Aerospray® Cytology Stain D, Hematoxylin I

Safety Data Sheet

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

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Product name : Aerospray® Cytology Stain D, Hematoxylin I
Product code : SS-051D

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : In-Vitro laboratory reagent or component
Recommended use : Professional use only

1.4. Supplier's details

ELITechGroup Inc.
370 West 1700 South
Logan, UT, Cache, 84321
USA
T +1 (435) 752-6011 - F +1 (435) 752-4127
qara_ebs@elitechgroup.com - www.elitechgroup.com

1.5. Emergency phone number

Emergency number : Contact your distributor or poison control center in your country.
InfoTrac Emergency Response: Calls within the USA, phone: 1-800-535-5053. Calls outside the USA, phone: +1 352-323-3500 (call collect)
Customer ID: #90104 (NOTE: this number is required when a customer calls into either phone number above).

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Corrosive to metals, Category 1	H290	May be corrosive to metals.
Acute toxicity (oral), Category 4	H302	Harmful if swallowed.
Skin corrosion/irritation, Category 2	H315	Causes skin irritation.
Serious eye damage/eye irritation, Category 1	H318	Causes serious eye damage.
Specific target organ toxicity — Repeated exposure, Category 2	H373	May cause damage to organs through prolonged or repeated exposure.

Full text of H statements : see section 16

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger

Hazard statements (GHS US)	:	H290 - May be corrosive to metals H302 - Harmful if swallowed H315 - Causes skin irritation H318 - Causes serious eye damage H373 - May cause damage to organs through prolonged or repeated exposure (if swallowed)
Precautionary statements (GHS US)	:	P234 - Keep only in original packaging. P260 - Do not breathe spray, mist, vapors. P264 - Wash hands thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P280 - Wear protective gloves. P301+P312 - If swallowed: Call a POISON CENTER, a doctor if you feel unwell. P302+P352 - If on skin: Wash with plenty of soap and water.. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P314 - Get medical advice or attention if you feel unwell. P330 - Rinse mouth. P332+P313 - If skin irritation occurs: Get medical advice or attention. P362+P364 - Take off contaminated clothing and wash it before reuse. P390 - Absorb spillage to prevent material-damage. P501 - Dispose of hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
ethylene glycol	CAS-No.: 107-21-1	20 – 35	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
Aluminum sulfate hydrate	CAS-No.: 17927-65-0	1 – 5	Met. Corr. 1, H290 Eye Dam. 1, H318
acetic acid, conc≥90%, aqueous solutions	CAS-No.: 64-19-7	1 – 2	Flam. Liq. 3, H226 Skin Corr. 1A, H314

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

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Call a poison center/doctor/physician if you feel unwell.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.

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 : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a poison center/doctor/physician if you feel unwell.

Personal protection for first-aid responders. : First-aiders should consider self-protection and use the recommended personal protective equipment (see section 8).

4.2. Most important symptoms/effects, acute and delayed

Potential Adverse human health effects and symptoms : Harmful if swallowed.

Symptoms/effects after inhalation : None under normal conditions.

Symptoms/effects after skin contact : Irritation.

Symptoms/effects after eye contact : Causes serious eye irritation. Serious damage to eyes.

Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard. Harmful if swallowed.

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

Other medical advice or treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

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

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : No fire hazard.

Explosion hazard : No direct explosion hazard.

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

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

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. 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

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Ventilate area. Evacuate unnecessary personnel. Stop leak if safe to do so.

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

6.2. Methods and materials for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.

Methods for cleaning up : Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Absorb spillage to prevent material-damage.

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

See Heading 8. Exposure controls and personal protection. 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. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Always wash hands after handling the product.

Additional hazards when processed : May be corrosive to metals.

7.2. Conditions for safe storage, including incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.

Storage conditions : Keep container closed when not in use. Store in corrosive resistant container with a resistant inner liner. Keep only in original container. Store in a well-ventilated place. Keep cool.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight. Metals.

Packaging materials : Store in corrosive resistant container with a resistant inner liner. Always store product in container of same material as original container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

ethylene glycol (107-21-1)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Ethylene glycol
ACGIH® TLV® TWA	25 ppm (Vapor fraction)
ACGIH® TLV® STEL	10 mg/m³ (Inhalable fraction, Aerosol only)
	50 ppm (Vapor fraction)
Remark (ACGIH®)	URT & eye irr
Regulatory reference	ACGIH 2025

Aluminum sulfate hydrate (17927-65-0)	
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (TWA)	2 mg/m³ (Aluminum)

acetic acid, conc≥90%, aqueous solutions (64-19-7)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Acetic acid
ACGIH® TLV® TWA	25 mg/m³
	10 ppm
ACGIH® TLV® STEL	37 mg/m³
	15 ppm
Remark (ACGIH®)	URT & eye irr; pulm func
Regulatory reference	ACGIH 2025
USA - OSHA - Occupational Exposure Limits	
Local name	Acetic acid
OSHA PEL TWA	25 mg/m³
	10 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

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, such as personal protective equipment

Personal protective equipment:
Avoid all unnecessary exposure.

Materials for protective clothing:
Wear protective clothing

Hand protection:
Wear protective gloves

Type	Material	Permeation	Thickness (mm)	Penetration
Disposable gloves	Nitrile rubber (NBR), Latex	3 (> 60 minutes)	0.1 - 0.15	

Eye protection:

Chemical goggles or safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Wear suitable respiratory equipment in case of insufficient ventilation

Personal protective equipment symbol(s):



Other information:

Do not eat, drink or smoke during use.

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Liquid
Color	:	Red; Red-brown to dark brown
Odor	:	Vinegar odour
Odor threshold	:	No data available
pH	:	2.6 (2.5 – 2.7)
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	≈ 104 °C
Flash point	:	≥ 104 °C
Flammability (solid, gas)	:	Non flammable.
Vapor pressure	:	No data available
Relative vapor density at 20°C	:	No data available
Relative density	:	No data available
Solubility	:	Water: No available data
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Explosion limits	:	No data available
Particle characteristics	:	No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

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

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases. metals. May be corrosive to metals.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Aerospray® Cytology Stain D, Hematoxylin I	
ATE US (oral)	1841.134 mg/kg body weight

ethylene glycol (107-21-1)	
LD50 oral rat	7712 mg/kg body weight (according to BASF-internal standards, Rat, Male / female, Experimental value, Aqueous solution, Oral, 7 day(s))
LD50 oral	493.91 mg/kg (Estimated)
LD50 dermal	> 3500 mg/kg body weight (Mouse, Male / female, Experimental value, Dermal)
ATE US (oral)	493.91 mg/kg body weight

Aluminum sulfate hydrate (17927-65-0)	
LD50 oral rat	> 2000 mg/kg (OCED Test Guideline 401, Rat, Male, Female)

acetic acid, conc≥90%, aqueous solutions (64-19-7)	
LD50 oral rat	3310 mg/kg body weight Animal: rat
LD50 oral	4960 mg/kg body weight Animal: mouse
ATE US (oral)	3310 mg/kg body weight

Skin corrosion/irritation : Causes skin irritation.
pH: 2.6 (2.5 – 2.7)

ethylene glycol (107-21-1)	
pH	No data available in the literature

Aluminum sulfate hydrate (17927-65-0)	
pH	3.5 (77 °F / 25 °C; Concentration: 50 g/L)

acetic acid, conc≥90%, aqueous solutions (64-19-7)	
pH	2.4 (6 %)

Serious eye damage/irritation : Causes serious eye damage.
pH: 2.6 (2.5 – 2.7)

ethylene glycol (107-21-1)	
pH	No data available in the literature

Aluminum sulfate hydrate (17927-65-0)	
pH	3.5 (77 °F / 25 °C; Concentration: 50 g/L)

acetic acid, conc≥90%, aqueous solutions (64-19-7)	
pH	2.4 (6 %)

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

ethylene glycol (107-21-1)	
NOAEL (chronic,oral,animal/male,2 years)	1500 mg/kg body weight Animal: mouse, Animal sex: male, Remarks on results: other: effect type: carcinogenicity (migrated information)

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

ethylene glycol (107-21-1)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

acetic acid, conc≥90%, aqueous solutions (64-19-7)	
NOAEL (oral,rat,90 days)	290 mg/kg body weight Animal: rat, Animal sex: male

Aspiration hazard : Not classified

ethylene glycol (107-21-1)	
Viscosity, kinematic	18.86 mm²/s (20 °C)

Aluminum sulfate hydrate (17927-65-0)	
Viscosity, kinematic	Not applicable

acetic acid, conc≥90%, aqueous solutions (64-19-7)	
Viscosity, kinematic	0.996 – 1.006 mm²/s

Potential Adverse human health effects and symptoms : Harmful if swallowed.

Symptoms/effects after inhalation : None under normal conditions.

Symptoms/effects after skin contact : Irritation.

Symptoms/effects after eye contact : Causes serious eye irritation. Serious damage to eyes.

Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard. Harmful if swallowed.

SECTION 12 Ecological information

12.1. Ecotoxicity

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

Hazardous to the aquatic environment, short–term (acute) : Not classified

Hazardous to the aquatic environment, long–term (chronic) : Not classified

ethylene glycol (107-21-1)	
LC50 - Fish [1]	> 72860 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	> 100 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, Daphnia magna, Static system, Fresh water, Experimental value)
EC50 96h - Algae [1]	3536 mg/l Test organisms (species): other: green algae
NOEC (chronic)	≥ 1000 mg/l Test organisms (species): Americamysis bahia (previous name: Mysidopsis bahia) Duration: '23 d'

Aluminum sulfate hydrate (17927-65-0)	
LC50 - Fish [1]	> 87.5 mg/l (OECD Test Guideline 203, Danio rerio, 96 h, Semi-static test)
EC50 - Crustacea [1]	> 200 mg/l (OECD Test Guideline 202, Daphnia magna, 48 h, Static test)
ErC50 algae	0.24 mg/l (OECD Test Guideline 201, Pseudokirchneriella subcapitata, 72 h, Static test)

acetic acid, conc≥90%, aqueous solutions (64-19-7)	
LC50 - Fish [1]	> 1000 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	> 1000 mg/l Test organisms (species): Daphnia magna
LC50 - Fish [2]	> 300.82 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [2]	> 300.82 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 1000 mg/l Test organisms (species): Skeletonema costatum
EC50 72h - Algae [2]	> 300.82 mg/l Test organisms (species): Skeletonema costatum

12.2. Persistence and degradability

Aerospray® Cytology Stain D, Hematoxylin I	
Persistence and degradability	Not established.

ethylene glycol (107-21-1)	
Persistence and degradability	Biodegradable in the soil, Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.47 g O_2/g substance
Chemical oxygen demand (COD)	1.24 g O_2/g substance
ThOD	1.29 g O_2/g substance

Aluminum sulfate hydrate (17927-65-0)	
Persistence and degradability	Not established.

acetic acid, conc≥90%, aqueous solutions (64-19-7)	
Persistence and degradability	Biodegradable in the soil, Readily biodegradable in water.

12.3. Bioaccumulative potential

Aerospray® Cytology Stain D, Hematoxylin I	
Bioaccumulative potential	Not established.

ethylene glycol (107-21-1)	
Partition coefficient n-octanol/water (Log Pow)	-1.36 (Experimental value)
Bioaccumulative potential	Not bioaccumulative. Not established.

Aluminum sulfate hydrate (17927-65-0)	
Bioaccumulative potential	Not established.

acetic acid, conc≥90%, aqueous solutions (64-19-7)	
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

ethylene glycol (107-21-1)	
Surface tension	48.4 mN/m (20 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0 (log Koc, SRC PCKOCWIN v2.0, QSAR)
Ecology - soil	Highly mobile in soil.

acetic acid, conc≥90%, aqueous solutions (64-19-7)	
Ecology - soil	Contains component(s) with potential for mobility in the soil. May be harmful to plant growth, blooming and fruit formation.

12.5. Other adverse effects

Ozone : Not classified
Fluorinated greenhouse gases : No

Other information : Avoid release to the environment.

SECTION 13 Disposal considerations

Regional waste regulation : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. Disposal must be done according to official regulations.
Additional information : Do not re-use empty containers.
Ecological waste information : Avoid release to the environment.

SECTION 14 Transport information

In accordance with DOT / TDG / IMDG / IATA

14.1. UN number

Not regulated for transport

14.2. UN Proper Shipping Name

Proper Shipping Name (DOT) : Not regulated
Proper Shipping Name (TDG) : Not regulated
Proper Shipping Name (IMDG) : Not regulated

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Proper Shipping Name (IATA) : Not regulated

14.3. Transport hazard class(es)

DOT
Transport hazard class(es) (DOT) : Not regulated

TDG
Transport hazard class(es) (TDG) : Not regulated

IMDG
Transport hazard class(es) (IMDG) : Not regulated

IATA
Transport hazard class(es) (IATA) : Not regulated

14.4. Packing group

Packing group (DOT) : Not regulated
Packing group (TDG) : Not regulated
Packing group (IMDG) : Not regulated
Packing group (IATA) : Not regulated

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT
Not regulated

TDG
Not regulated

IMDG
Not regulated

IATA
Not regulated

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:		
Aluminum sulfate hydrate	CAS-No. 17927-65-0	1 – 5%

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.		
ethylene glycol	CAS-No. 107-21-1	20 – 35%

ethylene glycol (107-21-1)	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	5000 lb

acetic acid, conc≥90%, aqueous solutions (64-19-7)	
CERCLA RQ	5000 lb

15.2. International regulations

CANADA

ethylene glycol (107-21-1)
Listed on the Canadian DSL (Domestic Substances List)

Aluminum sulfate hydrate (17927-65-0)
Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

acetic acid, conc≥90%, aqueous solutions (64-19-7)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. State regulations

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

Component	State or local regulations
ethylene glycol(107-21-1)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
acetic acid, conc≥90%, aqueous solutions(64-19-7)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16 Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Other information : None.

Full text of hazard classes and H-statements	
H226	Flammable liquid and vapor
H290	May be corrosive to metals
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage

Full text of hazard classes and H-statements	
H315	Causes skin irritation
H318	Causes serious eye damage
H373	May cause damage to organs through prolonged or repeated exposure

Safety Data Sheet (SDS), USA

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.

Reason for change: updating to latest format and company header logo.

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