

MATERIAL SAFETY DATA SHEET-GRAM STAIN SET (6060)

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Section I: IDENTIFICATION

Product Name: **Gram Stain Crystal Violet**

Date Prepared: 04/16/03

Item Number: 6081, 6060, 6400, 6251

Emergency Phone: 800-424-9300

Section II: HAZARDOUS INGREDIENTS

<i>Hazardous Component(s):</i>	<i>CAS#</i>	<i>OHSA PEL, ACGIH TLV/STEL(PPM)</i>	NFPA	
Phenol < 1%	108-95-2	5/250	Health	1
Methanol < 1%	67-56-1	200/250	Flammability	1
Ethanol ~11%	64-17-5 1000	1000/NR	Reactivity	0

Section III: PHYSICAL DATA

<i>Boiling Point:</i>	~200°F	<i>Specific Gravity (H₂O = 1):</i>	~1
<i>Vapor Pressure mm Hg/20°C:</i>	79	<i>Percent Volatile by Vol:</i>	10%
<i>Vapor Density (Air 1:1):</i>	>1	<i>Evaporation Rate (ether = 1):</i>	>1
<i>Solubility in H₂O:</i>	Complete	<i>Appearance & Odor:</i>	Purple liquid, phenolic odor

Section IV: FIRE/EXPLOSION HAZARD

Flash Point: 62°F *Flammable Limits:* LEL, NA UEL, NA
Extinguishing Media: Water spray, dry chemical, CO₂ and foam for alcohol
Special Fire Fighting Procedures: Wear protective clothing with NIOSH approved breathing apparatus.
Products of combustion may be harmful in a fire situation. Do not use direct water stream.
Unusual Fire & Explosion Hazards: Eliminate potential sources of ignition.

Section V: REACTIVITY

Stability: Stable *Material to Avoid:* Strong oxidizers, chromic anhydride, perchloric acids etc.
Hazardous Decomposition or Byproducts: Oxides of carbon
Hazardous Polymerization: Does not occur *Conditions to Avoid:* Excessive heat

Section VI: HEALTH HAZARDS

Routes of Entry: Inhalation, Skin and Ingestion
Acute: Vapors may cause eyes, skin and respiratory irritation, drowsiness, nausea, headache and vomiting.
Chronic: May cause liver, heart and kidney damage. May cause gastrointestinal disturbances and convulsions.
Carcinogenicity: Not classified as a human carcinogen.
Signs/Symptoms of Exposure: Vision blurring, drowsiness and headache.

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Section VI: HEALTH HAZARDS

Emergency First Aid:

Skin: Remove contaminated clothing. Wash affected area with soap and water.

Eyes: Thoroughly flush eyes with water. Contact a physician if irritation persists.

Ingestion: Rinse mouth thoroughly with water, provided person is conscious and contact a physician.

Inhalation: Remove person to fresh air. If not breathing, give artificial respiration and contact physician.

Section VII: SAFE HANDLING

Chemical Release or Spill: Eliminate source of ignition in the vicinity of the spill or released vapor. Isolate the spill area with sand, or other absorbent material. Place all contaminated material in closed container for disposal.

Waste Disposal Method: All liquid and or contaminated material should be disposed of in DOT approved waste containers. Incineration for liquids is the suggested method of disposal. Comply with all Federal, State and Local regulations for disposal.

Precautions for Handling and Storing: Use precautions for combustible liquids. Avoid excessive heat and sources of ignition. Use in ventilated area.

Section VIII: CONTROL MEASURES

Respiratory Protection: Not normally required. If used in a poorly ventilated area use under an approved fume hood or NIOSH approved respirator.

Ventilation: Mechanical exhaust is sufficient.

Protective Gloves: Chemical resistant *Eye Protection:* Safety glasses

Other Protective Clothing or Equipment: Normal laboratory apparel suggested by Good Laboratory Practices

Work/Hygienic Practices: Wash thoroughly with soap and water after handling.

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. Astraldiagnosics shall not be held liable for any damage resulting from handling or contact with this product.

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Section I: IDENTIFICATION

Product Name: Gram Stain, Iodine

Stabilized

Date Prepared: 04/16/03

Item Number: SP770-25, 6060, 6253, 6552,
6472

Emergency Phone: 800-424-9300

Section II: INGREDIENTS

<i>Component(s):</i>		<i>CAS#</i>	<i>OSHA PEL, ACGIH TLV/STEL</i>	<i>NFPA</i>
PVP Iodine	< 13%	25655-41-8	NE	Health 1
Potassium Iodide	< 2%	7681-11-0	NE	Flammability 0 Reactivity 0

Section III: PHYSICAL DATA

Boiling Point:	212°F	Specific Gravity (H₂O = 1):	~1
Vapor Pressure mm Hg/20°C:	40	Percent Volatile by Vol:	5%
Vapor Density (Air 1:1):	1	Evaporation Rate (ether = 1):	>1
Solubility in H₂O:	Complete	Appearance & Odor:	Reddish-brown liquid, iodine odor

Section IV: FIRE/EXPLOSION HAZARD

Flash Point: NA **Flammable Limits:** LEL, NA UEL, NA
Extinguishing Media: Water spray, dry chemical, CO₂ and foam
Special Fire Fighting Procedures: Wear protective clothing with NIOSH approved breathing apparatus. Products of combustion may be harmful in a fire situation. Do not use direct water stream.
Unusual Fire & Explosion Hazards: None Known.

Section V: REACTIVITY

Stability: Stable **Material to Avoid:** Strong oxidizers, chromic anhydride, perchloric acids.
Hazardous Decomposition or Byproducts: Oxides of carbon
Hazardous Polymerization: Does not occur **Conditions to Avoid:** Excessive heat

Section VI: HEALTH HAZARDS

Routes of Entry: Inhalation, Skin and Ingestion
Acute: Vapors may cause eyes, skin and respiratory irritation.
Chronic: Poisoning may may cause gastrointestinal disturbances, convulsions, circulatory problems and damage kidneys .
Carcinogenicity: Not classified as a human carcinogen.
Signs/Symptoms of Exposure: Skin and respiratory irritation.

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Section VI: HEALTH HAZARDS

Emergency First Aid:

Skin: Remove contaminated clothing. Wash affected area with soap and water.

Eyes: Thoroughly flush eyes with water. Contact a physician if irritation persists.

Ingestion: Rinse mouth thoroughly with water, provided person is conscious and contact a physician.

Inhalation: Remove person to fresh air. If not breathing, give artificial respiration and contact physician.

Section VII: SAFE HANDLING

Chemical Release or Spill: Isolate the spill area with sand, or other absorbent material. Place all contaminated material in a closed container for disposal.

Waste Disposal Method: All liquid and or contaminated material should be disposed of in DOT approved waste containers. Incineration for liquids is the suggested method of disposal. Comply with all Federal, State and Local regulations for disposal.

Precautions for Handling and Storing: Use normal precautions for liquids. Avoid excessive heat. Use in ventilated area.

Section VIII: CONTROL MEASURES

Respiratory Protection: Not normally required. If used in a poorly ventilated area use under fume hood or NIOSH approved respirator.

Ventilation: In ventilated areas, mechanical exhaust is sufficient.

Protective Gloves: Chemical resistant *Eye Protection:* Safety glasses

Other Protective Clothing or Equipment: Normal laboratory apparel suggested by Good Laboratory Practices

Work/Hygienic Practices: Wash thoroughly with soap and water after handling.

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Section I: IDENTIFICATION

Product Name: **Gram Stain, Decolorizer**

Date Prepared: 04/16/03

Item Number(s): 6084, 6060, 6400, 6254

Emergency Phone: 800-424-9300

Section II: COMPOSITION

<i>Component(s):</i>	<i>CAS Number</i>	<i>OHSA PEL, ACGIH TLV/STEL(ppm)</i>		<i>NFPA</i>	
Acetone < 20%	67-56-1	1000 TWA	500/750	Health	1
Isopropanol < 80%	67-63-0	400	400/500	Flammability	3
				Reactivity	0

Section III: PHYSICAL DATA

<i>Boiling Point:</i>	60°F	<i>Specific Gravity (H₂O = 1):</i>	0.8
<i>Vapor Pressure mm Hg/20°C:</i>	40	<i>Percent Volatile by Vol:</i>	91%
<i>Vapor Density (Air 1:1):</i>	1.6	<i>Evaporation Rate (ether = 1):</i>	>1
<i>Solubility in H₂O:</i>	Complete	<i>Appearance & Odor:</i>	Clear liquid/sweet odor

Section IV: FIRE/EXPLOSION HAZARD

Flash Point: 50°F TCC *Flammable Limits:* LEL 2.5 UEL 13

Extinguishing Media: Water spray, Dry chemical, CO₂ and foam for alcohol

Special Fire Fighting Procedures: Wear protective clothing with NIOSH approved breathing apparatus. Products of combustion may be harmful in a fire situation. Do not use direct water stream.

Unusual Fire & Explosion Hazards: Eliminate sources of ignition. Burns with invisible flame.

Section V: REACTIVITY

Stability: Stable *Material to Avoid:* Strong oxidizers

Hazardous Decomposition or Byproducts: Oxides of carbon

Hazardous Polymerization: Does not occur *Conditions to Avoid:* Excessive heat, sparks or flames

Section VI: HEALTH HAZARDS

Routes of Entry: Inhalation, Skin and Ingestion *Target Organs:* Kidneys, nervous system, liver and eyes

Acute: Vapors may cause eyes, skin and respiratory irritation, drowsiness, nausea, headache and vomiting.

Chronic: May cause liver, heart and kidney damage. May cause gastrointestinal disturbances and convulsions.

Carcinogenicity: Not classified as a human carcinogen.

Signs/Symptoms of Exposure: Vision blurring, drowsiness and headache.

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Section VI: HEALTH HAZARDS

Emergency First Aid:

Skin: Remove contaminated clothing. Wash affected area with soap and water.

Eyes: Thoroughly flush eyes with water. Contact a physician if irritation persist.

Ingestion: Rinse mouth thoroughly with water, provided person is conscious and contact a physician.

Inhalation: Remove person to fresh air. If not breathing, give artificial respiration and contact physician.

Section VII: SAFE HANDLING

Chemical Release or Spill: Eliminate source of ignition in the vicinity of the spill or released vapor. Isolate the spill area with sand, or other absorbent material. Place all contaminated material in closed container for disposal.

Waste Disposal Method: All liquid and or contaminated material should be disposed of in DOT approved waste containers. Incineration for liquids is the suggested method of disposal. Comply with all Federal, State and Local regulations for disposal.

Precautions for Handling and Storing: Use precautions for flammable liquids. Avoid excessive heat and sources of ignition. For large quantities, store in flammable safety cabinet. Use in well-ventilated area.

Section VIII: CONTROL MEASURES

Respiratory Protection: Not normally required. If used in a poorly ventilated area use under an approved fume hood or NIOSH approved respirator.

Ventilation: Special flammable exhaust hood if vapor concentration is high. In well-ventilated areas, mechanical exhaust is sufficient.

Protective Gloves: Chemical resistant *Eye Protection:* Safety glasses

Other Protective Clothing or Equipment: Normal laboratory apparel suggested by Good Laboratory Practices

Work/Hygienic Practices: Wash thoroughly with soap and water after handling.

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MATERIAL SAFETY DATA SHEET

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Section I: IDENTIFICATION

Product Name: **Gram Stain, Safranin**

Date Prepared: 04/16/03

Item Number(s): 6086, 6060, 6400, 6250, 6256

Emergency Phone: 800-424-9300

Section II: COMPOSITION

<i>Component(s):</i>	<i>CAS Number</i>	<i>OHSA PEL, ACGIH TLV/STEL</i>		<i>NFPA</i>	
Methanol < 1%	67-56-1	200	200/250	Health	1
Ethanol <19%	64-17-5	1000	1000/NR	Flammability	3
Safranin < 1%	477-73-6	NR		Reactivity	0

Section III: PHYSICAL DATA

Boiling Point: ~198°F

Specific Gravity (H₂O = 1): <1

Vapor Pressure mm Hg/20°C: 40

Percent Volatile by Vol: 91%

Vapor Density (Air 1:1): 1.6

Evaporation Rate (ether = 1): >1

Solubility in H₂O: Complete

Appearance & Odor: Red/purple liquid/alcohol odor

Section IV: FIRE/EXPLOSION HAZARD

Flash Point: 55°F TCC *Flammable Limits:* LEL 3.5 UEL 19

Extinguishing Media: Water spray, dry chemical, CO₂ and foam for alcohol

Special Fire Fighting Procedures: Wear protective clothing with NIOSH approved breathing apparatus. Products of combustion may be harmful in a fire situation. Do not use direct water stream.

Unusual Fire & Explosion Hazards: Eliminate sources of ignition. Burns with invisible flame.

Section V: REACTIVITY

Stability: Stable *Material to Avoid:* Strong oxidizers and organic acids

Hazardous Decomposition or Byproducts: Oxides of carbon and nitrogen

Hazardous Polymerization: Does not occur *Conditions to Avoid:* Excessive heat, sparks or flames

Section VI: HEALTH HAZARDS

Routes of Entry: Inhalation, Skin and Ingestion *Target Organs:* Kidneys, nervous system, liver and eyes

Acute: Vapors may cause eyes, skin and respiratory irritation, drowsiness, nausea, headache and vomiting.

Chronic: May cause liver, heart and kidney damage. May cause gastrointestinal disturbances and convulsions.

Carcinogenicity: Not classified as a human carcinogen.

Signs/Symptoms of Exposure: Vision blurring, drowsiness and headache.

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Section VI: HEALTH HAZARDS

Emergency First Aid:

- Skin:** Remove contaminated clothing. Wash affected area with soap and water.
- Eyes:** Thoroughly flush eyes with water. Contact a physician if irritation persist.
- Ingestion:** Rinse mouth thoroughly with water, provided person is conscious and contact a physician.
- Inhalation:** Remove person to fresh air. If not breathing, give artificial respiration and contact physician.

Section VII: SAFE HANDLING

Chemical Release or Spill: Eliminate source of ignition in the vicinity of the spill or released vapor. Isolate the spill area with sand, or other absorbent material. Place all contaminated material in closed container for disposal.

Waste Disposal Method: All liquid and or contaminated material should be disposed of in DOT approved waste containers. Incineration for liquids is the suggested method of disposal. Comply with all Federal, State and Local regulations for disposal.

Precautions for Handling and Storing: Use precautions for flammable liquids. Avoid excessive heat and sources of ignition. For large quantities, store in flammable safety cabinet. Use in well-ventilated area.

Section VIII: CONTROL MEASURES

Respiratory Protection: Not normally required. If used in a poorly ventilated area use under an approved fume hood or NIOSH approved respirator.

Ventilation: Special flammable exhaust hood if vapor concentration is high. In well-ventilated areas, mechanical exhaust is sufficient.

Protective Gloves: Chemical resistant *Eye Protection:* Safety glasses

Other Protective Clothing or Equipment: Normal laboratory apparel suggested by Good Laboratory Practices

Work/Hygienic Practices: Wash thoroughly with soap and water after handling.

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. Astral Diagnostics shall not be held liable for any damage resulting from handling or contact with this product.