

Safety Data Sheet

Schiff Reagent



SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

1.1 Product Identifier

Trade Name : Schiff Reagent
Product Number : 3803800; 3803800E; 38016SS4; 38016SS4B
SDS Date : August 28, 2015

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Product Use : For use with Periodic Acid Schiff procedure.
Uses Advised Against : All other uses.

1.3 Details of the Supplier of the Substance or Mixture

Manufacturer/Preparer : Leica Biosystems Richmond, Inc
5205 Route 12
Richmond, IL 60071
800-225-3035
LBSNA-LBS-QA@LEICABIOSYSTEMS.COM

1.4 Emergency Telephone Number

Emergency Spill : 1-800-424-9300 (ChemTrec)
+1 703-527-3887 International calls (call collect)
13 11 26 (Australia 24 Hr Poisons Information Centre)
Other Information : 1-800-225-3035

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

CLP/GHS Classification (1272/2008) :

Physical:	Health:	Environmental:
Corrosive to Metals – Category 1	Carcinogen – Category 1B	Not hazardous

2.2 Label Elements

Hazard Pictograms :



Signal Word : DANGER!

Hazard Statements : H290 May be corrosive to metals.
H350 May cause cancer.

LeicaBiosystems.com

Precautionary Statements	P201	Obtain special instructions before use.
	P202	Do not handle until all safety precautions have been read and understood.
	P234	Keep only in original packaging.
	P308+313	IF exposed or concerned: Get medical advice/attention.
	P390	Absorb spillage to prevent material damage.
	P403+233	Store in a well-ventilated place. Keep container tightly closed.
	P405	Store locked up.
	P406	Store in corrosive resistant container with a resistant inner liner.
	P501	Dispose of contents/container in accordance with all local and national regulations.

2.3 Other Hazards

Other hazards which do not result in classifications : None known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number / EINECS Number / REACH Reg. Number	% (w/w)	CLP/GHS Classification (1272/2008)
Sodium Bisulfite	7631-90-5 231-548-0	<2	Acute Toxicity – Category 3 (H302)
Hydrochloric Acid	7647-01-0 231-595-7	<1	Skin Corrosion – Category 1B (H314) Eye Damage – Category 1 (H318) Specific Target Organ Toxicity (Single Exposure) – Category 3 (H335) Corrosive to Metals – Category 1 (H290) Acute Aquatic Toxicity – Category 3 (H402)
Basic Fuchsin	569-61-9 209-321-2	<0.5	Carcinogen – Category 1B (H350)

See Section 16 for full text of GHS and EU Classifications.

SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid Measures

Eye contact	: Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 20 minutes, occasionally lifting upper and lower eyelids. Get medical attention immediately.
Skin contact	: In case of contact, immediately flush skin with plenty of water for at least 20 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly after handling. Get medical attention immediately.
Inhalation	: Call medical doctor or poison control center immediately. Move exposed person to fresh air. If not breathing, if breathing is irregular, or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing, such as a collar, tie, belt, or waistband. Get medical attention immediately.
Ingestion	: Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

See Section 11 for more detailed information on health effects.

4.2 Most important symptoms and effects, both acute and delayed

Eye contact	:	May cause eye irritation.
Skin contact	:	May cause skin irritation.
Inhalation	:	May cause respiratory tract irritation.
Ingestion	:	May be harmful if swallowed.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	:	No immediate treatment is normally required.
Specific treatments	:	No specific treatment.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing Media

Suitable extinguishing media	:	Use dry chemical, alcohol foam, carbon dioxide (CO ₂), or water spray.
Unsuitable extinguishing media	:	None known.

5.2 Special hazards arising from the substance or mixture

Unusual fire and explosion hazards	:	None known.
Combustion products	:	Oxides of sulfur; smoke; hydrogen chloride; chlorine.

5.3 Advice for fire-fighters

Special protective equipment for fire-fighters	:	Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals.
Special protective action for fire-fighters	:	Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures

For emergency responders	:	Wear appropriate protective equipment. Ventilate the area. Prevent entry into basements or confined areas.
---------------------------------	---	--

6.2 Environmental precautions

Environmental precautions	:	Prevent entry in storm sewers and waterways. Report spill as required by local and federal regulations.
----------------------------------	---	---

6.3 Methods and materials for containment and cleaning up

For small & large spill	:	Stop spill at source if it is safe to do so. Absorb with an inert material. Collect into a suitable container for disposal.
------------------------------------	---	---

6.4 Reference to other sections

Refer to Section 8 for personal protective equipment, and Section 13 for disposal information.

SECTION 7: HANDLING and STORAGE

7.1 Precautions for safe handling

Protective measures : Prevent eye and skin contact. Do not breathe vapors or mists. Use with adequate ventilation. Wash thoroughly after handling. Remove contaminated clothing and launder before reuse.

7.2 Conditions for safe storage, including any incompatibilities

Protect containers from physical damage. Store in a cool area. Keep containers closed when not in use. Store away from oxidizers. Empty containers contain product residues. Do not cut, weld, braze, etc. on or near empty containers. Follow all SDS precautions in handling empty containers.

7.3 Specific end use(s)

Industrial uses : None identified.
Professional uses : For use with Periodic Acid Schiff procedure.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Chemical Name	US OEL	EU IOEL	UK OEL	Germany OEL
Sodium bisulfite	5 mg/m ³ TWA ACGIH TLV	None established	5 mg/m ³ TWA ACGIH TLV	None established
Hydrochloric acid	5 ppm ceiling OSHA PEL 2 ppm ceiling ACGIH TLV	5 ppm TWA 10 ppm STEL	1 ppm TWA 5 ppm STEL	2 ppm ceiling

Refer to local or national authority for exposure limits not listed above.

8.2 Exposure controls

Recommended monitoring procedure : Sodium bisulfate: Collection on filters with gravimetric analysis.
Hydrochloric acid: Collection in silica gel tubes with analysis by ion chromatography.

Appropriate engineering controls : Use with adequate local exhaust ventilation to maintain exposure levels below the occupational exposure limits.

Personal protective measures

Eye/face protection : Wear safety glasses or chemical goggles.
Skin protection : Impervious clothing as needed to avoid skin contact.
Hands : Impervious gloves recommended (butyl rubber).
Respiratory protection : None needed with adequate ventilation. If the occupational exposure limit is exceeded, use an approved respirator with organic vapor/formaldehyde cartridges. (In the United States, refer to 29 CFR 1910.1048 for cartridge change schedule requirements). Selection of respiratory protection depends on the

contaminant type, form, and concentration. Select in accordance with OSHA 1910.134 or other applicable regulations and good industrial hygiene practice.

Other protection : Suitable washing facilities should be available.

SECTION 9: PHYSICAL and CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	: Colorless liquid
Odor	: Odorless
Odor threshold	: Not applicable
pH	: ~1.6
Melting/freezing point	: Not available
Boiling point	: Not available
Flash point	: Not available
Lower flammability limit	: Not available
Upper flammability limit	: Not available
Evaporation rate	: Not available
Vapor density (air = 1)	: Not available
Vapor pressure	: Not available
Specific gravity (H₂O = 1)	: 1.45
Relative density	: 1.45
Solubility	: Soluble in water
Octanol/water partition coefficient	: Not available
Autoignition temperature	: Not available
Decomposition temperature	: Not available
Viscosity	: Not available
Explosive properties	: None
Oxidizing properties	: None
Molecular formula	: Not available
Molecular weight	: Not available

9.2 Other information

No additional information available

SECTION 10: STABILITY and REACTIVITY

10.1 Reactivity	: This material is reactive with oxidizing materials, metals, and bases.
10.2 Chemical stability	: Normally stable.
10.3 Possibility of hazardous reactions	: None expected.
10.4 Conditions to avoid	: None known.
10.5 Incompatible materials	: Oxidizing agents, metals, and bases.
10.6 Hazardous decomposition products	: Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: oxides of sulfur; hydrogen chloride; chlorine.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Potential health effects:

LeicaBiosystems.com

Eye contact : May cause eye irritation.
Skin contact : May cause mild skin irritation. Prolonged or repeated exposure may cause dryness or dermatitis.
Inhalation : May cause respiratory tract irritation.
Ingestion : Small amounts are not anticipated to cause adverse effects.

Acute toxicity:

Product/ingredient name	Result	Species	Dose	Exposure
Sodium bisulfite	LD50 Oral	Rat	2,000 mg/kg	-
Hydrochloric acid	LD50 Oral	Rat	238 – 277 mg/kg	-
	LD50 Dermal	Mouse	1,449 mg/kg	-
	LC50 Inhalation	Rat	3,124 ppm	1 hr
Basic fuchsin	LD50 Oral	Mouse	5,000 mg/kg	-

Skin corrosion/irritation : No data available for mixture.
Eye damage/irritation : No data available for mixture.
Respiratory irritation : No data available for mixture.
Respiratory sensitization : No data available for mixture.
Skin sensitization : No data available for mixture.
Germ cell mutagenicity : No data available for mixture.
Carcinogenicity : Basic fuchsin is classified by IARC as “Possibly Carcinogenic to Humans” (Group 2B) and “Reasonably Anticipated to be a Human Carcinogen” by NTP.
Reproductive Toxicity : No data available for mixture.

Specific Target Organ Toxicity:

Single exposure : Hydrochloric acid mists are damaging to lungs in high concentrations.
Repeat exposure : No data available.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Hydrochloric Acid	LC50 7.45 mg/L	Rainbow trout	96 hours

12.2 Persistence and degradability : No data available.

12.3 Bioaccumulative potential : No data available.

12.4 Mobility in soil : No data available.

12.5 Results of PVT and vPvB assessment : No data available.

12.6 Other adverse effects : No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor.

Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: TRANSPORTATION INFORMATION

	14.1 UN Number	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 Packing group	14.5 Environmental hazards
US DOT	UN1789	Hydrochloric Acid	8	III	No
Canada TDG	UN1789	Hydrochloric Acid	8	III	No
EU ADR/RID	UN1789	Hydrochloric Acid	8	III	No
IMDG	UN1789	Hydrochloric Acid	8	III	No
IATA	UN1789	Hydrochloric Acid	8	III	No

14.6 Special precautions for user : None.

14.7 Transport in bulk according to Annex III MARPOL 73/78 and the IBC Code : Not determined

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

US Regulations

- OSHA hazard classification : Corrosive; Carcinogen
- TSCA Inventory : All of the components are listed on the TSCA Inventory.
- SARA 302 : This product does not contain any chemicals regulated under SARA 302.
- SARA 311 Hazard Classification : Chronic health
- SARA 313 : This product does not contain any chemicals regulated under SARA 313.
- CERCLA Section 103 : The RQ for the product, based on the RQ for Sodium Bisulfite (2% maximum) of 5,000 lbs is 250,000 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state, and local regulations.
- California Prop 65 : This product contains the following chemical(s) which are known to the state of California to cause cancer, reproductive toxicity, or birth defects:

Product name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Basic fuchsin	Yes	No	Yes	Yes

SECTION 16: OTHER INFORMATION

Revision history : Updated formatting

CLP/GHS Classification and H Phrases for Reference (See Section 3)

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H350	May cause cancer.
H402	Harmful to aquatic life.

NFPA Rating	Health: 2	Fire: 0	Instability: 0
HMIS Rating	Health: 2	Fire: 0	Physical Hazard: 0

Notice to reader:

This Safety Data Sheet (SDS) has been prepared in accordance with the Classification, Labelling, and Packaging (CLP) regulation in the EU and the Globally Harmonized System (GHS) (29CFR 1910.1200) in the US. It complies with the requirements of the Canadian Controlled Products Regulations. To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.