

**Safety Data Sheet**  
**Gram Stain Kit**



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**Gram Stain Kit**

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**SECTION 1: Identification**

**1.1 GHS Product identifier**

Product name	Gram Stain Kit
Product number	KT018
Brand	Gram Stain Kit (EU)

**1.2 Other means of identification**

Components

1. Gentian Violet Solution
2. Lugol's Iodine Solution
3. Gram's Decolorizer Solution
4. Carbol Fuchsin Counterstain
5. Tetrazine Solution

**1.3 Recommended use of the chemical and restrictions on use**

In Vitro Diagnostic Use

**1.4 Supplier's details**

Name	Diagnostic Biosystems
Address	6616 Owens Drive Pleasanton CA 94588 USA
Telephone	(888) 896-3350
email	customersupport@dbiosys.com

**1.5 Emergency phone number**

(925) 484-3350 (9AM-6PM, Monday - Friday, Pacific Standard Time)

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**SECTION 2: Hazard identification**

**General hazard statement**

For Professional Users Only

**2.1 Classification of the substance or mixture**

**GHS classification in accordance with: Regulation (EC) No 1272/2008 (CLP)**

# Safety Data Sheet

## Gram Stain Kit

- Acute toxicity, inhalation (chapter 3.1), Cat. 4
- Acute toxicity, inhalation (chapter 3.1), Cat. 5
- Acute toxicity, oral (chapter 3.1), Cat. 4
- Carcinogenicity (chapter 3.6), Cat. 1B
- Germ cell mutagenicity (chapter 3.5), Cat. 2
- Skin corrosion/irritation (chapter 3.2), Cat. 1B
- Specific target organ toxicity following single exposure (chapter 3.8), Cat. 3

## 2.2 GHS label elements, including precautionary statements

### Pictogram



1. Exclamation mark; 2. Health hazard; 3. Corrosion

### Signal word

**Danger**

### Hazard statement(s)

H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H341	Suspected of causing genetic defects
H350	May cause cancer

### Precautionary statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell,
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of water.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P310	Immediately call a POISON CENTER/doctor.
P312	Call a POISON CENTER/doctor if you feel unwell.
P330	Rinse mouth.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P363	Wash contaminated clothing before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

# Safety Data Sheet

## Gram Stain Kit

P501

Dispose of contents/container to a licensed disposal company

### 2.3 Other hazards which do not result in classification

No other hazards identified.

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## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Components

##### Component 1

##### 1. Crystal violet

Concentration <= 2 % (weight)

Other names / synonyms Methanaminium,  
N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-  
N-methyl-, chloride

EC no. 208-953-6

CAS no. 548-62-9

Index no. 612-205-00-8

- Carcinogenicity (chapter 3.6), Cat. 1B
- Acute toxicity, oral (chapter 3.1), Cat. 4
- Serious eye damage/eye irritation (chapter 3.3), Cat. 1
- Hazardous to the aquatic environment, short-term (acute) (chapter 4.1), Cat. 1
- Hazardous to the aquatic environment, long-term (chronic) (chapter 4.1), Cat. 1

H302 Harmful if swallowed

H318 Causes serious eye damage

H350 May cause cancer

H400 Very toxic to aquatic life

H410 Very toxic to aquatic life with long lasting effects

##### 2. Alcohol

Concentration <= 17 % (volume)

Other names / synonyms ABSOLUTE ETHANOL; ALCOHOL DEHYDRATED; ALCOHOL,  
ANHYDROUS; Alcoholum / ethanolum; ALGRAIN; ANHYDROL; COLOGNE  
SPIRIT; COLOGNE SPIRITS (ALCOHOL); Ethanol; ETHANOL 200 PROOF;  
ETHANOL SOLUTION; ETHYL ALCOHOL; ETHYL ALCOHOL  
ANHYDROUS; ETHYL HYDRATE; ETHYL HYDROXIDE; FERMENTATION  
ALCOHOL; GRAIN ALCOHOL; JAYSOL; JAYSOL S; METHYLCARBINOL;  
MOLASSES ALCOHOL; NCI-C03134; POTATO ALCOHOL; SD ALCOHOL  
23-HYDROGEN; SPIRIT; SPIRITS OF WINE; TECSOL; UN 1170

EC no. 200-578-6

CAS no. 64-17-5

Index no. 603-002-00-5

- Flammable liquids (chapter 2.6), Cat. 2

H225 Highly flammable liquid and vapor

# Safety Data Sheet

## Gram Stain Kit

### 3. Isopropyl alcohol

Concentration	<= 3 % (volume)
Other names / synonyms	2-HYDROXYPROPANE; 2-Propanol; 2-PROPYL ALCOHOL; ALCOJEL; ALCOSOLVE; ALCOSOLVE 2; AVANTIN; AVANTINE; CHROMAR; COMBI-SCHUTZ; DIMETHYLCARBINOL; HARTOSOL; IMSOL A; ISOHOL; Isopropanol; LUTOSOL; N-PROPAN-2-OL; PETROHOL; PRO; PROPAN-2-OL; Propan-2-ol, isopropanol; PROPOL; reaction mass of: bis(1S,2S,4S)-(1-benzyl-4-tert-butoxycarboxamido-2-hydroxy-5-phenyl)pentyl ammonium succinate; SEC-PROPYL ALCOHOL; SPECTRAR; STERISOL HAND DISINFECTANT; TAKINEOCOL; UN 1219
EC no.	414-810-0
CAS no.	67-63-0
Index no.	607-403-00-6

- Flammable liquids (chapter 2.6), Cat. 2
- Serious eye damage/eye irritation (chapter 3.3), Cat. 2
- Specific target organ toxicity following single exposure (chapter 3.8), Cat. 3
- Specific target organ toxicity following repeated exposure (chapter 3.9), Cat. 2
- Serious eye damage/eye irritation (chapter 3.3), Cat. 1
- Hazardous to the aquatic environment, short-term (acute) (chapter 4.1), Cat. 1
- Hazardous to the aquatic environment, long-term (chronic) (chapter 4.1), Cat. 1

H225	Highly flammable liquid and vapor
H318	Causes serious eye damage
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

### 4. Ammonium oxalate monohydrate

Concentration	<= 0.8 % (weight)
EC no.	238-135-4
CAS no.	6009-70-7

- Acute toxicity, dermal (chapter 3.1), Cat. 4
- Acute toxicity, oral (chapter 3.1), Cat. 4

H302	Harmful if swallowed
H312	Harmful in contact with skin

### Component 2

#### 1. Potassium iodide

Concentration	<= 4 % (weight)
Other names / synonyms	Kalii iodidum; Potassium iodide (KI);
EC no.	231-659-4
CAS no.	7681-11-0

# Safety Data Sheet

## Gram Stain Kit

- Acute toxicity, oral (chapter 3.1), Cat. 4
- Skin corrosion/irritation (chapter 3.2), Cat. 2
- Serious eye damage/eye irritation (chapter 3.3), Cat. 2A

H302 Harmful if swallowed  
H315 Causes skin irritation  
H319 Causes serious eye irritation

### 3. Iodine

Concentration <= 2 % (weight)  
EC no. 231-442-4  
CAS no. 7553-56-2  
Index no. 053-001-00-3

- Acute toxicity, inhalation (chapter 3.1), Cat. 4
- Acute toxicity, dermal (chapter 3.1), Cat. 4
- Hazardous to the aquatic environment, short-term (acute) (chapter 4.1), Cat. 1

H312 Harmful in contact with skin  
H332 Harmful if inhaled  
H400 Very toxic to aquatic life

### Component 3

#### 1. Acetone

Concentration <= 50 % (volume)

Other names / synonyms 2-Propanone; BETA-KETOPROPANE; CHEVRON ACETONE; DIMETHYL KETONE; DIMETHYLFORMALDEHYDE; DIMETHYLKETAL; KETONE PROPANE; KETONE, DIMETHYL; METHYL KETONE; propan-2-one; PROPANONE; PYROACETIC ACID; PYROACETIC ETHER; RCRA WASTE NUMBER U002

EC no. 200-662-2  
CAS no. 67-64-1  
Index no. 606-001-00-8

- Flammable liquids (chapter 2.6), Cat. 2
- Specific target organ toxicity following single exposure (chapter 3.8), Cat. 3
- Serious eye damage/eye irritation (chapter 3.3), Cat. 2

H225 Highly flammable liquid and vapor  
H319 Causes serious eye irritation  
H336 May cause drowsiness or dizziness

#### 2. Alcohol

Concentration <= 42 % (volume)

Other names / synonyms ABSOLUTE ETHANOL; ALCOHOL DEHYDRATED; ALCOHOL, ANHYDROUS; Alcoholum / ethanolum; ALGRAIN; ANHYDROL; COLOGNE SPIRIT; COLOGNE SPIRITS (ALCOHOL); Ethanol; ETHANOL 200 PROOF;

# Safety Data Sheet

## Gram Stain Kit

ETHANOL SOLUTION; ETHYL ALCOHOL; ETHYL ALCOHOL ANHYDROUS; ETHYL HYDRATE; ETHYL HYDROXIDE; FERMENTATION ALCOHOL; GRAIN ALCOHOL; JAYSOL; JAYSOL S; METHYLCARBINOL; MOLASSES ALCOHOL; NCI-C03134; POTATO ALCOHOL; SD ALCOHOL 23-HYDROGEN; SPIRIT; SPIRITS OF WINE; TECSOL; UN 1170

EC no. 200-578-6  
CAS no. 64-17-5  
Index no. 603-002-00-5

- Flammable liquids (chapter 2.6), Cat. 2

H225 Highly flammable liquid and vapor

### 3. Isopropyl Alcohol

Concentration <= 3 % (volume)  
Other names / synonyms 2-HYDROXYPROPANE; 2-Propanol; 2-PROPYL ALCOHOL; ALCOJEL; ALCOSOLVE; ALCOSOLVE 2; AVANTIN; AVANTINE; CHROMAR; COMBI-SCHUTZ; DIMETHYLCARBINOL; HARTOSOL; IMSOL A; ISOHOL; Isopropanol; LUTOSOL; N-PROPAN-2-OL; PETROHOL; PRO; PROPAN-2-OL; Propan-2-ol, isopropanol; PROPOL; reaction mass of: bis(1S,2S,4S)-(1-benzyl-4-tert-butoxycarboxamido-2-hydroxy-5-phenyl)pentyl ammonium succinate; SEC-PROPYL ALCOHOL; SPECTRAR; STERISOL HAND DISINFECTANT; TAKINEOCOL; UN 1219

EC no. 414-810-0  
CAS no. 67-63-0  
Index no. 607-403-00-6

- Flammable liquids (chapter 2.6), Cat. 2
- Serious eye damage/eye irritation (chapter 3.3), Cat. 2
- Specific target organ toxicity following single exposure (chapter 3.8), Cat. 3
- Specific target organ toxicity following repeated exposure (chapter 3.9), Cat. 2
- Serious eye damage/eye irritation (chapter 3.3), Cat. 1
- Hazardous to the aquatic environment, short-term (acute) (chapter 4.1), Cat. 1
- Hazardous to the aquatic environment, long-term (chronic) (chapter 4.1), Cat. 1

H225 Highly flammable liquid and vapor  
H318 Causes serious eye damage  
H319 Causes serious eye irritation  
H335 May cause respiratory irritation  
H336 May cause drowsiness or dizziness  
H373 May cause damage to organs through prolonged or repeated exposure  
H400 Very toxic to aquatic life  
H410 Very toxic to aquatic life with long lasting effects

### 4. PHENOL

Concentration <= 5 % (volume)  
EC no. 203-632-7  
CAS no. 108-95-2

# Safety Data Sheet

## Gram Stain Kit

Index no. 604-001-00-2

- Germ cell mutagenicity (chapter 3.5), Cat. 2
- Acute toxicity, inhalation (chapter 3.1), Cat. 3
- Acute toxicity, dermal (chapter 3.1), Cat. 3
- Acute toxicity, oral (chapter 3.1), Cat. 3
- Specific target organ toxicity following repeated exposure (chapter 3.9), Cat. 2
- Skin corrosion/irritation (chapter 3.2), Cat. 1B

H301 Toxic if swallowed  
H311 Toxic in contact with skin  
H314 Causes severe skin burns and eye damage  
H331 Toxic if inhaled  
H341 Suspected of causing genetic defects  
H373 May cause damage to organs through prolonged or repeated exposure  
SCLs/M-factors/ATEs \*  
Skin Corr. 1B; H314: C ≥ 3 %  
Skin Irrit. 2; H315: 1 % ≤ C < 3 %  
Eye Irrit. 2; H319: 1 % ≤ C < 3 %

### Component 4

#### 1. Alcohol

Concentration ≤ 10 % (volume)

Other names / synonyms ABSOLUTE ETHANOL; ALCOHOL DEHYDRATED; ALCOHOL, ANHYDROUS; Alcoholum / ethanolum; ALGRAIN; ANHYDROL; COLOGNE SPIRIT; COLOGNE SPIRITS (ALCOHOL); Ethanol; ETHANOL 200 PROOF; ETHANOL SOLUTION; ETHYL ALCOHOL; ETHYL ALCOHOL ANHYDROUS; ETHYL HYDRATE; ETHYL HYDROXIDE; FERMENTATION ALCOHOL; GRAIN ALCOHOL; JAYSOL; JAYSOL S; METHYLCARBINOL; MOLASSES ALCOHOL; NCI-C03134; POTATO ALCOHOL; SD ALCOHOL 23-HYDROGEN; SPIRIT; SPIRITS OF WINE; TECSOL; UN 1170

EC no. 200-578-6  
CAS no. 64-17-5  
Index no. 603-002-00-5

- Flammable liquids (chapter 2.6), Cat. 2

H225 Highly flammable liquid and vapor

#### 2. Ci 42510

Concentration ≤ 0.1 % (weight)

Other names / synonyms

(4-(4-Aminophenyl)(4-iminocyclohexa-2,5-dienylidene)methyl)-2-methyl aniline hydrochloride; Benzenamine, 4-((4-aminophenyl)(4-imino-2,5-cyclohexadien-1-ylidene)methyl)-2-methyl-, hydrochloride (1:1); Benzenamine, 4-[(4-aminophenyl)(4-imino-2,5-cyclohexadien-1-ylidene)methyl]-2-methyl-, monohydrochloride; C.I. BASIC VIOLET 14; Fuchsin  
632-99-5

CAS no.

# Safety Data Sheet

## Gram Stain Kit

### 3. Acetic acid

Concentration <= 0.2 % (volume)

Other names / synonyms acetic acid; ACETIC ACID; ACETIC ACID, GLACIAL; ACETICACID; Acidum aceticum; ETHANOIC ACID; ETHYLIC ACID; GLACIAL ACETIC ACID; METHANECARBOXYLIC ACID; UN 2789; UN 2790; VINEGAR ACID

EC no. 200-580-7

CAS no. 64-19-7

Index no. 607-002-00-6

- Flammable liquids (chapter 2.6), Cat. 3
- Skin corrosion/irritation (chapter 3.2), Cat. 1A

H226 Flammable liquid and vapor  
H314 Causes severe skin burns and eye damage  
SCLs/M-factors/ATEs Skin Corr. 1A; H314: C ≥ 90 %  
Skin Corr. 1B; H314: 25 % ≤ C < 90 %  
Skin Irrit. 2; H315: 10 % ≤ C < 25 %  
Eye Irrit. 2; H319: 10 % ≤ C < 25 %

### Component 5

#### 1. Ci 19140

Concentration <= 0.1 % (weight)

Other names / synonyms 1H-Pyrazole-3-carboxylic acid,  
4,5-dihydro-5-oxo-1-(4-sulfophenyl)-4-[(4-sulfophenyl)azo]-, trisodium salt;  
1H-Pyrazole-3-carboxylic acid,  
4,5-dihydro-5-oxo-1-(4-sulfophenyl)-4-[2-(4-sulfophenyl)diazenyl]-, sodium  
salt (1:3); Acid Yellow; Acid Yellow ; Tartrazine; Trisodium  
5-hydroxy-1-(4-sulphophenyl)-4-(4-sulphophenylazo)pyrazole-3-carboxylate

EC no. 217-699-5

CAS no. 1934-21-0

- Respiratory sensitizer (chapter 3.4), Cat. 1
- Skin sensitizer (chapter 3.4), Cat. 1

H317 May cause an allergic skin reaction  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled

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## SECTION 4: First-aid measures

### 4.1 Description of necessary first-aid measures

General advice Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled If breathed in, move person into fresh air. If not breathing, give artificial respiration.

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.



# Safety Data Sheet

## Gram Stain Kit

In case of skin contact	Rinse with plenty of water. Get medical attention if irritation develops and persists.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.
If swallowed	Call a poison center or doctor if you feel unwell. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.  Acute and delayed symptoms and effects: May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.
Personal protective equipment for first-aid responders	Ensure adequate ventilation. Use personal protective equipment. For personal protection see section 8.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### 4.3 Indication of immediate medical attention and special treatment needed, if necessary

No data available

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## SECTION 5: Fire-fighting measures

### 5.1 Suitable extinguishing media

Use extinguishing media appropriate for surrounding fire.

### 5.2 Specific hazards arising from the chemical

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Ethanol: Carbon oxides

### 5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### Further information

No data available.

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## SECTION 6: Accidental release measures

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

Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

Ensure adequate ventilation. Use personal protective equipment. For personal protection see section 8.

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

# Safety Data Sheet

## Gram Stain Kit

### 6.2 Environmental precautions

Should not be released into the environment. See Section 12 for additional ecological information.

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

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

### Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

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

Keep container tightly closed in a dry and well-ventilated place.

### Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### CAS: 108-95-2

Phenol

Cal/OSHA: 5 ppm PEL inhalation; NIOSH: 5 ppm, (C) 15.6 ppm [15-min] REL inhalation; OSHA: 5 ppm PEL inhalation; 19 mg/m<sup>3</sup> PEL inhalation

#### CAS: 64-17-5

Alcohol

ACGIH (USA): (ST) 1000 ppm TLV® inhalation; Cal/OSHA: 1000 ppm PEL inhalation; NIOSH: 1000 ppm REL inhalation; OSHA: 1000 ppm PEL inhalation; 1900 mg/m<sup>3</sup> PEL inhalation

#### CAS: 64-19-7 (EC: 200-580-7)

Acetic acid

ACGIH (USA): 15 ppm STEL inhalation; 10 ppm, (ST) 15 ppm TLV® inhalation; 10 ppm TWA inhalation; Cal/OSHA (USA): 40 ppm C inhalation; 10 ppm, (ST) 15 ppm, (C) 40 ppm PEL inhalation; 10 ppm, 25 mg/m<sup>3</sup> PEL inhalation; 15 ppm, 37 mg/m<sup>3</sup> STEL inhalation; NIOSH (USA): 10 ppm, (ST) 15 ppm REL inhalation; 15 ppm, 37 mg/m<sup>3</sup> ST inhalation; 10 ppm, 25 mg/m<sup>3</sup> TWA inhalation; OSHA (USA): 25 mg/m<sup>3</sup> PEL inhalation; 10 ppm PEL inhalation; 10 ppm, 25 mg/m<sup>3</sup> TWA inhalation

#### CAS: 67-63-0

Isopropyl alcohol

ACGIH (USA): 200 ppm, (ST) 400 ppm TLV® inhalation; Cal/OSHA: 400 ppm, (ST) 500 ppm PEL inhalation; NIOSH: 400 ppm, (ST) 500 ppm REL inhalation; OSHA: 400 ppm PEL inhalation; 980 mg/m<sup>3</sup> PEL inhalation

#### CAS: 67-64-1

Acetone

ACGIH (USA): 250 ppm, (ST) 500 ppm TLV® inhalation; Cal/OSHA: 500 ppm, (ST) 750 ppm, (C) 3000 ppm PEL inhalation; NIOSH: 250 ppm REL inhalation; OSHA: 1000 ppm PEL inhalation; 2400 mg/m<sup>3</sup> PEL inhalation

#### CAS: 7553-56-2

Iodine

# Safety Data Sheet

## Gram Stain Kit

Cal/OSHA: (C) 0.1 ppm PEL inhalation; NIOSH: (C) 0.1 ppm REL inhalation; OSHA: (C) 0.1 ppm PEL inhalation;  
(C) 1 mg/m<sup>3</sup> PEL inhalation

**CAS: 7681-11-0 (EC: 231-659-4)**

Potassium iodide

ACGIH: 0.01 mg/m<sup>3</sup> TWA inhalation

### 8.2 Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

### 8.3 Individual protection measures, such as personal protective equipment (PPE)

#### Pictograms



#### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### Body protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Thermal hazards

No data available

#### Control banding approach

No data available.

#### Environmental exposure controls

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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## SECTION 9: Physical and chemical properties and safety characteristics

Physical state	Liquid
Appearance	Clear
Color	Various
Odor	Odorless
Odor threshold	No data available.
pH	No data available
Melting point/freezing point	No data available.
Boiling point or initial boiling point and boiling range	No data available.
Flash point	No data available.

# Safety Data Sheet

## Gram Stain Kit

Evaporation rate	No data available.
Flammability	No data available.
Lower and upper explosion limit/flammability limit	No data available.
Vapor pressure	No data available.
Relative vapor density	No data available.
Density and/or relative density	No data available.
Solubility	No data available.
Partition coefficient n-octanol/water (log value)	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Kinematic viscosity	No data available.
Explosive properties	No data available.
Oxidizing properties	No data available.

### Particle characteristics

No data available.

### Supplemental information regarding physical hazard classes

No data available.

### Further safety characteristics (supplemental)

No data available.

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

None under normal use conditions.

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

None under normal use conditions.

### 10.4 Conditions to avoid

Exposure to moisture.

Avoid storing in direct sunlight and avoid extremes of temperature.

Heat, flames and sparks.

### 10.5 Incompatible materials

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Ethanol: Alkali metals, Oxidizing agents, Peroxides

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Isopropanol: Oxidizing agents, Acid anhydrides, Aluminium, Halogenated compounds, Acids

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Ammonium oxalate monohydrate: Strong oxidizing agents, Strong acids

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Potassium iodide: Strong reducing agents, Nickel, Strong acids, and its alloys, Steel (all types and surface treatments), Aluminum, Alkali metals, Brass, Magnesium, Zinc, cadmium, Copper

# Safety Data Sheet

## Gram Stain Kit

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Acetone: Bases, Oxidizing agents, Reducing agents, Acetone reacts violently with phosphorous oxychloride.

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Acetic acid: Oxidizing agents, Soluble carbonates and phosphates, Hydroxides, Metals, Peroxides, permanganates, e.g. potassium permanganate, Amines, Alcohols, Nitric acid

### 10.6 Hazardous decomposition products

Other decomposition products - No data available In the event of fire: see section 5

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Isopropanol: Hazardous decomposition products formed under fire conditions. - Carbon oxides  
Other decomposition products - No data available  
In the event of fire: see section 5

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Acid Yellow : Other decomposition products - no data available  
In the event of fire: see section 5

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## SECTION 11: Toxicological information

### Information on toxicological effects

#### Acute toxicity

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Ethanol: ACGIH: A3 Confirmed animal carcinogen with unknown relevance to humans.

The ATE (gas inhalation) of the mixture is: 13179.92 ppmV

The ATE (vapor inhalation) of the mixture is: 54.1 mg/l

The ATE (oral) of the mixture is: 1612.9 mg/kg bw

Acetic acid

LD50 Oral - Rat - 3,310 mg/kg

ACETONE

LD50 Oral - Rat - 5,800 mg/kg

Remarks: Behavioral :Altered sleep time (including change in righting reflex). Behavioral:Tremor.  
Behavioral:Headache.

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Acid yellow

LD50 Oral - Mouse - 12,750 mg/kg

ETHANOL

LD50 Oral - Rat - 10,470 mg/kg

Potassium iodide

LD50 Oral - Mouse - 1,000 mg/kg

# Safety Data Sheet

## Gram Stain Kit

### Skin corrosion/irritation

Acetic acid

LD50 Skin - Rat - 1,112 mg/kg

ACETONE

LD50 Skin - Guinea pig - 7,429 mg/kg

ACETONE

Skin - Rabbit - 24 hr

Result: Mild skin irritation

ETHANOL

LD50 Skin - Rabbit - 15,800 mg/kg

ETHANOL

OECD Test Guideline 404 Skin - Rabbit - 24 h

Result: No skin irritation

ISOPROPANOL

LD50 Skin - Rabbit - 12,800 mg/kg

### Serious eye damage/irritation

ETHANOL

OECD Test Guideline 405 Eyes - Rabbit

Result: Moderate eye irritation

### Respiratory or skin sensitization

Acetic acid

LC50 Inhalation - Mouse - 5620 ppm - 1 h

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Conjunctive irritation. Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Other. Blood:Other changes.

ACETONE

LC50 Inhalation - Rat - 50,100 mg/m<sup>3</sup> - 8 h

Remarks: Drowsiness Dizziness Unconsciousness

ETHANOL

LD50 Inhalation - Rat - 30,000 mg/l - 4 h

ISOPROPANOL

LC50 Inhalation - Rat - 16000 ppm - 8 h

### Germ cell mutagenicity

No data available

### Carcinogenicity

Acetic acid

Result: IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

# Safety Data Sheet

## Gram Stain Kit

### ACETONE

Remarks: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

### Acid yellow

Result: IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

### ISOPROPANOL

Result: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

### Potassium iodide

Result: IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

### **Reproductive toxicity**

No data available

### **STOT-single exposure**

ACETONE

Remarks: May cause drowsiness or dizziness.

### **STOT-repeated exposure**

No data available.

### **Aspiration hazard**

No data available.

# Safety Data Sheet

## Gram Stain Kit

### Additional information

No data available.

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## SECTION 12: Ecological information

### Toxicity

ISOPROPANOL

EC50 - Desmodesmus subspicatus (chodat) - > 2,000.00 mg/l - 72 h

### Persistence and degradability

ACETONE

OECD Test Guideline 301B

Result: 91% -Readily biodegradable.

### Bioaccumulative potential

No data available.

### Mobility in soil

No data available.

### Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### Endocrine disrupting properties

No data available.

### Other adverse effects

No data available.

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## SECTION 13: Disposal considerations

### Disposal methods

#### Product disposal

Offer surplus and non-recyclable solutions to a licensed disposal company.

#### Packaging disposal

Dispose of as unused product.

#### Waste treatment

No data available

#### Sewage disposal

Do not let product enter drains

#### Other disposal recommendations

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

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## SECTION 14: Transport information

14.1	UN Number	None
14.2	UN Proper Shipping Name	None
14.3	Transport hazard class(es)	None
14.4	Packing group	None



# Safety Data Sheet

## Gram Stain Kit

14.5	Environmental hazards	None
14.6	Special precautions for user	None
14.7	Maritime transport in bulk according to IMO instruments	None

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### SECTION 15: Regulatory information

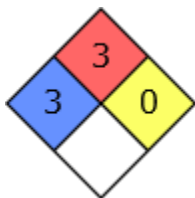
#### 15.2 Chemical Safety Assessment

The supplier of this product has not conducted any Chemical Safety Assessment

#### HMIS Rating

Gram Stain Kit	
HEALTH	3
FLAMMABILITY	3
PHYSICAL HAZARD	0
PERSONAL PROTECTION	B

#### NFPA Rating



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### SECTION 16: Other information

SDS-0064, Rev. C

#### 16.1 Further information/disclaimer

DISCLAIMER: The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigation to determine the suitability of information for their particular purposes. In no event shall Diagnostic BioSystems 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, whatsoever arising, even if Diagnostic BioSystems has been advised of the possibility of such damages.