



Safety Data Sheet

Gram Stain Set Stabilized

Revision Date: 07/22/19

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier Trade name: Gram Stain Stabilized Set
Product code(s): 6060-02, 6400, 6600

1.2 Relevant identified use Laboratory Reagent

1.3 Supplier Company:
Astral Diagnostics Inc.
1224 Forest Parkway
Suite 200
West Deptford, NJ 08066
Tel: 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
Component Identifier: 6060A, 6251-08, 6251-16

Component Name: Stabilized Iodine
Component Identifier: 6060B, 6253-08, 6253-16

Component Name: Decolorizer
Component Identifier: 6060C, 6254-08, 6254-16

Component Name: Safranin
Component Identifier: 6060D, 6256-08, 6256-16

Safety Data Sheet

Crystal Violet, Gram Stain

Revision Date: 01/17/19

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier	Trade name: Gram Stain Crystal Violet Product code(s): 6060A, 6251-08, 6251-16
1.2 Relevant identified uses	Laboratory Reagent
Supplier:	Astral Diagnostics Inc. 800-441-0366 Technical Service Monday-Friday: 8:00 -5:00 PM
Synonym:	None.
Material uses:	Laboratory Reagent.
Validation date:	12/11/2013
In case of emergency:	800-424-9300 CHEMTREC (USA) 24 Hours/Day: 7 Days/Week

2. HAZARDS IDENTIFICATION

Emergency Overview:

GHS Label Elements: Pictogram



Signal Word: **DANGER!**

Hazard statement(s):

- H226:** Flammable liquid
- H316:** Causes mild skin irritation
- H319:** Causes serious eye irritation
- H412:** May cause long lasting harmful effects to aquatic life

Precautionary statement(s):

- P260:** Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
- P280:** Wear protective gloves/ eye protection/ face protection.
- P305+351+338:** If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

NFPA Rating

Health hazard: 2
Fire: 2
Reactivity Hazard: 0

HMIS Classification

Health hazard: 2
Flammability: 2
Physical hazards: 0

Potential Health Effects : Inhalation – May cause respiratory tract irritation.
Skin - May cause skin irritation.
Eyes – May cause eye irritation.

Ingestion – Potentially toxic if swallowed in large quantities.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Name	CAS number	% by volume
Ethanol	64-17-5	<11
Methanol	67-56-1	<1
Crystal Violet	17372-87-1	<1
Phenol	108-95-2	<.0.5
Water	7732-18-5	<90

4. FIRST AID MEASURES

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

First-aid measures after inhalation: *Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.*

First-aid measures after skin contact: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a poison center or doctor/physician.

First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.

First-aid measures after ingestion: Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor/physician.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media: Do not use a heavy water stream

5.2 Special hazards arising from the substance or mixture

No additional information available

5.3 Advice for firefighters

Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. Do not enter fire area without proper protective equipment, including respiratory protection.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment: Gloves. Safety glasses. Combined gas/dust mask with filter type B/P3.
Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment: Equip cleanup crew with proper protection.
Emergency procedures: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Precautions for safe handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not breathe mist, vapors, spray. Obtain special instructions before use. Use personal protective equipment as required. Do not handle until all safety precautions have been read and understood.

Hygiene measures: Wash exposed skin thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures: Comply with applicable regulations.

Storage conditions: Keep container closed when not in use. Protect from sunlight. Store in a well-ventilated place.

Incompatible products: Strong oxidizers. Strong reducing agents. Strong bases.

Incompatible materials: Sources of ignition. Direct sunlight

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Consult local authorities for acceptable exposure limits.

Component	Source	Type	Value	Note
Phenol Solution	ACGIH	TWA	19 mg/m3, 5 ppm	
	OSHA	PEL (TWA)	19 mg/m3, 5 ppm	
	IDLH	US IDLH	250 ppm	
	NIOSH	REL (TWA)	19 mg/m3, 5 ppm	
	NIOSH	REL (ceiling)	60 mg/m3 15 min	
	NIOSH	REL (ceiling)	15.6 ppm 15 min	
Ethanol Solution	ACGH	STEL	1000 ppm 15 min	
	OSHA	PEL (TWA)	1000 ppm 8 hours	
	NIOSH	REL (TWA)	1000 ppm 10 hours	
Methanol	ACGIH	TWA	200 ppm	
	ACGIH	STEL	250 ppm	
	NIOSH	TWA	260 mg/m3, 200 ppm	
	OSHA	TWA	260 mg/m3, 200 ppm	

Personal protective equipment: Safety glasses. Gloves. Protective clothing. High gas/vapor concentration: gas mask with filter type B.

Hand protection: Wear protective gloves.

Eye protection: Chemical goggles or face shield.

Skin and body protection: Wear suitable protective clothing.

Respiratory protection: Wear appropriate mask. Gas mask with filter type B.

Other information: Do not eat, drink or smoke during use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.

Flash Point: NA

pH: NA

Melting/freezing point: NA

Vapor pressure: NA

Odor threshold: NA

VOC: NA

Color: Purple

Odor: Characteristic

Boiling/condensation point: NA

Relative density: NA

Vapor density: NA

Evaporation rate: NA

Solubility: Soluble in the following materials: water

10. STABILITY AND REACTIVITY

10.1. Reactivity

No further relevant information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Extremely high or low temperatures.

10.5. Incompatible materials

Strong oxidizers. Strong acids.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide. Nitrogen Oxides. Ammonia

11. TOXICOLOGICAL INFORMATION

Phenol (108-95-2)

LD50 oral rat 650 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Experimental value)

LD50 dermal rat 660 mg/kg (Rat; Experimental value; Equivalent or similar to OECD 402)

LD50 dermal rabbit 850 - 1400 mg/kg (Rabbit)

LC50 inhalation rat (mg/l) 0.32 mg/l/4h (Rat; Literature study)

ATE US (oral) 650.000 mg/kg body weight

ATE US (dermal) 660.000 mg/kg body weight

ATE US (vapors) 0.320 mg/l/4h

ATE US (dust, mist) 0.320 mg/l/4h

Water (7732-18-5)

LD50 oral rat ≥ 90000 mg/kg

ATE US (oral) 90000.000 mg/kg body weight

Ethanol (64-17-5)

LD50 Oral rat 3450 mg/kg (mouse)

LC50 Inhalation rat 20000 ppm/10H

Methanol

LD50 oral rat 1187-2769 mg/kg

LC50 inhalation rat (mg/l) 128.2 mg/l (4hr)

LC50 inhalation rat (mg/l) 87.6 mg/l (6hr)

LD50 Dermal rabbit 17100 mg/kg

Skin corrosion/irritation: Not classified

Serious eye damage/irritation: No irritating effect

Respiratory or skin sensitization: Not classified

Germ cell mutagenicity: Not classified

Carcinogenicity: Not Classified

12. ECOLOGICAL INFORMATION

Toxicity:

Ethanol
LC50 fish 14200 mg/l

Methanol
LC50 fish 1 15400 mg/l
EC50 Daphnia 1 18260 mg/l
ErC50 algae 22000 mg/l

Persistence and degradability:

Ethanol
BOD 0.8-0.967 gO₂/g
COD 1.7 gO₂/g
ThOD 2.1 gO₂/g

Methanol
BOD 0.6-1.12 gO₂/g
COD 1.42 gO₂/g
ThOd 1.5 gO₂/g

Bioaccumulative potential:

Ethanol
BCF fish 1 1
Log Pow -0.31

Methanol
BCF fish 1 1-4.5
Log Pow -0.77

Mobility in soil:

Ethanol
Surface tension 0.022 N/m

Methanol
Surface tension 0.023 N/m
Log Koc -0.89-0.21

PBT and vPvB assessment: no data available
Other adverse effects: no data available

13. DISPOSAL CONSIDERATIONS

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 and local laws and regulations.

14. TRANSPORT INFORMATION

DOT (US)
Not Regulated

15. REGULATORY INFORMATION

15.1 US Federal Regulations

All components are listed on the United States TSCA (Toxic Substances Control Act) inventory
Methanol

RQ 5000lb

SARA Section 311-312 Hazard classes : Flammable, Acute toxicity

15.2 International Regulations

All components are listed on the Canadian DSL (Domestic Substances List)

15.3 US State regulations

California Proposition 65



WARNING: This product can expose you to chemicals including Methanol, which are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

16. OTHER INFORMATION

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



Notice to reader

This Safety Data Sheet has been prepared in accordance with the Globally Harmonized System for the Classification and Labeling of Chemicals (GHS). To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries makes any warranty of merchantability or any other warranty, expressed or implied, which respect to such information, and we assume no liability resulting from its use. In no event shall Astral Diagnostics, Inc be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages resulting from use of or reliance upon this information.

Safety Data Sheet

Iodine Stabilized, Gram Stain

Revision Date: 1/09/19

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier	Trade name: Gram Stain Iodine, Stabilized Product code(s): 6060B, 6253-08, 6253-16
1.2 Relevant identified uses	Laboratory Reagent
Supplier:	Astral Diagnostics Inc. 800-441-0366 Technical Service Monday-Friday: 8:00 -5:00 PM
Synonym:	None.
Material uses:	Laboratory Reagent.
Validation date:	12/11/2013
In case of emergency:	800-424-9300 CHEMTREC (USA) 24 Hours/Day: 7 Days/Week

2. HAZARDS IDENTIFICATION

Emergency Overview:

GHS Label Elements: Pictogram



Signal Word: Warning

Hazard statement(s):

H302: Harmful if swallowed

H319: Causes serious eye irritation

Precautionary statement(s):

P264: Wash exposed skin thoroughly after handling

P270: Do not eat, drink or smoke when using this product

P280: Wear protective gloves/ eye protection/ face protection.

P305+351+338: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

NFPA Rating

Health hazard: 1

Fire: 0

Reactivity Hazard: 0

HMIS Classification

Health hazard: 1

Flammability: 0

Physical hazards: 0

Potential Health Effects :

Inhalation – May cause respiratory tract irritation.

Skin - May cause skin irritation.

Eyes - May cause eye irritation.

Ingestion – Potentially toxic if swallowed in large quantities.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Name	CAS number	% by volume
Potassium Iodine	7681-11-0	~1.1
Povidone Iodine	25655-41-8	~.2
Water	7732-18-5	Balance

4. FIRST AID MEASURES

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

First-aid measures after inhalation: *Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.*

First-aid measures after skin contact: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a poison center or doctor/physician.

First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.

First-aid measures after ingestion: Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor/physician.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media: Do not use a heavy water stream

5.2 Special hazards arising from the substance or mixture

No additional information available

5.3 Advice for firefighters

Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. Do not enter fire area without proper protective equipment, including respiratory protection.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment: Gloves. Safety glasses. Combined gas/dust mask with filter type B/P3.
Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment: Equip cleanup crew with proper protection.
Emergency procedures: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Precautions for safe handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not breathe mist, vapors, spray. Obtain special instructions before use. Use personal protective equipment as required. Do not handle until all safety precautions have been read and understood.

Hygiene measures: Wash exposed skin thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures: Comply with applicable regulations.

Storage conditions: Keep container closed when not in use. Protect from sunlight. Store in a well-ventilated place.

Incompatible products: Strong oxidizers. Strong reducing agents. Strong bases.

Incompatible materials: Sources of ignition. Direct sunlight

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Component	Source	Type	Value	Note
Iodine	ACGIH	TWA	0.1 mg/m ³	
	ACGIH	TWA	0.01 ppm	
	OSHA	PEL (Ceiling)	1 mg/m ³	
	OSHA	PEL (Ceiling)	0.1 ppm	

8.2. Exposure controls

Personal protective equipment: Safety glasses. Gloves. Protective clothing. High gas/vapor concentration: gas mask with filter type B.

Hand protection: Wear protective gloves.

Eye protection: Chemical goggles or face shield.

Skin and body protection: Wear suitable protective clothing.

Respiratory protection: Wear appropriate mask. Gas mask with filter type B.

Other information: Do not eat, drink or smoke during use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.

Flash Point: NA

pH: NA

Melting/freezing point: NA

Vapor pressure: NA

Odor threshold: NA

VOC: NA

Color: amber

Odor: NA

Boiling/condensation point: NA

Relative density: NA

Vapor density: NA

Evaporation rate: NA

Solubility: Soluble in the following materials: water

10. STABILITY AND REACTIVITY

10.1. Reactivity

No further relevant information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Extremely high or low temperatures.

10.5. Incompatible materials

Metals. Strong reducing agents. Ammonia

10.6. Hazardous decomposition products

Iodine Vapor. Potassium oxide.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Iodine (7553-56-2)

LD50 Oral Rat 14000 mg/kg

ATE US (oral) 14000 mg/kg body weight

ATE US (dermal) 220 mg/kg body weight

Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

Skin Corrosion/irritation

No data available

Serious eye damage/eye irritation

Causes serious eye irritation

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

12. ECOLOGICAL INFORMATION

Toxicity:

Iodine

LC50 fish 1: 1.7 mg/l

EC50 Daphnia 1: 0.2 mg/l

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

13. DISPOSAL CONSIDERATIONS

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 and local laws and regulations.

14. TRANSPORT INFORMATION

DOT (US)

Not Regulated

15. REGULATORY INFORMATION

15.1 US Federal Regulations

Iodine

Listed on the US TSCA (Toxic Substances Control Act) inventory

SARA Sections 311/312 Hazard Classes

Immediate (acute) health hazard

15.2 International regulations

Iodine

Listed on the Canadians DSL (Domestic Substances List)

WHMIS Classification- Class D Division 2 Subdivision B Toxic material causing other toxic effects

15.3 US State Regulations

California Proposition 65- This product does not contains any substances known to the state of California to cause cancer, developmental and/or reproductive harm

16. OTHER INFORMATION

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



Notice to reader

This Safety Data Sheet has been prepared in accordance with the Globally Harmonized System for the Classification and Labeling of Chemicals (GHS). To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries makes any warranty of merchantability or any other warranty, expressed or implied, which respect to such information, and we assume no liability resulting from its use. In no event shall Astral Diagnostics, Inc be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages resulting from use of or reliance upon this information.

Safety Data Sheet

Gram Decolorizer 75-25

Revision Date: 01/17/19

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier	Trade name: Gram Decolorizer 75-25 Product code(s): 6060C, 6254-08, 6254-16
1.2 Relevant identified uses	Laboratory Reagent
Supplier:	Astral Diagnostics Inc. 800-441-0366 Technical Service Monday-Friday: 8:00 -5:00 PM
Synonym:	None.
Material uses:	Laboratory Reagent.
Validation date:	12/11/2013
In case of emergency:	800-424-9300 CHEMTREC (USA) 24 Hours/Day: 7 Days/Week

2. HAZARDS IDENTIFICATION

Emergency Overview:

GHS Label Elements: Pictogram



Signal Word:

Danger!

Hazard statement(s):

- H226:** Flammable liquid and vapor
- H315:** Causes skin irritation
- H319:** Causes serious eye irritation
- H336:** May cause drowsiness or dizziness

Precautionary statement(s):

- P210:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P260:** Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
- P280:** Wear protective gloves/ eye protection/ face protection.
- P305+351+338:** If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

NFPA Rating

Health hazard: 1
Fire: 3
Reactivity Hazard: 0

HMIS Classification

Health hazard: 1
Flammability: 3
Physical hazards: 0

Potential Health Effects :

Inhalation - Causes respiratory tract irritation.
Skin - Causes skin irritation.
Eyes - Causes eye irritation.

Ingestion – Potentially toxic if swallowed in large quantities.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Name	CAS number	% by volume
Ethanol	64-17-5	<71
Methanol	67-56-1	<4
Acetone	67-64-1	25

4. FIRST AID MEASURES

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

First-aid measures after inhalation: *Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.*

First-aid measures after skin contact: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a poison center or doctor/physician.

First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.

First-aid measures after ingestion: Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor/physician.

5. FIREFIGHTING MEASURES

5.1 Extinguishing Media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substances or mixture

No data available

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment: Gloves. Safety glasses. Combined gas/dust mask with filter type B/P3.
Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment: Equip cleanup crew with proper protection.
Emergency procedures: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Precautions for safe handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not breathe mist, vapors, spray. Obtain special instructions before use. Use personal protective equipment as required. Do not handle until all safety precautions have been read and understood.

Hygiene measures: Wash exposed skin thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures: Comply with applicable regulations.

Storage conditions: Keep container closed when not in use. Protect from sunlight. Store in a well-ventilated place.

Incompatible products: Strong oxidizers. Strong reducing agents. Strong bases.

Incompatible materials: Sources of ignition. Direct sunlight

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Consult local authorities for acceptable exposure limits.

Component	Source	Type	Value	Note
Ethanol	ACGIH	STEL	1000 ppm 15 min	
	OSHA	PEL (TWA)	1900 mg/m3 8Hr	
	OSHA	PEL (TWA)	1000 ppm 15 min	
	NIOSH	REL (TWA)	1900 mg/m3 10 Hr	
	NIOSH	REL (TWA)	1000 ppm 15 min	
	OSHA	PEL (TWA)	1900 mg/m3 10 Hr	
	OSHA	PEL (TWA)	1000 ppm 8 Hr	
Acetone	ACGIH	TVL (STEL)	1782 mg/m3 15 min	
	ACGIH	TVL (STEL)	750 ppm 15 min	
	ACGIH	TVL (TWA)	1188 mg/m3 8 Hr	
	ACGI/h	TVL (TWA)	500 ppm 8 Hr	
	OSHA	PEL (TWA)	1800 mg/m3 8 Hr	
	OSHA	PEL (TWA)	750 ppm 8 Hr	
	OSHA	PEL (STEL)	2400 mg/m3 15 min	
	OSHA	PEL (STEL)	1000 ppm 15 min	
	NIOSH	REL (TWA)	250 ppm 10 Hr	
	NIOSH	REL (TWA)	590 mg/m3 10 Hr	

Personal protective equipment: Safety glasses. Gloves. Protective clothing. High gas/vapor concentration: gas mask with filter type B.

Hand protection: Wear protective gloves.

Eye protection: Chemical goggles or face shield.

Skin and body protection: Wear suitable protective clothing.

Respiratory protection: Wear appropriate mask. Gas mask with filter type B.

Other information: Do not eat, drink or smoke during use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.

Flash Point: Closed cup: 11.667°C (53°F)

pH: NA

Melting/freezing point: NA

Vapor pressure: NA

Odor threshold: NA

VOC: 70%

Color: Clear

Odor: Characteristic

Boiling/condensation point: NA

Relative density: NA

Vapor density: NA

Evaporation rate: NA

Solubility: Soluble in the following materials: water

10. STABILITY AND REACTIVITY

10.1. Reactivity

No further relevant information available

10.2. Chemical stability

Hygroscopic

10.3. Possibility of hazardous reactions

Vapors may form explosive mixture with air

10.4. Conditions to avoid

Heat, flames and sparks

10.5. Incompatible materials

Strong oxidizers.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide.

11. TOXICOLOGICAL INFORMATION

Water (7732-18-5)

LD50 oral rat

≥ 90000 mg/kg

ATE US (oral)

90000.000 mg/kg body weight

Ethanol (64-17-5)

LD50 Oral rat

10740 mg/kg

LD50 dermal rabbit

>16000 mg/kg

LC50 inhalation rat

117-125 mg/l air

ATE US (oral)

10740 mg/kg body weight

Methanol

LD50 oral rat

1187-2769 mg/kg

LC50 inhalation rat (mg/l)

128.2 mg/l (4hr)

LC50 inhalation rat (mg/l)

87.6 mg/l (6hr)

LD50 Dermal rabbit

17100 mg/kg

Acetone (67-64-1)

LD50 oral rat

5800 mg/kg

LD50 dermal rabbit

20000 mg/kg

LC50 inhalation rat

71 mg/l/4h, 30000 ppm/4h

12. ECOLOGICAL INFORMATION

Toxicity:

Ethanol

LC50 fish

14200 mg/l

Methanol
LC50 fish 1 15400 mg/l
EC50 Daphnia 1 18260 mg/l
ErC50 algae 22000 mg/l

Acetone
LC50 fish 2 5540 mg/l
EC50 daphnia 2 12600 mg/l

Persistence and degradability:

Ethanol
BOD 0.8-0.967 gO₂/g
COD 1.7 gO₂/g
ThOD 2.1 gO₂/g

Methanol
BOD 0.6-1.12 gO₂/g
COD 1.42 gO₂/g
ThOd 1.5 gO₂/g

Bioaccumulative potential:

Ethanol
BCF fish 1 1
Log Pow -0.31

Methanol
BCF fish 1 1-4.5
Log Pow -0.77

Mobility in soil:

Ethanol
Surface tension 0.022 N/m

Methanol
Surface tension 0.023 N/m
Log Koc -0.89-0.21

PBT and vPvB assessment: no data available

Other adverse effects: no data available

13. DISPOSAL CONSIDERATIONS

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 and local laws and regulations.

14. TRANSPORT INFORMATION

DOT (US)

UN 1993

Shipping Name: Flammable Liquids n.o.s (Methanol, Ethanol, Acetone)

Class: 3
Group: II

IATA

UN 1993

Shipping Name: Flammable Liquids n.o.s (Methanol, Ethanol, Acetone)

Class: 3

Marine Pollutant: No

Group: II

Proper Shipping Name

FLAMMABLE LIQUID, N.O.S. (Ethanol/Acetone)

15. REGULATORY INFORMATION

15.1 US Federal Regulations

All components are listed on the United States TSCA (Toxic Substances Control Act) inventory
Methanol

RQ 5000lb

SARA Section 311-312 Hazard classes : Flammable, Acute toxicity

Acetone

RQ 5000lb

SARA Section 311/312 Hazard classes: immediate acute, fire

15.2 International Regulations

All components are listed on the Canadian DSL (Domestic Substances List)

15.3 US State regulations

California Proposition 65



WARNING: This product can expose you to chemicals including Methanol, which are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

16. OTHER INFORMATION

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



Notice to reader

This Safety Data Sheet has been prepared in accordance with the Globally Harmonized System for the Classification and Labeling of Chemicals (GHS). To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries makes any warranty of merchantability or any other warranty, expressed or implied, which respect to such information, and we assume no liability resulting from its use. In no event shall Astral Diagnostics, Inc be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages resulting from use of or reliance upon this information.

Safety Data Sheet

Safranin, Gram Stain

Revision Date: 1/08/19

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier	Trade name: Gram Stain, Safranin
1.2 Relevant identified uses	Product code(s): 6060D, 6256-08, 6256-16 Laboratory Reagent
Supplier:	Astral Diagnostics Inc. 800-441-0366 Technical Service Monday-Friday: 8:00 -5:00 PM
Synonym:	None.
Material uses:	Laboratory Reagent.
Validation date:	12/11/2013
In case of emergency:	800-424-9300 CHEMTREC (USA) 24 Hours/Day: 7 Days/Week

2. HAZARDS IDENTIFICATION

Emergency Overview:

GHS Label Elements: Pictogram



Signal Word: **Danger!**

Hazard statement(s):

H225: Highly flammable liquid and vapor
H303: May be harmful if swallowed
H315: Causes skin irritation
H319: Causes serious eye irritation
H370: Causes damage to organs

Precautionary statement(s):

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking
P260: Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P280: Wear protective gloves/ eye protection/ face protection.
P305+351+338: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

NFPA Rating

Health hazard: 1
Fire: 3
Reactivity Hazard: 0

HMIS Classification

Health hazard: 1
Flammability: 3
Physical hazards: 0

Potential Health Effects : Inhalation – May cause respiratory tract irritation.
Skin - May cause skin irritation.
Eyes – May cause eye irritation.
Ingestion – Potentially toxic if swallowed in large quantities.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Name	CAS number	% by volume
Ethanol	64-17-5	<18
Safranin	477-73-6	<1
Methanol	67-56-1	<1
Water	7732-18-4	Balance

4. FIRST AID MEASURES

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

First-aid measures after inhalation: *Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.*

First-aid measures after skin contact: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a poison center or doctor/physician.

First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.

First-aid measures after ingestion: Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor/physician.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media: Do not use a heavy water stream

5.2 Special hazards arising from the substance or mixture

No additional information available

5.3 Advice for firefighters

Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. Do not enter fire area without proper protective equipment, including respiratory protection.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment: Gloves. Safety glasses. Combined gas/dust mask with filter type B/P3.
Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment: Equip cleanup crew with proper protection.
Emergency procedures: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Precautions for safe handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not breathe mist, vapors, spray. Obtain special instructions before use. Use personal protective equipment as required. Do not handle until all safety precautions have been read and understood.

Hygiene measures: Wash exposed skin thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures: Comply with applicable regulations.

Storage conditions: Keep container closed when not in use. Protect from sunlight. Store in a well-ventilated place.

Incompatible products: Strong oxidizers. Strong reducing agents. Strong bases.

Incompatible materials: Sources of ignition. Direct sunlight

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Consult local authorities for acceptable exposure limits.

Component	Source	Type	Value	Note
Ethanol	ACGIH	STEL	1000 ppm 15 min	
	OSHA	PEL (TWA)	1000 ppm 8 hrs	
	OSHA	TWA (ppm)	1000 ppm 10 hrs	
Methyl Alcohol	ACGH	TWA	200 ppm	
	ACGH	STEL	250 ppm	
	NIOSH	TWA	260 mg/m ³ , 200 ppm	
	OSHA	TWA	260 mg/m ³ , 200 ppm	

Personal protective equipment: Safety glasses. Gloves. Protective clothing. High gas/vapor concentration: gas mask with filter type B.

Hand protection: Wear protective gloves.

Eye protection: Chemical goggles or face shield.

Skin and body protection: Wear suitable protective clothing.

Respiratory protection: Wear appropriate mask. Gas mask with filter type B.

Other information: Do not eat, drink or smoke during use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.

Flash Point: Closed cup: 43°C (109°F)

pH: NA

Melting/freezing point: NA

Vapor pressure: NA

Color: Red

Odor: Characteristic

Boiling/condensation point: NA

Relative density: NA

Vapor density: NA

Odor threshold: NA
VOC: NA

Evaporation rate: NA
Solubility: Soluble in the following materials: water

10. STABILITY AND REACTIVITY

10.1. Reactivity

No further relevant information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

High temperatures, flames, sparks

10.5. Incompatible materials

Strong oxidizers. Strong acids.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide, nitrogen oxides, hydrogen chloride gas

11. TOXICOLOGICAL INFORMATION

Water (7732-18-5)

LD50 oral rat	≥ 90000 mg/kg
ATE US (oral)	90000.000 mg/kg body weight

Ethanol (64-17-5)

LD50 Oral rat	10740 mg/kg
LD50 dermal rabbit	>16000 mg/kg
LC50 inhalation rat	117-125 mg/l air
ATE US (oral)	10740 mg/kg body weight

Methanol (67-56-1)

LD50 oral rat	1187-2769 mg/kg
LC50 inhalation rat (mg/l)	128.2 mg/l (4hr)
LC50 inhalation rat (mg/l)	87.6 mg/l (6hr)
LD50 Dermal rabbit	17100 mg/kg

Skin corrosion/irritation: Not classified

Serious eye damage/irritation: Causes eye irritation

Respiratory or skin sensitization: Not classified

Germ cell mutagenicity: Not classified

Carcinogenicity: Not Classified

12. ECOLOGICAL INFORMATION

Toxicity:

Ethanol	
LC50 fish	14200 mg/l

Methanol

LC50 fish 1	15400 mg/l
EC50 Daphnia 1	18260 mg/l
ErC50 algae	22000 mg/l

Persistence and degradability:

Ethanol	
BOD	0.8-0.967 gO2/g

COD 1.7 gO₂/g
ThOD 2.1 gO₂/g

Methanol
BOD 0.6-1.12 gO₂/g
COD 1.42 gO₂/g
ThOd 1.5 gO₂/g

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BCF fish 1 1
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DOT (US)

UN 1170
Shipping Name: Ethanol Solution
Class: 3
Group: II

IATA

UN 1170
Shipping Name: Ethanol Solution
Class: 3
Marine Pollutant: No
Group: II

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SARA Section 311-312 Hazard classes : Flammable, Acute toxicity

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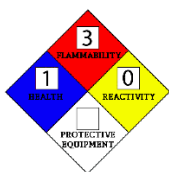
California Proposition 65



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