια. ES: Evítese el contacto con los ojos. FR: Éviter le contact avec les yeux. IT: Evitare il contatto con gli occhi. NL: Aanraking met de ogen vermijden. PT: Evitar o contacto com os olhos. SV: Undvik kontakt med ögonen.</p> <p><b>S36/37/39</b> EN: Wear suitable protective clothing, gloves and eye/face protection. DA: Brug særligt arbejdstøj, egnede beskyttelseshandsker og -briller/ansigtsskærm. DE: Bei der Arbeit geeignete Schutzkleidung, Schutzhandschuhe und Schutzbrille/Gesichtsschutz tragen. EL: Φοράτε κατάλληλη προστατευτική ενδυμασία, γάντια και συσκευή προστασίας ματιών/προσώπου ES: Usense indumentaria y guantes adecuados y protección para los ojos/la cara. FR: Porter un vêtement de protection appropriée, des gants et un appareil de protection des yeux/du visage. IT: Usare indumenti protettivi e guanti adatti e proteggersi gli occhi/la faccia. NL: Draag geschikte beschermende kleding, handschoenen en een beschermingsmiddel voor de ogen/het gezicht. PT: Usar vestuário de protecção, luvas e equipamento protector para os olhos /face adequados. SV: Använd lämpliga skyddskläder, skyddshandskar samt skyddsglasögon eller ansiktsskydd.</p>



*Safety Data Sheet*

**Emergency** 1-800-424-9300  
**Contact** (intl.) 1-352-323-3500

**Section 16. Other Information**

**Revision Date:** 2019-01-11

**Notice to Reader:**

*To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.*