

A Geno Technology, Inc. (USA) brand name

# **Safety Data Sheet**

Cat. # BAQ092

PAS (Periodic Acid-Schiff)-Harris Hematoxylin

Size: 500ml



## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 05/14/2019 Version: 1.1

## **SECTION 1: Identification**

#### 1.1. Identification

Product form : Mixture
Product name : Schiff Reagent

Product code : 061S

## 1.2. Recommended use and restrictions on use

No additional information available

#### 1.3. Supplier

Geno Technology, Inc./ G-Biosciences 9800 Page Avenue Saint Louis, 63132-1429 - United States T 800-628-7730 - F 314-991-1504

technical@GBiosciences.com - www.GBiosciences.com

#### 1.4. Emergency telephone number

Emergency number : Chemtrec 1-800-424-9300 (USA/Canada), +1-703-527-3887 (Intl)

## SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

#### **GHS US classification**

Serious eye damage/eye irritation Category 2 H319 Causes serious eye irritation

Full text of H statements : see section 16

## 2.2. GHS Label elements, including precautionary statements

#### **GHS US labeling**

Hazard pictograms (GHS US)



Signal word (GHS US) : Warning

Hazard statements (GHS US) : H319 - Causes serious eye irritation

Precautionary statements (GHS US) : P264 - Wash hands, forearms and face thoroughly after handling.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing

P337+P313 - If eye irritation persists: Get medical advice/attention.

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

No additional information available

## 2.4. Unknown acute toxicity (GHS US)

Not applicable

## **SECTION 3: Composition/Information on ingredients**

## 3.1. Substances

Not applicable

## 3.2. Mixtures

Name	Common Name (Synonyms)	Product identifier	%	GHS US classification
potassium pyrosulfite	disulfurous acid, dipotassium salt / potassiumdisulfite / potassiummetabisulfite / pyrosulfurous acid, dipotassium salt	(CAS-No.) 16731-55-8	0.5 - 2	Eye Dam. 1, H318

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Full text of hazard classes and H-statements : see section 16

#### **SECTION 4: First-aid measures**

#### 4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to

do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

## 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after eye contact : Eye irritation.

#### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## **SECTION 5: Fire-fighting measures**

## 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

#### 5.2. Specific hazards arising from the chemical

No additional information available

## 5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## **SECTION 6: Accidental release measures**

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

## 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

## 6.2. Environmental precautions

Avoid release to the environment.

## 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

## 6.4. Reference to other sections

For further information refer to section 13.

## **SECTION 7: Handling and storage**

#### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal

protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the

product.

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

Storage conditions : Store in a well-ventilated place. Keep cool.

## SECTION 8: Exposure controls/personal protection

## 8.1. Control parameters

## Schiff Reagent

No additional information available

## potassium pyrosulfite (16731-55-8)

No additional information available

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## 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

#### 8.3. Individual protection measures/Personal protective equipment

## Hand protection:

Protective gloves

#### Eye protection:

Safety glasses

## Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

## **SECTION 9: Physical and chemical properties**

## 9.1. Information on basic physical and chemical properties

Physical state : Liquid

Color : No data available Odor : No data available : No data available Odor threshold : No data available рΗ Melting point : Not applicable Freezing point : No data available Boiling point No data available : No data available Flash point : No data available Relative evaporation rate (butyl acetate=1) Flammability (solid, gas) : Not applicable. Vapor pressure : No data available Relative vapor density at 20 °C No data available Relative density : No data available : No data available Solubility Log Pow : No data available Auto-ignition temperature : No data available Decomposition temperature : No data available : No data available Viscosity, kinematic : No data available Viscosity, dynamic **Explosion limits** No data available Explosive properties : No data available

## 9.2. Other information

No additional information available

## **SECTION 10: Stability and reactivity**

## 10.1. Reactivity

Oxidizing properties

The product is non-reactive under normal conditions of use, storage and transport.

## 10.2. Chemical stability

Stable under normal conditions.

## 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

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: No data available

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#### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

#### 10.5. Incompatible materials

No additional information available

#### 10.6. Hazardous decomposition products

Hazardous decomposition products.

## SECTION 11: Toxicological information

## 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

potassium pyrosulfite (16731-55-8)	
LD50 oral rat	> 2000 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 7 day(s))
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
LC50 inhalation rat (mg/l)	> 5.5 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation, 14 day(s))

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified

Specific target organ toxicity – single exposure : Not classified

Specific target organ toxicity – repeated

exposure

: Not classified

Aspiration hazard : Not classified
Viscosity, kinematic : No data available
Symptoms/effects after eye contact : Eye irritation.

## **SECTION 12: Ecological information**

## 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

potassium pyrosulfite (16731-55-	8)
LC50 fish 1	2.15 - 464 mg/l (DIN 38412-15, 96 h, Leuciscus idus, Static system, Fresh water, Readacross)
EC50 Daphnia 1	89 mg/l (Other, 48 h, Daphnia magna, Static system, Fresh water, Read-across)
ErC50 (algae)	43.8 mg/l (Equivalent or similar to OECD 201, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Read-across)

## 12.2. Persistence and degradability

potassium pyrosulfite (16731-55-8)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

## 12.3. Bioaccumulative potential

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potassium pyrosulfite (16731-55-8)	
Bioaccumulative potential	No bioaccumulation data available.

## 12.4. Mobility in soil

potassium pyrosulfite (16731-55-8)	
Ecology - soil	No (test)data on mobility of the substance available.

#### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

#### 13.1. Disposal methods

Waste treatment methods : Waste treatment methods.

## **SECTION 14:** Transport information

#### **Department of Transportation (DOT)**

In accordance with DOT

Not applicable

## **Transportation of Dangerous Goods**

Not applicable

## Transport by sea

Not applicable

## Air transport

Not applicable

## **SECTION 15: Regulatory information**

## 15.1. US Federal regulations

## potassium pyrosulfite (16731-55-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

## 15.2. International regulations

## **CANADA**

## potassium pyrosulfite (16731-55-8)

Listed on the Canadian DSL (Domestic Substances List)

## **EU-Regulations**

## **National regulations**

No additional information available

## 15.3. US State regulations

## **SECTION 16: Other information**

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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## Full text of H-phrases:

H318	Causes serious eye damage
H319	Causes serious eye irritation

## SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

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## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 05/08/2019 Version: 1.1

## **SECTION 1: Identification**

## 1.1. Identification

Product form : Mixture

Product name : Periodic acid [0.5%]

Product code : 076P

#### 1.2. Recommended use and restrictions on use

No additional information available

#### 1.3. Supplier

Geno Technology, Inc./ G-Biosciences 9800 Page Avenue Saint Louis, 63132-1429 - United States T 800-628-7730 - F 314-991-1504

technical@GBiosciences.com - www.GBiosciences.com

#### 1.4. Emergency telephone number

Emergency number : Chemtrec 1-800-424-9300 (USA/Canada), +1-703-527-3887 (Intl)

## SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

#### **GHS US classification**

Not classified

## 2.2. GHS Label elements, including precautionary statements

#### **GHS US labeling**

No labeling applicable

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

No additional information available

## 2.4. Unknown acute toxicity (GHS US)

Not applicable

## **SECTION 3: Composition/Information on ingredients**

## 3.1. Substances

Not applicable

## 3.2. Mixtures

Name	Common Name (Synonyms)	Product identifier	%	GHS US classification
Glyco-Oxidizing Reagent	o-periodic acid / ortho-periodic acid / orthoperiodic-acid / periodic acid (H5IO6)	(CAS-No.) 10450-60-9	0.5 - 2	Ox. Sol. 2, H272 Skin Corr. 1, H314

Full text of hazard classes and H-statements : see section 16

## **SECTION 4: First-aid measures**

## 4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water.

First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

## 4.2. Most important symptoms and effects (acute and delayed)

No additional information available

## 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

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## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

## SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

#### 5.2. Specific hazards arising from the chemical

No additional information available

#### 5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing

apparatus. Complete protective clothing.

## **SECTION 6: Accidental release measures**

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

#### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

## 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

## **SECTION 7: Handling and storage**

## 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the

product.

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

Storage conditions : Store in a well-ventilated place. Keep cool.

## SECTION 8: Exposure controls/personal protection

## 8.1. Control parameters

## Periodic acid [0.5%]

No additional information available

## Glyco-Oxidizing Reagent (10450-60-9)

No additional information available

## 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

## 8.3. Individual protection measures/Personal protective equipment

## Hand protection:

Protective gloves

## Eye protection:

Safety glasses

## Skin and body protection:

Wear suitable protective clothing

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## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

## Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

## **SECTION 9: Physical and chemical properties**

## 9.1. Information on basic physical and chemical properties

Physical state : Liquid

Color : No data available Odor No data available : No data available Odor threshold рΗ : No data available Not applicable Melting point : No data available Freezing point : No data available **Boiling point** : No data available Flash point Relative evaporation rate (butyl acetate=1) : No data available Flammability (solid, gas) Not applicable. Vapor pressure : No data available Relative vapor density at 20 °C : No data available Relative density : No data available Solubility : No data available Log Pow No data available Auto-ignition temperature : No data available Decomposition temperature No data available Viscosity, kinematic : No data available : No data available Viscosity, dynamic **Explosion limits** No data available

## 9.2. Other information

No additional information available

## **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

Explosive properties

Oxidizing properties

The product is non-reactive under normal conditions of use, storage and transport.

No data availableNo data available

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

## 10.5. Incompatible materials

No additional information available

## 10.6. Hazardous decomposition products

Hazardous decomposition products.

## **SECTION 11: Toxicological information**

## 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Skin corrosion/irritation : Not classified

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## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified

Specific target organ toxicity – single exposure : Not classified

Specific target organ toxicity – repeated

exposure

: Not classified

Aspiration hazard : Not classified
Viscosity, kinematic : No data available

## **SECTION 12: Ecological information**

## 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

## 12.2. Persistence and degradability

Glyco-Oxidizing Reagent (10450-60-9)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

## 12.3. Bioaccumulative potential

Glyco-Oxidizing Reagent (10450-60-9)	
Bioaccumulative potential	No bioaccumulation data available.

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

#### 13.1. Disposal methods

Waste treatment methods : Waste treatment methods.

## **SECTION 14: Transport information**

## **Department of Transportation (DOT)**

In accordance with DOT

Not applicable

## **Transportation of Dangerous Goods**

Not applicable

## Transport by sea

Not applicable

## Air transport

Not applicable

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## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

## **SECTION 15: Regulatory information**

15.1. US Federal regulations

## Glyco-Oxidizing Reagent (10450-60-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### 15.2. International regulations

#### **CANADA**

## Glyco-Oxidizing Reagent (10450-60-9)

Listed on the Canadian DSL (Domestic Substances List)

#### **EU-Regulations**

#### **National regulations**

No additional information available

## 15.3. US State regulations

## **SECTION 16: Other information**

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

#### Full text of H-phrases:

H272	May intensify fire; oxidizer
H314	Causes severe skin burns and eye damage

## SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

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## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 05/14/2019 Version: 1.1

## **SECTION 1: Identification**

## 1.1. Identification

Product form : Mixture

Product name : Harris Hematoxylin

Product code : 658H

## 1.2. Recommended use and restrictions on use

No additional information available

#### 1.3. Supplier

Geno Technology, Inc./ G-Biosciences 9800 Page Avenue Saint Louis, 63132-1429 - United States T 800-628-7730 - F 314-991-1504

technical@GBiosciences.com - www.GBiosciences.com

#### 1.4. Emergency telephone number

Emergency number : Chemtrec 1-800-424-9300 (USA/Canada), +1-703-527-3887 (Intl)

## SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

#### **GHS US classification**

Not classified

## 2.2. GHS Label elements, including precautionary statements

#### **GHS US labeling**

No labeling applicable

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

No additional information available

## 2.4. Unknown acute toxicity (GHS US)

Not applicable

## **SECTION 3: Composition/Information on ingredients**

## 3.1. Substances

Not applicable

## 3.2. Mixtures

Name	Common Name (Synonyms)	Product identifier	%	GHS US classification
Ethanol, 95%	ethanol, conc=90%, aqueous solution / ethyl alcohol, conc=90%, aqueous solution	(CAS-No.) 64-17-5	5 - 10	Flam. Liq. 2, H225 Carc. 1A, H350
hematoxylin	7,11b-dihydrobenz[b]indeno[1,2-d]pyran-3,4,6a,9,10(6H)-pentol / 7,11b-dihydrobenz[b]indeno[1,2-d]pyran-3,4,6a,9,10(6H)-pentol, cis-(+)- / benz[b]indeno[1,2-d]pyran-3,4,6a,9,10(6H)-pentol, 7,11b-dihydrobenz[b]indeno[1,2-d]pyran-3,4,6a,9,10(6H)-pentol / cis-(+)-benz[b]indeno[1,2-d]pyran-3,4,6a,9,10(6H)-pentol, 7,11b-dihydrobenz[b]indeno[1,2-d]pyran-3,4,6a,9,10(6H)-pentol, 7,11b-dihydro- / Ehrlich's hematoxylin / haematoxylin / hematoxylin (Ehrlich's) / hydroxybrasilin / natural black / natural black 1	(CAS-No.) 517-28-2	0.5 - 2	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335

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## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of hazard classes and H-statements : see section 16

## **SECTION 4: First-aid measures**

## 4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water.

First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

#### 4.2. Most important symptoms and effects (acute and delayed)

No additional information available

#### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## **SECTION 5: Fire-fighting measures**

#### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

#### 5.2. Specific hazards arising from the chemical

No additional information available

#### 5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take

: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## **SECTION 6: Accidental release measures**

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

## 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

## 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

## 6.2. Environmental precautions

Avoid release to the environment.

## 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

## 6.4. Reference to other sections

For further information refer to section 13.

## **SECTION 7: Handling and storage**

#### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the

product.

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

Storage conditions : Store in a well-ventilated place. Keep cool.

## SECTION 8: Exposure controls/personal protection

## 8.1. Control parameters

## Harris Hematoxylin

No additional information available

#### hematoxylin (517-28-2)

No additional information available

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## Ethanol, 95% (64-17-5)

No additional information available

## 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

## 8.3. Individual protection measures/Personal protective equipment

#### Hand protection:

Protective gloves

## Eye protection:

Safety glasses

## Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

## **SECTION 9: Physical and chemical properties**

## 9.1. Information on basic physical and chemical properties

Physical state : Liquid

Color : No data available No data available Odor No data available Odor threshold Hq : No data available Melting point Not applicable Freezing point : No data available Boiling point : No data available Flash point No data available Relative evaporation rate (butyl acetate=1) : No data available Flammability (solid, gas) Not applicable. Vapor pressure : No data available : No data available Relative vapor density at 20 °C Relative density : No data available Solubility : No data available Log Pow No data available : No data available Auto-ignition temperature : No data available Decomposition temperature Viscosity, kinematic No data available Viscosity, dynamic : No data available

#### 9.2. Other information

No additional information available

## **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

**Explosion limits** 

Explosive properties

Oxidizing properties

The product is non-reactive under normal conditions of use, storage and transport.

## 10.2. Chemical stability

Stable under normal conditions.

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No data available

: No data available

: No data available

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#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

#### 10.5. Incompatible materials

No additional information available

## 10.6. Hazardous decomposition products

Hazardous decomposition products.

## **SECTION 11: Toxicological information**

## 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

hematoxylin (517-28-2)	
LD50 oral rat	400 mg/kg (Rat, Literature study, Oral)
ATE US (oral)	400 mg/kg body weight
Ethanol, 95% (64-17-5)	
LD50 oral rat	> 5000 mg/kg (Rat, Oral)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit, Dermal)
LC50 inhalation rat (mg/l)	> 20 mg/l (4 h, Rat, Inhalation)

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Ethanol, 95% (64-17-5)
------------------------

IARC group 1 - Carcinogenic to humans

Reproductive toxicity : Not classified

Specific target organ toxicity - single exposure : Not classified

hematoxy	din /	(517.	28-21

Specific target organ toxicity – single exposure May cause respiratory irritation.

Specific target organ toxicity - repeated

exposure

: Not classified

Aspiration hazard : Not classified
Viscosity, kinematic : No data available

## **SECTION 12: Ecological information**

## 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

Ethanol, 95% (64-17-5)	
LC50 fish 1	13000 mg/l (96 h, Salmo gairdneri, Pure substance)
EC50 Daphnia 1	9300 mg/l (48 h, Daphnia magna, Pure substance)

## 12.2. Persistence and degradability

hematoxylin (517-28-2)	
Persistence and degradability	Biodegradability in water: no data available.

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Ethanol, 95% (64-17-5)		
Persistence and degradability	Readily biodegradable in water.	
Biochemical oxygen demand (BOD)	0.8 - 0.967 g O₂/g substance	
Chemical oxygen demand (COD)	1.7 g O <sub>2</sub> /g substance	
ThOD	2.1 g O <sub>2</sub> /g substance	
BOD (% of ThOD)	0.43	

## 12.3. Bioaccumulative potential

hematoxylin (517-28-2)		
Log Pow	0.71 (Calculated, 25 °C)	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).	
Ethanol, 95% (64-17-5)		
Log Pow	-0.32	
Bioaccumulative potential	Not bioaccumulative.	

## 12.4. Mobility in soil

hematoxylin (517-28-2)		
Ecology - soil	No (test)data on mobility of the substance available.	
Ethanol, 95% (64-17-5)		
Ecology - soil	No (test)data on mobility of the components available.	

#### 12.5. Other adverse effects

No additional information available

## **SECTION 13: Disposal considerations**

## 13.1. Disposal methods

Waste treatment methods : Waste treatment methods.

## **SECTION 14: Transport information**

## **Department of Transportation (DOT)**

In accordance with DOT

Not applicable

**Transportation of Dangerous Goods** 

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

## **SECTION 15: Regulatory information**

## 15.1. US Federal regulations

## hematoxylin (517-28-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

## Ethanol, 95% (64-17-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

## 15.2. International regulations

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#### **CANADA**

## hematoxylin (517-28-2)

Listed on the Canadian DSL (Domestic Substances List)

#### Ethanol, 95% (64-17-5)

Listed on the Canadian DSL (Domestic Substances List)

## **EU-Regulations**

## **National regulations**

## Ethanol, 95% (64-17-5)

Listed on IARC (International Agency for Research on Cancer)

15.3. US State regulations

## **SECTION 16: Other information**

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

## Full text of H-phrases:

H225	Highly flammable liquid and vapour
H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H350	May cause cancer

## SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

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## Safety Data Sheet

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Date of issue: 05/14/2019 Version: 1.1

## **SECTION 1: Identification**

## 1.1. Identification

Product form : Mixture

Product name : Sulfurous Acid Reagent

 CAS-No.
 : 7782-99-2

 Product code
 : 819S

 Formula
 : H2SO3

Synonyms : sulfur dioxide, aqueous solution / sulfur dioxide, solution / sulfurous acid

BIG No : 11993

#### 1.2. Recommended use and restrictions on use

No additional information available

#### 1.3. Supplier

Geno Technology, Inc./ G-Biosciences 9800 Page Avenue Saint Louis, 63132-1429 - United States T 800-628-7730 - F 314-991-1504

technical@GBiosciences.com - www.GBiosciences.com

#### 1.4. Emergency telephone number

Emergency number : Chemtrec 1-800-424-9300 (USA/Canada), +1-703-527-3887 (Intl)

## SECTION 2: Hazard(s) identification

## 2.1. Classification of the substance or mixture

#### **GHS US classification**

Skin corrosion/irritation Category 1B H314 Causes severe skin burns and eye damage

Full text of H statements : see section 16

## 2.2. GHS Label elements, including precautionary statements

## **GHS US labeling**

Hazard pictograms (GHS US)



Signal word (GHS US) : Danger

Hazard statements (GHS US) : H314 - Causes severe skin burns and eye damage
Precautionary statements (GHS US) : P260 - Do not breathe dust/fume/gas/mist/vapors/spray.

P264 - Wash hands, forearms and face thoroughly after handling.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting

P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse

skin with water/shower

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 P310 - Immediately call a poison center or doctor

P321 - Specific treatment (see supplemental first aid instruction on this label)

P363 - Wash contaminated clothing before reuse.

P405 - Store locked up.

P501 - Dispose of contents/container to hazardous or special waste collection point, in

accordance with local, regional, national and/or international regulation

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

No additional information available

## 2.4. Unknown acute toxicity (GHS US)

Not applicable

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## **SECTION 3: Composition/Information on ingredients**

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of HazCom 2012

## **SECTION 4: First-aid measures**

#### 4.1. Description of first aid measures

First-aid measures general

: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

First-aid measures after inhalation
First-aid measures after skin contact

- : Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
- Wash immediately with lots of water (15 minutes)/shower. Do not apply (chemical) neutralizing agents. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital.

First-aid measures after eye contact

Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an

ophthalmologist.

First-aid measures after ingestion

Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Do not give activated charcoal. Immediately consult a doctor/medical service. Call Poison Information Centre (www.big.be/antigif.htm). Take the container/vomit to the doctor/hospital. Ingestion of large quantities: immediately to hospital. Do not give chemical antidote.

## 4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms

- : Causes severe skin burns. Causes serious eye damage.
- Symptoms/effects after inhalation : EXPOSURE TO HIGH CONCENTRATIONS: Corrosion of the upper respiratory tract.

FOLLOWING SYMPTOMS MAY APPEAR LATER: Possible laryngeal spasm/oedema. Risk of lung oedema.

Symptoms/effects after skin contact

Symptoms/effects after eye contact

Symptoms/effects after ingestion

: Caustic burns/corrosion of the skin.

: Corrosion of the eye tissue.

: Burns to the gastric/intestinal mucosa.

## 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## **SECTION 5: Fire-fighting measures**

## 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media

: Quick-acting ABC powder extinguisher. Quick-acting BC powder extinguisher. Quick-acting class B foam extinguisher. Quick-acting CO2 extinguisher. Class B foam (alcohol-resistant). Water spray if puddle cannot expand.

Unsuitable extinguishing media

: Water (quick-acting extinguisher, reel); risk of puddle expansion. Water; risk of puddle expansion.

## 5.2. Specific hazards arising from the chemical

No additional information available

## 5.3. Special protective equipment and precautions for fire-fighters

Precautionary measures fire

: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: seal off low-lying areas. Exposure to fire/heat: have neighbourhood close doors and windows

Firefighting instructions

: Cool tanks/drums with water spray/remove them into safety. Dilute toxic gases with water spray. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it

Protection during firefighting

: Heat/fire exposure: compressed air/oxygen apparatus.

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#### **SECTION 6: Accidental release measures**

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

#### 6.1.1. For non-emergency personnel

Protective equipment : Gloves. Face-shield. Corrosion-proof suit. Large spills/in enclosed spaces: compressed air

apparatus. Large spills/in enclosed spaces: gas-tight suit.

Emergency procedures : Mark the danger area. No naked flames. Corrosion-proof appliances. Wash contaminated

clothes.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

For containment : Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Dam up the liquid spill. Take account of toxic/corrosive precipitation water. Heat exposure: dilute

toxic gas/vapour with water spray.

Methods for cleaning up : Take up liquid spill into absorbent material, e.g.: sodium bicarbonate. Scoop absorbed

substance into closing containers. Carefully collect the spill/leftovers. Damaged/cooled tanks must be emptied. Take collected spill to manufacturer/competent authority. Clean contaminated

surfaces with an excess of water. Wash clothing and equipment after handling.

Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

## 7.1. Precautions for safe handling

Precautions for safe handling : Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Exhaust

gas must be neutralised. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Handle and open the container with care. Cool before opening. Use corrosionproof equipment. Thoroughly clean/dry the installation before

use. Keep container tightly closed.

Hygiene measures : Observe strict hygiene.

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

Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.

Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources.

Information on mixed storage : KEEP SUBSTANCE AWAY FROM: (strong) acids. metals.

Storage area : Store in a cool area. Ventilation at floor level. Keep locked up. Provide for a tub to collect spills.

Meet the legal requirements.

Special rules on packaging : SPECIAL REQUIREMENTS: closing. clean. correctly labelled. meet the legal requirements.

Secure fragile packagings in solid containers.

Packaging materials : SUITABLE MATERIAL: stainless steel. polyethylene. glass. stoneware/porcelain.

## **SECTION 8: Exposure controls/personal protection**

## 8.1. Control parameters

## Sulfurous Acid Reagent (7782-99-2)

No additional information available

## 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

#### 8.3. Individual protection measures/Personal protective equipment

## Materials for protective clothing:

GIVE GOOD RESISTANCE: butyl rubber. viton

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Hand protection:

Gloves

Eye protection:

Face shield

Skin and body protection:

Corrosion-proof clothing

Respiratory protection:

High gas/vapour concentration: full face mask with filter type E

## **SECTION 9: Physical and chemical properties**

## 9.1. Information on basic physical and chemical properties

Physical state : Liquid
Appearance : Liquid.
Color : Colourless

Odor : Asphyxiating odour Odor threshold : No data available No data available рΗ Melting point : Not applicable : No data available Freezing point : No data available Boiling point Flash point : No data available : No data available Relative evaporation rate (butyl acetate=1) Flammability (solid, gas) : Not applicable. : No data available Vapor pressure

Relative vapor density at 20 °C : > 2
Relative density : 1

Specific gravity / density : 1030 kg/m³
Molecular mass : 82.08 g/mol

Solubility : Soluble in water. Soluble in ethanol. Soluble in ether. Soluble in acetone. Soluble in other

organic solvents. Water: complete

Log Pow : No data available No data available Auto-ignition temperature Decomposition temperature : No data available : No data available Viscosity, kinematic Viscosity, dynamic : No data available : No data available Explosion limits Explosive properties : No data available : No data available Oxidizing properties

9.2. Other information

VOC content : 0 %

Other properties : Gas/vapour heavier than air at 20°C. Clear. Acid reaction.

## **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

## 10.2. Chemical stability

Unstable on exposure to air.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

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#### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

#### 10.5. Incompatible materials

No additional information available

#### 10.6. Hazardous decomposition products

Oxidizes slowly on exposure to air: release of corrosive products (sulphuric acid vapours). Reacts with (some) acids: release of toxic and corrosive gases/vapours (sulphur dioxide). Decomposes on exposure to temperature rise: release of toxic and corrosive gases/vapours (sulphur dioxide).

## **SECTION 11: Toxicological information**

#### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Skin corrosion/irritation : Causes severe skin burns and eye damage.

Serious eye damage/irritation : Eye damage, category 1, implicit

Respiratory or skin sensitization : Not classified Germ cell mutagenicity : Not classified Carcinogenicity : Not classified Reproductive toxicity : Not classified

Specific target organ toxicity - single exposure : Not classified

Specific target organ toxicity - repeated

exposure

: Not classified

Aspiration hazard : Not classified
Viscosity, kinematic : No data available

Potential Adverse human health effects and

symptoms

: Causes severe skin burns. Causes serious eye damage.

Symptoms/effects after inhalation : EXPOSURE TO HIGH CONCENTRATIONS: Corrosion of the upper respiratory tract.

FOLLOWING SYMPTOMS MAY APPEAR LATER: Possible laryngeal spasm/oedema. Risk of

lung oedema.

Symptoms/effects after skin contact : Caustic burns/corrosion of the skin. Symptoms/effects after eye contact : Corrosion of the eye tissue.

Symptoms/effects after ingestion : Burns to the gastric/intestinal mucosa.

## **SECTION 12: Ecological information**

## 12.1. Toxicity

Ecology - general : Not classified as dangerous for the environment according to the criteria of Regulation (EC) No

1272/2008.

Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).

Ecology - water : Very toxic to aquatic organisms. Very toxic to fishes. Groundwater pollutant. Mild water

pollutant (surface water). pH shift.

## 12.2. Persistence and degradability

Sulfurous Acid Reagent (7782-99-2)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

## 12.3. Bioaccumulative potential

Sulfurous Acid Reagent (7782-99-2)	
Bioaccumulative potential	No bioaccumulation data available.

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## Safety Data Sheet

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#### 12.4. Mobility in soil

Sulfurous Acid Reagent (7782-99-2)	
Ecology - soil	No (test)data on mobility of the components available.

#### 12.5. Other adverse effects

No additional information available

## **SECTION 13: Disposal considerations**

#### 13.1. Disposal methods

Waste treatment methods

: Waste treatment methods.

Product/Packaging disposal recommendations

Treat using the best available techniques before discharge into drains or the aquatic environment. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle/reuse. Remove to an authorized dump (Class I). Dehydrate/make insoluble. Immobilize the toxic or harmful components.

Additional information

Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No. 43E7/0044 and Regulation (EU) No. 3047/007

1357/2014 and Regulation (EU) No 2017/997.

## **SECTION 14: Transport information**

## **Department of Transportation (DOT)**

In accordance with DOT

Not applicable

#### **Transportation of Dangerous Goods**

Not applicable

#### Transport by sea

Transport document description (IMDG) : UN 1833 sulphurous acid, 8, II

UN-No. (IMDG) : 1833

Proper Shipping Name (IMDG) : sulphurous acid

Class (IMDG) : 8 - Corrosive substances

Packing group (IMDG) : II - substances presenting medium danger

EmS-No. (1) : F-A EmS-No. (2) : S-B

#### Air transport

Transport document description (IATA) : UN 1833 Sulphurous acid, 8, II

UN-No. (IATA) : 1833

Proper Shipping Name (IATA) : Sulphurous acid Class (IATA) : 8 - Corrosives Packing group (IATA) : II - Medium Danger

## **SECTION 15: Regulatory information**

#### 15.1. US Federal regulations

## Sulfurous Acid Reagent (7782-99-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### 15.2. International regulations

## CANADA

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## Sulfurous Acid Reagent (7782-99-2)

Listed on the Canadian DSL (Domestic Substances List)

**EU-Regulations** 

## **National regulations**

No additional information available

15.3. US State regulations

## **SECTION 16: Other information**

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of H-phrases:

H314	Causes severe skin burns and eye damage

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

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