

Revision Date: 1/15/15

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier Trade name: Gram Stain Kit, Stabilized Iodine
Product code(s): 6060, 6400, 6600

1.2 Relevant identified use Laboratory Reagent

1.3 Supplier Company:
Astral Diagnostics
1224 Forest Parkway
Suite 200
West Deptford, NJ 08066
Telephone: 856.224.0900

1.4 Emergency Telephone CHEMTREC 800.424.9300

This product is a kit which contains the following; refer to the SDS data for each of the components listed.

Component Name: Crystal Violet Solution
Component Identifier: 6060A, 6081, 6161

Component Name: Stabilized Iodine Solution
Component Identifier: 6060B, 6082, 6182

Component Name: Decolorizer 75/25 Solution
Component Identifier: 6060C, 6084, 6164

Component Name: Safranin Solution
Component Identifier: 6060D, 6086, 6166

2. COMPONENT AND HAZARDS IDENTIFICATION

2.1 Product identifier Crystal Violet Solution
Product Code: 6060A, 6081, 6161

2.2 Classification of the substance or mixture

Hazard statement(s):

Irritant!

Causes mild skin irritation.
Causes serious eye irritation.
Toxic to aquatic life with long lasting effects.
Causes damage to organs.
Suspected carcinogen.

2.3 GHS Label elements, including precautionary statements



Irritant!

Precautionary statement(s):

Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
Wear protective gloves/ eye protection/ face protection.
If swallowed: Immediately call a poison center or doctor/ physician.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.4 WHMIS Classification

B-2: Flammable Liquid
D-2B: Material causing other toxic effects.

2.5 NFPA Rating

Health hazard: 1
Fire: 1
Reactivity Hazard: 0

2.6 Target Organs

Eyes, Kidney, Liver, Heart, Central nervous system.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Components	Name	CAS number	% by weight
	Methanol	67-56-1	<1
	Ethanol	64-17-5	<11

Crystal Violet	17372-87-1	<1
Phenol	108-95-2	<0
Water	7732-18-5	<90

4. FIRST AID MEASURES

4.1 General Information

- Eye contact:** Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact:** In case of contact, flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation:** Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion:** Call medical doctor or poison control center immediately. Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Use dry chemical, CO₂, water spray (fog) or foam. Not suitable, do not use water jet.

5.2 Special hazards: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

5.3 Hazardous Products: Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst with the risk of a subsequent explosion. Run-off to sewer may create fire or explosion hazard.

5.4 Special protective

equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

5.5 Special remarks on

explosion hazards: Development of hazardous combustion gases or vapors possible in the event of fire.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

6.2 Environmental precaution: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Clean up: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect

spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container.

7. HANDLING AND STORAGE

- 7.1 Safe Handling:** Do not get in eyes, on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use empty containers to retain product, residue can be hazardous. Do not reuse container.
- 7.2 Storage:** Store in accordance with local regulations. Store in a segregated and approved area.. Store in original container, protected from direct sunlight. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

Ethanol:	Exposure limits ACGIH TLV (United States, 3/2012). Absorbed through skin. STEL: 1000 ppm 15 minute(s). STEL: 328 mg/m ³ 15 minute(s). OSHA PEL 1989 (United States, 3/1989). Absorbed through skin. TWA: 1000 ppm 8 hour(s). TWA: 1900 mg/m ³ 8 hour(s). NIOSH REL (United States, 1/2013). Absorbed through skin. TWA: 1000 ppm 10 hour(s). TWA: 1900 mg/m ³ 10 hour(s). OSHA PEL (United States, 6/2010). TWA: 1000 ppm 8 hour(s). TWA: 1900 mg/m ³ 8 hour(s).
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8.2 Engineering measures: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

8.3 Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

8.4 Personal protection

Respiratory:

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Recommended: neoprene

Eyes: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: splash goggles

Skin: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: lab coat

8.5 Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state:	Liquid.	Color:	Violet/Purple
Flash Point:	Not available	Odor:	Characteristic, alcohol-like.
pH:	1.8	Boiling/condensation point:	Not available
Melting/freezing point:	Not available	Relative density:	Not available
Vapor pressure:	Not available	Vapor density:	Not available
Odor threshold:	Not available	Evaporation rate:	<11%
VOC:	11.1% (w/w)	Solubility:	Soluble in water

10. STABILITY AND REACTIVITY

10.1 Chemical stability: The product is stable.

10.2 Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

10.3 Hazardous polymerization: Under normal conditions of storage and use, hazardous polymerization will not occur.

10.4 Conditions to avoid: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition

10.5 Materials to avoid: Highly reactive or incompatible with the following materials: oxidizing materials. Reactive or incompatible with the following materials: metals and acids.

10.6 Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not occur

10.7 Conditions of reactivity: Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge, heat, shocks and mechanical impacts and oxidizing materials. Highly explosive in the presence of the following materials or conditions: open flames, sparks and static discharge, heat, shocks and mechanical impacts and oxidizing materials.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity

Oral LD50:	no data available
Inhalation LC50:	no data available
Dermal LD50:	no data available
Other information on acute toxicity:	no data available
Skin corrosion/irritation:	no data available
Serious eye damage/eye irritation:	no data available
Respiratory or skin sensitization:	no data available
Germ cell mutagenicity:	no data available
Specific target organ toxicity, single exposure (Globally Harmonized System):	no data available
Specific target organ toxicity, repeated exposure (Globally Harmonized System):	no data available
Aspiration hazard:	no data available

11.2 Potential Health Effects

Inhalation: Toxic if inhaled. Causes respiratory tract irritation.

Ingestion: Toxic if swallowed.

Skin: Toxic if absorbed through skin. Causes skin irritation.

Eyes: Causes eye irritation.

11.2 Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been investigated.

12. ECOLOGICAL INFORMATION

12.1 Data:

Toxicity: No data available
Persistence and degradability: No data available
Bioaccumulative potential: No data available
Mobility in soil: No data available
PBT and vPvB assessment: No data available
Other adverse effects: No data available

13. DISPOSAL CONSIDERATIONS

13.1 Methods: The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national, local laws and regulations.

14. TRANSPORT INFORMATION

Land Transport DOT (US)

Not regulated

15. REGULATORY INFORMATION

United States

HCS Classification: Flammable liquid, Highly toxic material, Irritating material, Target organ effects

U.S. Federal regulations: United States inventory (TSCA 8b):

TSCA 8(d) H and S data reporting: Phenol: 1987

TSCA (Toxic substance control act): This product is listed on the TSCA inventory.

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304/311/312 hazardous chemicals: Ethanol

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:

Ethanol: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard.

Clean Water Act (CWA) 307: Phenol

Clean Water Act (CWA) 311: Phenol

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

DEA List I & II Chemicals

(Precursor Chemicals): Not listed

Connecticut Carcinogen Reporting: None of the components are listed.

Connecticut Hazardous Material Survey: None of the components are listed.

Florida substances: None of the components are listed.

Illinois Chemical Safety Act: None of the components are listed.

Illinois Toxic Substances

Disclosure to Employee Act: None of the components are listed.

Louisiana Spill: None of the components are listed.

Louisiana Reporting: None of the components are listed.

Massachusetts Spill: None of the components are listed.

Massachusetts Substances: The following components are listed: Ethanol

Minnesota Hazardous Substances: None of the components are listed.

Michigan Critical Material: None of the components are listed.

NJ Toxic Catastrophe Prevention Act: None of the components are listed.

New Jersey Spill: None of the components are listed.

New Jersey Hazardous Substances: The following components are listed: Ethanol

NY Toxic Chemical Release Reporting: None of the components are listed.

New York Acutely Hazardous Substances: None of the components are listed.

Pennsylvania RTK Hazardous Substances: The following components are listed: Ethanol

Rhode Island Hazardous Substances: None of the components are listed.

WHMIS (Canada):

Class B-2: Flammable Liquid

Class D-2B: Material causing other toxic effects (Toxic).

Canadian lists:

CEPA Toxic substances: None of the components are listed.

Canadian ARET: None of the components are listed.

Canadian NPRI: The following components are listed: Ethanol

Alberta Designated Substances: None of the components are listed.

Ontario Designated Substances: None of the components are listed.

Quebec Designated Substances: None of the components are listed.

CEPA DSL / CEPA NDSL:

All components are listed or exempted.

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

International regulations

International lists: **Australia inventory (AICS):** All components are listed or exempted.

China inventory (IECSC): All components are listed or exempted.

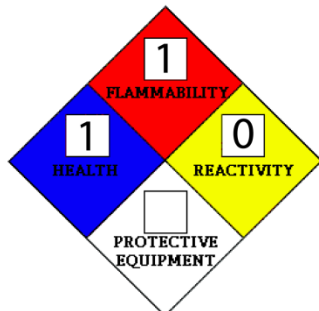
Japan inventory: Not determined.

Korea inventory: Not determined.

New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.

Philippines inventory (PICCS): All components are listed or exempted.

16. OTHER INFORMATION



National Fire Protection Association (U.S.A.)

Disclaimer

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Astral Diagnostics and its Affiliates shall not be liable for any damage resulting from handling.

2. COMPONENT AND HAZARDS IDENTIFICATION

2.1 Product Identifier Gram Stain Iodine, Stabilized
Component Code: 6060B, 6082, 6162

2.2 Classification of the substance or mixture

Hazard statement:

May cause an allergic skin reaction.
Harmful to aquatic life

2.3 GHS Label elements, including precautionary statements



Warning!

Precautionary statement(s):

Skin: Wear protective gloves/ eye protection/ face protection.
Ingestion: May be harmful if swallowed. Call a doctor/ physician.
If in eyes: May cause irritation. Rinse cautiously with water for several minutes.

2.4 WHMIS Classification

D-2A: Material causing other toxic effects.

2.5 NFPA Rating

Health hazard: 0
Fire: 0
Reactivity Hazard: 0

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Components	Name	CAS number	% by weight
	Water	7732-18-5	<98
	Povidone Iodine	25655-41-8	<12
	Potassium Iodide	7681-11-0	<2

4. FIRST AID MEASURES

4.1 General Information

- Eye contact:** Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact:** In case of contact, flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation:** Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion:** Call medical doctor or poison control center immediately. Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Use an extinguishing agent suitable for the surrounding fire.

5.2 Special exposure hazards: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

5.3 Hazardous thermal decomposition products: Decomposition products may include the following materials:

- Carbon dioxide
- Carbon monoxide
- Nitrogen oxides
- Halogenated compounds
- Metal oxide/oxides

5.4 Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

6.2 Environmental precaution: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Clean up: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container.

7. HANDLING AND STORAGE

- 7.1 Safe Handling:** Do not get in eyes, on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use empty containers to retain product, residue can be hazardous. Do not reuse container.
- 7.2 Storage:** Store in accordance with local regulations. Store in a segregated and approved area.. Store in original container, protected from direct sunlight. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.2 Engineering measures:** Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- 8.3 Hygiene measures:** Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- 8.4 Personal protection**
- Respiratory:** Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands:** Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Recommended: neoprene
- Eyes:** Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: splash goggles
- Skin:** Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: lab coat
- 8.5 Environmental exposure controls:** Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state:	Liquid.	Color:	Brown
Odor:	Pungent	pH:	Not available
Boiling/condensation point:	100C (212F)	Melting/freezing point:	Not available
Relative density:	Not available	Vapor pressure:	Not available
Vapor density:	Not available	Odor threshold:	Not available
Evaporation rate:	0.36 (water)	VOC:	0% (w/w)
Solubility:	Soluble in water		

10. STABILITY AND REACTIVITY

10.1 Chemical stability: The product is stable.

10.2 Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

10.3 Hazardous polymerization: Under normal conditions of storage and use, hazardous polymerization will not occur.

10.4 Conditions to avoid: No specific data.

10.5 Materials to avoid: Highly reactive or incompatible with the following materials: oxidizing materials. Reactive or incompatible with the following materials: metals and acids.

10.6 Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not occur

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity

Oral LD50:	no data available
Inhalation LC50:	no data available
Dermal LD50:	no data available
Other information on acute toxicity:	no data available
Skin corrosion/irritation:	no data available
Serious eye damage/eye irritation:	no data available
Respiratory or skin sensitization:	no data available
Germ cell mutagenicity:	no data available
Specific target organ toxicity, single exposure (Globally Harmonized System):	no data available
Specific target organ toxicity, repeated exposure (Globally Harmonized System):	no data available
Aspiration hazard:	no data available

11.2 Potential Health Effects

Inhalation: Toxic if inhaled. Causes respiratory tract irritation.

Ingestion: Toxic if swallowed.

Skin: Toxic if absorbed through skin. Causes skin irritation.

Eyes: Causes eye irritation.

11.2 Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been

Investigated.

12. ECOLOGICAL INFORMATION

12.1 Data:

Toxicity: No data available
Persistence and degradability: No data available
Bioaccumulative potential: No data available
Mobility in soil: No data available
PBT and vPvB assessment: No data available
Other adverse effects: No data available

13. DISPOSAL CONSIDERATIONS

13.1 Methods: The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national, local laws and regulations.

14. TRANSPORT INFORMATION

DOT United States:

Not regulated.

15. REGULATORY INFORMATION

United States

HCS Classification: Not regulated

U.S. Federal regulations: **TSCA 8(a) IUR:** Not determined
United States inventory (TSCA 8b):
All components are listed or exempted.
All components of this product are listed on or compliant with the TSCA inventory.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: No products were found.
SARA 311/312 MSDS distribution - chemical inventory - hazard identification:
No products were found.
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: No products were found
Clean Air Act (CAA) 112 accidental release prevention: No products were found.
Clean Air Act (CAA) 112 regulated flammable substances: No products were found.
Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

DEA List I & II Chemicals (Precursor Chemicals):

Not listed

Connecticut Carcinogen Reporting: None of the components are listed.
Connecticut Hazardous Material Survey: None of the components are listed.
Florida substances: None of the components are listed.
Illinois Chemical Safety Act: None of the components are listed.
Illinois Toxic Substances None of the components are listed.
Disclosure to Employee Act: None of the components are listed.
Louisiana Spill: None of the components are listed.
Louisiana Reporting: None of the components are listed.

Massachusetts Spill: None of the components are listed.
Massachusetts Substances: None of the components are listed.
Minnesota Hazardous Substances: None of the components are listed.
Michigan Critical Material: None of the components are listed.
NJ Toxic Catastrophe Prevention Act: None of the components are listed.
New Jersey Spill: None of the components are listed.
New Jersey Hazardous Substances: None of the components are listed.
NY Toxic Chemical Release Reporting: None of the components are listed.
New York Acutely Hazardous Substances: None of the components are listed.
Pennsylvania RTK Hazardous Substances: None of the components are listed.
Rhode Island Hazardous Substances: None of the components are listed.

WHMIS (Canada): Class D-2A: Material causing other toxic effects.

Canadian lists:
CEPA Toxic substances: None of the components are listed.
Canadian ARET: None of the components are listed.
Canadian NPRI: None of the components are listed.
Alberta Designated Substances: None of the components are listed.
Ontario Designated Substances: None of the components are listed.
Quebec Designated Substances: None of the components are listed.

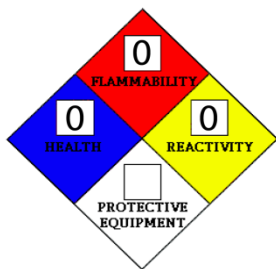
CEPA DSL / CEPA NDSL: All components are listed or exempted.

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

International regulations

International lists:
Australia inventory (AICS): All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.

16. OTHER INFORMATION



Disclaimer

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Astral Diagnostics and its Affiliates shall not be liable for any damage resulting from handling.

2. COMPONENT AND HAZARDS IDENTIFICATION

2.1 Product Identifier Decolorizer 75/25 Solution
Component Code: 6060C, 6084, 6164

2.2 Classification of the substance or mixture

Hazard statement(s):

Danger!
Highly flammable liquid and vapor.
Causes skin irritation.
Causes serious eye damage.
May cause respiratory irritation, drowsiness or dizziness.
Repeated exposure may cause skin dryness or cracking.

2.3 GHS Label elements, including precautionary statements



Danger!

Precautionary statement(s):

Danger!
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
Wear protective gloves/ eye protection/ face protection.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.4 WHMIS Classification

B-2 Flammable Liquid
D-2B Material causing other toxic effects

2.5 NFPA Rating

Health hazard: 1
Fire: 3
Reactivity Hazard: 0

2.6 Target Organs

Kidney, Liver, Heart, Central nervous system.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Components	Name	CAS number	% by weight
	Ethanol	64-17-5	<75
	Methanol	67-56-1	<4
	Acetone	67-64-1	25

4. FIRST AID MEASURES

4.1 General Information

- Eye contact:** Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact:** In case of contact, flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation:** Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion:** Call medical doctor or poison control center immediately. Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5. FIREFIGHTING MEASURES

- 5.1 Extinguishing media:** Use dry chemical, CO₂, water spray (fog) or foam. Not suitable, do not use water jet.
- 5.2 Special hazards:** Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- 5.3 Hazardous Products:** Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst with the risk of a subsequent explosion. Run-off to sewer may create fire or explosion hazard.
- 5.4 Special protective equipment for fire-fighters:** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
- 5.5 Special remarks on explosion hazards:** Vapor may cause flash fire. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.

6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions:** No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or

flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

6.2 Environmental precaution: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Clean up: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container.

7. HANDLING AND STORAGE

7.1 Safe Handling: Do not get in eyes, on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use empty containers to retain product, residue can be hazardous. Do not reuse container.

7.2 Storage: Store in accordance with local regulations. Store in a segregated and approved area.. Store in original container, protected from direct sunlight. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Ingredient

Methanol:

Exposure limits

ACGIH (United States, 1994). Absorbed through skin.
TWA: 262 mg/m³
STEL: 328 mg/m³

OSHA (United States, 1989). Absorbed through skin.
TWA: 260 mg/m³
STEL: 325 mg/m³

ACGIH TLV (United States, 1/2008). Absorbed through skin.
TWA: 200 ppm 8 hour(s).
TWA: 262 mg/m³ 8 hour(s).
STEL: 250 ppm 15 minute(s).
STEL: 328 mg/m³ 15 minute(s).

OSHA PEL 1989 (United States, 3/1989). Absorbed through skin.
TWA: 200 ppm 8 hour(s).
TWA: 260 mg/m³ 8 hour(s).
STEL: 250 ppm 15 minute(s).

STEL: 325 mg/m³ 15 minute(s).
NIOSH REL (United States, 6/2008). Absorbed through skin.
TWA: 200 ppm 10 hour(s).
TWA: 260 mg/m³ 10 hour(s).
STEL: 250 ppm 15 minute(s).
STEL: 325 mg/m³ 15 minute(s).
OSHA PEL (United States, 11/2006).
TWA: 200 ppm 8 hour(s).
TWA: 260 mg/m³ 8 hour(s).

Ethanol: Exposure Limits

ACGIH TLV (United States, 3/2012).
STEL: 1000 ppm 15 minute(s).
OSHA PEL 1989 (United States, 3/1989).
TWA: 1900 mg/m³ 8 hour(s).
TWA: 1000 ppm 8 hour(s).
NIOSH REL (United States, 1/2013).
TWA: 1000 ppm 10 hour(s).
TWA: 1900 mg/m³ 10 hour(s).
OSHA PEL (United States, 6/2010).
TWA: 1000 ppm 8 hour(s).
TWA: 1900 mg/m³ 8 hour(s).

Acetone: Exposure Limits

ACGIH (United States, 1996).
STEL: 1782 mg/m³ 15 minute(s).
TWA: 1188 mg/m³ 8 hour(s).
OSHA (United States, 1989).
STEL: 2400 mg/m³ 15 minute(s).
TWA: 1800 mg/m³ 8 hour(s).
ACGIH TLV (United States, 3/2012).
TWA: 500 ppm 8 hour(s).
TWA: 1188 mg/m³ 8 hour(s).
STEL: 750 ppm 15 minute(s).
STEL: 1782 mg/m³ 15 minute(s).
OSHA PEL 1989 (United States, 3/1989).
TWA: 750 ppm 8 hour(s).
TWA: 1800 mg/m³ 8 hour(s).
STEL: 1000 ppm 15 minute(s).
STEL: 2400 mg/m³ 15 minute(s).
NIOSH REL (United States, 1/2013).
TWA: 250 ppm 10 hour(s).
TWA: 590 mg/m³ 10 hour(s).
OSHA PEL (United States, 6/2010).
TWA: 1000 ppm 8 hour(s).
TWA: 2400 mg/m³ 8 hour(s).

Consult local authorities for acceptable exposure limits.

8.2 Engineering measures: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

8.3 Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

8.4 Personal protection

Respiratory:

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Recommended: neoprene

Eyes: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: splash goggles

Skin: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: lab coat

8.5 Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state:	Liquid.	Color:	Clear
Flash Point:	Closed cup: 11.667C (60.5F)	Odor:	Characteristic, alcohol-like.
pH:	Not available.	Boiling/condensation point:	Not available
Melting/freezing point:	Not available	Relative density:	Not available
Vapor pressure:	Not available	Vapor density:	Not available
Odor threshold:	Not available	Evaporation rate:	Not available
VOC:	100% (w/w)	Solubility:	Soluble in water.

10. STABILITY AND REACTIVITY

10.1 Chemical stability: The product is stable.

10.2 Possibility of hazardous

reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

10.3 Hazardous polymerization: Under normal conditions of storage and use, hazardous polymerization will not occur.

10.4 Conditions to avoid: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition

10.5 Materials to avoid: Highly reactive or incompatible with the following materials: oxidizing materials. Reactive or incompatible with the following materials: metals and acids.

10.6 Hazardous decomposition

products: Under normal conditions of storage and use, hazardous decomposition products should not occur

10.7 Conditions of reactivity: Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge, heat, shocks and mechanical impacts and oxidizing materials. Highly explosive in the presence of the following materials or conditions: open flames, sparks and static discharge, heat, shocks and mechanical impacts and oxidizing materials. Vapor may cause flash fire. Vapors may accumulate in low or confined areas

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity

Oral LD50:	no data available
Inhalation LC50:	no data available
Dermal LD50:	no data available
Other information on acute toxicity:	no data available
Skin corrosion/irritation:	no data available
Serious eye damage/eye irritation:	no data available
Respiratory or skin sensitization:	no data available
Germ cell mutagenicity:	no data available
Specific target organ toxicity, single exposure (Globally Harmonized System):	no data available
Specific target organ toxicity, repeated exposure (Globally Harmonized System):	no data available
Aspiration hazard:	no data available

11.2 Potential Health Effects

Inhalation: Toxic if inhaled. Causes respiratory tract irritation.

Ingestion: Toxic if swallowed.

Skin: Toxic if absorbed through skin. Causes skin irritation.

Eyes: Causes eye irritation.

11.2 Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated..

12. ECOLOGICAL INFORMATION

12.1 Data:

Toxicity: No data available

Persistence and degradability: No data available

Bioaccumulative potential: No data available

Mobility in soil: No data available

PBT and vPvB assessment: No data available

Other adverse effects: No data available

13. DISPOSAL CONSIDERATIONS

13C.1 Methods: The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national, local laws and regulations.

14. TRANSPORT INFORMATION

Land Transport DOT (US)

UN No.: UN1993, Class 3, Packing Group II
Proper Shipping Name: Flammable liquids, n.o.s. (Ethanol, Acetone)
Marine Pollutant: No
Poison Inhalation Hazard: No

TDG

UN No. UN1993
Proper Shipping Name Flammable liquid n.o.s. (Ethanol, Acetone)
Hazard Class 3
Subsidiary Hazard Class 6.1
Packing Group II

IATA

UN No. UN1993
Proper Shipping Name Flammable liquid n.o.s. (Ethanol, Acetone)
Hazard Class 3
Subsidiary Hazard Class 6.1
Packing Group II

IMDG/IMP

UN No. UN 1993
Proper Shipping Name Flammable liquid n.o.s. (Ethanol, Acetone)
Hazard Class 3
Packing Group II
EMS-NO F-E, S-E

15. REGULATORY INFORMATION

United States

HCS Classification: Flammable liquid, Toxic material, Irritating material, Target organ effects

U.S. Federal regulations: **TSCA 8(a) IUR:** Partial exemption
United States inventory (TSCA 8b):
Listed on inventory.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Acetone, Ethanol, Methanol.
SARA 311/312 MSDS distribution - chemical inventory - hazard identification:
Methanol: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard
Ethanol: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard
Acetone: : Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard

DEA List I Chemicals: Not listed

DEA List II Chemicals: Listed

SARA 313

	Product name	CAS number	Concentration
Form R - Reporting Requirements:	Methanol	64-17-5	<4%
Supplier notification:	Methanol	64-17-5	<4%

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

Connecticut Carcinogen Reporting: None of the components are listed.

Connecticut Hazardous Material Survey:	None of the components are listed.
Florida substances:	None of the components are listed.
Illinois Chemical Safety Act:	None of the components are listed.
Illinois Toxic Substances Disclosure to Employee Act:	None of the components are listed.
Louisiana Spill:	None of the components are listed.
Louisiana Reporting:	None of the components are listed.
Massachusetts Spill:	None of the components are listed.
Massachusetts Substances:	The following components are listed: Ethanol, Methanol, Acetone
Minnesota Hazardous Substances:	None of the components are listed.
Michigan Critical Material:	None of the components are listed.
NJ Toxic Catastrophe Prevention Act:	None of the components are listed.
New Jersey Spill:	None of the components are listed.
New Jersey Hazardous Substances:	The following components are listed: Ethanol, Methanol, Acetone
NY Toxic Chemical Release Reporting:	None of the components are listed.
New York Acutely Hazardous Substances:	The following components are listed: Methanol, Acetone
Pennsylvania RTK Hazardous Substances:	The following components are listed: Ethanol, Methanol, Acetone
Rhode Island Hazardous Substances:	None of the components are listed.

WHMIS (Canada): Class B-2: Flammable Liquid
Class D-2B: Material causing other toxic effects (Toxic).

Canadian lists:

CEPA Toxic substances: Volatile organic compounds
Canadian ARET: None of the components are listed.
Canadian NPRI: The following components are listed: Ethanol, Methanol, Acetone.
Alberta Designated Substances: None of the components are listed.
Ontario Designated Substances: None of the components are listed.
Quebec Designated Substances: None of the components are listed.

CEPA DSL / CEPA NDSL: All components are listed or exempted.

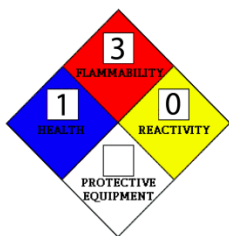
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International regulations

International lists:

Australia inventory (AICS): All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.

16. OTHER INFORMATION



National Fire Protection Association (U.S.A.)

Disclaimer

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Astral Diagnostics and its Affiliates shall not be liable for any damage resulting from handling.

2. COMPONENT AND HAZARDS IDENTIFICATION

2.1 Product identifier Safranin Solution
Product Code: 6060D, 6086, 6166

2.2 Classification of the substance or mixture

Hazard statement(s):

Irritant!

Causes mild skin irritation.
Causes serious eye irritation.
Toxic to aquatic life with long lasting effects.
Causes damage to organs.
Suspected carcinogen.

2.3 GHS Label elements, including precautionary statements



Irritant!

Precautionary statement(s):

Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
Wear protective gloves/ eye protection/ face protection.
If swallowed: Immediately call a poison center or doctor/ physician.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Avoid release to the environment.

2.4 WHMIS Classification

B-2: Flammable Liquid
D-2B: Material causing other toxic effects.

2.5 NFPA Rating

Health hazard: 1
Fire: 1
Reactivity Hazard: 0

2.6 Target Organs

Eyes, Kidney, Liver, Heart, Central nervous system.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Components	Name	CAS number	% by weight
	Methanol	67-56-1	<1
	Ethanol	64-17-5	<18
	Safranin	477-73-6	<1
	Water	7732-18-5	<82

4. FIRST AID MEASURES

4.1 General Information

- Eye contact:** Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact:** In case of contact, flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation:** Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion:** Call medical doctor or poison control center immediately. Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Use dry chemical, CO₂, water spray (fog) or foam. Not suitable, do not use water jet.

5.2 Special hazards: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

5.3 Hazardous Products: Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst with the risk of a subsequent explosion. Run-off to sewer may create fire or explosion hazard.

5.4 Hazardous Thermal Decomposition products: Decomposition products may include the following:
Carbon dioxide
Carbon monoxide

5.5 Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing

apparatus (SCBA) with a full face-piece operated in positive pressure mode.

5.6 Special remarks on explosion hazards: Development of hazardous combustion gases or vapors possible in the event of fire.

6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions:** No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- 6.2 Environmental precaution:** Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- 6.3 Clean up:** Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container.

7. HANDLING AND STORAGE

- 7.1 Safe Handling:** Do not get in eyes, on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use empty containers to retain product, residue can be hazardous. Do not reuse container.
- 7.2 Storage:** Store in accordance with local regulations. Store in a segregated and approved area.. Store in original container, protected from direct sunlight. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

Ethanol: **Exposure limits**
ACGIH TLV (United States, 3/2012). Absorbed through skin.
STEL: 1000 ppm 15 minute(s).

STEL: 328 mg/m³ 15 minute(s).

OSHA PEL 1989 (United States, 3/1989). Absorbed through skin.

TWA: 1000 ppm 8 hour(s).

TWA: 1900 mg/m³ 8 hour(s).

NIOSH REL (United States, 1/2013). Absorbed through skin.

TWA: 1000 ppm 10 hour(s).

TWA: 1900 mg/m³ 10 hour(s).

OSHA PEL (United States, 6/2010).

TWA: 1000 ppm 8 hour(s).

TWA: 1900 mg/m³ 8 hour(s).

8.2 Engineering measures: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

8.3 Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

8.4 Personal protection

Respiratory:

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Recommended: neoprene

Eyes: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: splash goggles

Skin: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: lab coat

8.5 Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state:	Liquid.	Color:	Reddish/maroon
Flash Point:	Not available	Odor:	Characteristic, alcohol-like.
pH:	Not available	Boiling/condensation point:	Not available
Melting/freezing point:	Not available	Relative density:	Not available
Vapor pressure:	Not available	Vapor density:	Not available
Odor threshold:	Not available	Evaporation rate:	<20%
VOC:	~20% (w/w)	Solubility:	Soluble in water

10. STABILITY AND REACTIVITY

- 10.1 Chemical stability:** The product is stable.
- 10.2 Possibility of hazardous reactions:** Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.3 Hazardous polymerization:** Under normal conditions of storage and use, hazardous polymerization will not occur.
- 10.4 Conditions to avoid:** Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition
- 10.5 Materials to avoid:** Highly reactive or incompatible with the following materials: oxidizing materials. Reactive or incompatible with the following materials: metals and acids.
- 10.6 Hazardous decomposition products:** Under normal conditions of storage and use, hazardous decomposition products should not occur
- 10.7 Conditions of reactivity:** Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge, heat, shocks and mechanical impacts and oxidizing materials. Highly explosive in the presence of the following materials or conditions: open flames, sparks and static discharge, heat, shocks and mechanical impacts and oxidizing materials.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity

Oral LD50:	no data available
Inhalation LC50:	no data available
Dermal LD50:	no data available
Other information on acute toxicity:	no data available
Skin corrosion/irritation:	no data available
Serious eye damage/eye irritation:	no data available
Respiratory or skin sensitization:	no data available
Germ cell mutagenicity:	no data available
Specific target organ toxicity, single exposure (Globally Harmonized System):	no data available
Specific target organ toxicity, repeated exposure (Globally Harmonized System):	no data available
Aspiration hazard:	no data available

11.2 Potential Health Effects

Inhalation: Toxic if inhaled. Causes respiratory tract irritation.

Ingestion: Toxic if swallowed.

Skin: Toxic if absorbed through skin. Causes skin irritation.

Eyes: Causes eye irritation.

11.2 Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been investigated.

12. ECOLOGICAL INFORMATION

12.1 Data:

Toxicity: No data available
Persistence and degradability: No data available
Bioaccumulative potential: No data available
Mobility in soil: No data available
PBT and vPvB assessment: No data available
Other adverse effects: No data available

13. DISPOSAL CONSIDERATIONS

13.1 Methods: The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national, local laws and regulations.

14. TRANSPORT INFORMATION

Land Transport DOT (US)

Not regulated

15. REGULATORY INFORMATION

United States

HCS Classification: Flammable liquid, Highly toxic material, Irritating material, Target organ effects

U.S. Federal regulations: United States inventory (TSCA 8b):

TSCA 8(d) H and S data reporting: No products were found.

TSCA (Toxic substance control act): This product is listed on the TSCA inventory.

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304/311/312 hazardous chemicals: Ethanol

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:

Ethanol: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard.

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

DEA List I & II Chemicals

(Precursor Chemicals): Not listed

Connecticut Carcinogen Reporting:

None of the components are listed.

Connecticut Hazardous Material Survey:

None of the components are listed.

Florida substances:

None of the components are listed.

Illinois Chemical Safety Act:

None of the components are listed.

Illinois Toxic Substances

Disclosure to Employee Act:

None of the components are listed.

Louisiana Spill:

None of the components are listed.

Louisiana Reporting:

None of the components are listed.

Massachusetts Spill:

None of the components are listed.

Massachusetts Substances:

The following components are listed: Ethanol

Minnesota Hazardous Substances:

None of the components are listed.

Michigan Critical Material:

None of the components are listed.

NJ Toxic Catastrophe Prevention Act:

None of the components are listed.

New Jersey Spill:

None of the components are listed.

New Jersey Hazardous Substances:

The following components are listed: Ethanol

NY Toxic Chemical Release Reporting: None of the components are listed.
New York Acutely Hazardous Substances: None of the components are listed.
Pennsylvania RTK Hazardous Substances: The following components are listed: Ethanol
Rhode Island Hazardous Substances: None of the components are listed.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

<u>Ingredient name</u>	<u>Cancer</u>	<u>Reproductive level</u>	<u>No significant risk level</u>	<u>Maximum acceptable dosage</u>
Methanol	No.	Yes.	No.	No.

CANADA

WHMIS (Canada): Class B-2: Flammable Liquid
 Class D-2B: Material causing other toxic effects (Toxic).

Canadian lists:

CEPA Toxic substances: None of the components are listed.
Canadian ARET: None of the components are listed.
Canadian NPRI: The following components are listed: Ethanol
Alberta Designated Substances: None of the components are listed.
Ontario Designated Substances: None of the components are listed.
Quebec Designated Substances: None of the components are listed.

CEPA DSL / CEPA NDSL:

All components are listed or exempted.

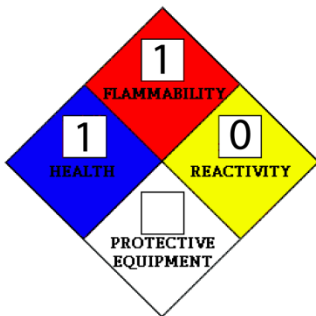
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International regulations

International lists:

Australia inventory (AICS): All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.

16. OTHER INFORMATION



National Fire Protection Association (U.S.A.)

Disclaimer

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with

regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Astral Diagnostics and its Affiliates shall not be liable for any damage resulting from handling.