



Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation Hematoxylin Stain Solution, Gill 2 Formulation, Double Strength
for More Intense Nuclei in Progressive Cytology and Delicate Nuclei in Progressive Histology

Product Number 3536

Other Identifying Product Numbers 3536-1, 3536-16, 3536-32, 3536-5

1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

1.3. Details of the Supplier of the Safety Data Sheet

Company Ricca Chemical Company
Address 412 West Fork Drive

Arlington, TX 76012 USA

Telephone 888-467-4222

1.4. Emergency Telephone Number (24 hours)

CHEMTREC (USA) 800-424-9300
CHEMTREC (International) 1+ 703-527-3887

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SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

Hazard Class	Category	Hazard Statements	Precautionary Statements
Acute Toxicity - Oral	Category 4	H302	P264,P270,P301+P312,P330,P501
Skin Corrosion / Irritation	Category 2	H315	P264,P280,P302+P352,P321, P332+P313,P362+P364
Serious Eye Damage / Eye Irritation	Category 1	H318	P280,P305+P351+P338,P310
Specific Target Organ Toxicity - Single Exposure	Category 1	H370	P260,P264,P270,P308+P311, P321,P405,P501

2.2. GHS Label Elements

Pictograms:



Signal Word: **Danger**

Hazard Statements:

NOTE: Hazard statements may be combined on labels to improve clarity and readability.

Hazard Number	Hazard Statement
H302	Harmful if swallowed
H315	Causes skin irritation
H318	Causes serious eye damage
H370	Causes damage to kidneys

Precautionary Statements:

NOTE: Precautionary statements may be combined or consolidated on labels to improve clarity and readability.

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Prevention

Precautionary Number	Precautionary Statement
P260	Do not breathe fumes or mist.
P264	Wash hands, arms, and face thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves and eye protection.

Response

Precautionary Number	Precautionary Statement
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P302+P352	IF ON SKIN: Wash with plenty of 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.
P308+P311	If exposed or concerned: Call a poison center or doctor.
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.

Storage

Precautionary Number	Precautionary Statement
P405	Store locked up.

Disposal

Precautionary Number	Precautionary Statement
P501	Dispose of contents/container to suitable waste stream in accordance with local, state, federal, and international regulations.

2.3. Hazards not Otherwise Classified

No other hazards identified.

2.4. Ingredients of Unknown Acute Toxicity

3.9 percent of this mixture consists of ingredient(s) of unknown acute oral toxicity. 4.6 percent of this mixture consists of ingredient(s) of unknown acute dermal toxicity. 4 percent of this mixture consists of ingredient(s) of unknown acute inhalation toxicity.

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SECTION 3: Composition / Information on Ingredients

3.1. Components of Mixture

Chemical Name (IUPAC)	Common Name and Synonyms	CAS Number	Weight%
water	Water	7732-18-5	64.00
ethane-1,2-diol	Ethylene Glycol; glycol	107-21-1	27.84
acetic acid	Acetic Acid; Ethanoic acid	64-19-7	4.20
dialuminum trisulfate octadecahydrate	Aluminum Sulfate Hydrate; Sulfuric acid, aluminum salt (3:2), octadecahydrate	7784-31-8	3.52
(6aS,11bR)-7,11b-dihydro-6H-indeno[2,1-c]chromene-3,4,6a,9,10-pentol	Hematoxylin	517-28-2	0.40
sodium iodate	Sodium Iodate; Iodic acid, sodium salt	7681-55-2	< 0.1

SECTION 4: First-Aid Measures

4.1. Description of Necessary Measures

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. May cause slight irritation.

Ingestion: IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Dilute immediately with water or milk. Induce vomiting. Call a physician.

Inhalation: Not expected to require first aid. If necessary, remove to fresh air.

Skin Contact: IF ON SKIN: Wash with plenty of water. May cause irritation, allergic reaction and rash.

4.2. Most Important Symptoms and Effects, Acute and Delayed

Harmful if swallowed May cause irritation to the eyes. May be harmful if swallowed. Wash areas of contact with plenty of water. If ingested, dilute with water, induce vomiting then call a physician. EYE CONTACT: May cause slight irritation. SKIN CONTACT: May cause irritation, allergic reaction and rash. CHRONIC EFFECTS / CARCINOGENICITY: Chronic exposure may lead to kidney and liver damage.

4.3. Immediate Medical Attention or Special Treatment Needed

Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Wash areas of contact with soap and water for at least 15 minutes. Call a physician if irritation develops. Dilute immediately with water or milk. Induce vomiting. Call a physician.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

Water spray, fog, carbon dioxide, dry chemical powder, alcohol foam, polymer foam



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5.2. Specific Hazards Arising from the Substance or Mixture in a Fire

Not considered to be a fire or explosion hazard.

5.3. Special Protective Equipment and Precautions for Firefighters

Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear protective gloves and eye protection.

6.2. Cleanup and Containment Methods and Materials

Absorb with suitable material and dispose of in accordance with local regulations.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

Store locked up. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Store at controlled room temperature, 15 - 30oC.

SECTION 8: Exposure Controls / Personal Protection

8.1. Exposure Limits

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U.S. OSHA - Permissible Exposure Limits (PEL) - Time Weighted Averages (TWA)

Chemical Name	CAS Number	Exposure Limit
Acetic Acid	64-19-7	10 ppm TWA; 25 mg/m ³ TWA

U.S. OSHA - Permissible Exposure Limits (PEL) - Ceiling Limits

No limits found.

U.S. OSHA - Permissible Exposure Limits (PEL) - Short Term Exposure Limits (STEL)

No limits found.

U.S. OSHA - Specifically Regulated Chemicals

No limits found.

ACGIH - Threshold Limit Values - Ceilings (TLV-C)

No limits found.

ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)

Chemical Name	CAS Number	Exposure Limit
Ethylene Glycol	107-21-1	50 ppm STEL (vapor fraction); 10 mg/m ³ STEL (inhalable particulate matter, aerosol only)
Acetic Acid	64-19-7	15 ppm STEL

ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

Chemical Name	CAS Number	Exposure Limit
Ethylene Glycol	107-21-1	25 ppm TWA (vapor fraction)
Acetic Acid	64-19-7	10 ppm TWA

8.2. Engineering Controls

No specific controls are needed. Normal room ventilation is adequate.

8.3. Individual Protective Measures and Personal Protective Equipment

Respiratory Protection: Normal room ventilation is adequate.

Skin Protection: Chemical resistant gloves.

Eye Protection: Safety glasses or goggles.



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SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Physical State:	liquid
Color:	Dark purple
Odor:	Data not available.
Odor Threshold:	Data not available.
Melting/Freezing Point:	Approximately 0°C
Boiling Point/Range:	Approximately 100°C
Flammability:	Data not available.
Flammability/Explosive Limits:	Data not available.
Flash Point:	Not flammable
Auto-Ignition Temperature:	Data not available.
Decomposition Temperature:	Data not available.
pH:	2 - 4
Kinematic Viscosity:	Data not available.
Solubility:	miscible
Vapor Pressure:	Data not available.
Evaporation Rate:	Data not available.
Relative Density:	Data not available.
Relative Vapor Density:	Data not available.
Particle Characteristics:	Data not available.
Partition Coefficient n-octanol/water, log	Data not available.

SECTION 10: Stability and Reactivity

10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

10.2. Possibility of Hazardous Reactions

Data not available.

10.3. Conditions to Avoid and Incompatible Materials

Strong oxidizers (ex. Potassium Permanganate, Chromium Trioxide), Sulfuric Acid, Perchloric Acid.

10.4. Hazardous Decomposition Products

Will not occur.

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SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Oral acute toxicity estimate (ATE): 1755 mg/kg(calculated)

Chemical Name	CAS Number	Toxicity
Ethylene Glycol	107-21-1	Oral LD50 Acute Toxicity Estimate 500 mg/kg (Source: Canada_WHMIS)
Acetic Acid	64-19-7	Oral LD50 Rat 3530 mg/kg (Source: Canada_HSA)
Sodium Iodate	7681-55-2	Oral LD50 Mouse 505 mg/kg (Source: Canada_WHMIS)

Acute Toxicity - Dermal Exposure:

No information found.

Chemical Name	CAS Number	Toxicity
Ethylene Glycol	107-21-1	Dermal LD50 Rat 10600 mg/kg (Source: JAPAN_GHS)
Aluminum Sulfate Hydrate	7784-31-8	Dermal LD50 Rabbit >5000 mg/kg (Source: ECHA_API) As Sulfuric acid, aluminum salt (3:2) [10043-01-3]

Acute Toxicity - Inhalation Exposure:

Inhalation acute toxicity estimate (ATE, vapor): 202.3810 mg/L, 4 h(calculated)

Chemical Name	CAS Number	Toxicity
Ethylene Glycol	107-21-1	Inhalation LC50 Rat >2.5 mg/L 6 h (aerosol, Source: ECHA)
Acetic Acid	64-19-7	Inhalation LC50 Rat > 8.5 mg/L 4 h (Source: Canada_HSA)

11.2 Carcinogenicity:

International Agency for Research on Cancer (IARC)

Chemical Name	CAS Number	Classification
No data found.		

National Toxicology Program (NTP)

Chemical Name	CAS Number	Classification
Ethylene Glycol	107-21-1	Male Rat - Not Tested; Female Rat - Not Tested; Male Mice - No Evidence; Female Mice - No Evidence (TR-413)

U.S. OSHA specifically regulated carcinogens

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Chemical Name	CAS Number	Classification
No data found.		

11.3 Additional Toxicology Information:

Harmful if swallowed. Causes skin irritation. Causes serious eye damage. Causes damage to kidneys.

SECTION 12: Ecological Information

12.1. Ecotoxicity

Chemical Name	CAS Number	Species	Exposure	Toxicity
Ethylene Glycol	107-21-1	Freshwater Algae	Acute	EC50 96 h Pseudokirchneriella subcapitata 6500 - 13000 mg/L (IUCLID)
Ethylene Glycol	107-21-1	Freshwater Fish	Acute	LC50 96 h Oncorhynchus mykiss 41000 mg/L (IUCLID); LC50 96 h Oncorhynchus mykiss 14 - 18 mL/L [static] (EPA); LC50 96 h Lepomis macrochirus 27540 mg/L [static] (EPA); LC50 96 h Oncorhynchus mykiss 40761 mg/L [static] (IUCLID); LC50 96 h Pimephales promelas 40000 - 60000 mg/L [static] (EPA); LC50 96 h Poecilia reticulata 16000 mg/L [static] (IUCLID)
Acetic Acid	64-19-7	Freshwater Fish	Acute	LC50 96 h Pimephales promelas 79 mg/L [static] (EPA); LC50 96 h Lepomis macrochirus 75 mg/L [static] (EPA)
Aluminum Sulfate Hydrate	7784-31-8	Freshwater Fish	Acute	"LC50 96 h Pimephales promelas 27.9 mg/L [static] (ECHA)" As Sulfuric acid, aluminum salt (3:2) [10043-01-3]
Ethylene Glycol	107-21-1	Water Flea	Acute	EC50 48 h Daphnia magna 46300 mg/L (IUCLID)
Acetic Acid	64-19-7	Water Flea	Acute	EC50 48 h Daphnia magna 65 mg/L [Static] (EPA)

12.2. Persistence and Degradability

Data not available.

12.3. Bioaccumulative Potential

Data not available.

12.4. Mobility in soil

Data not available.



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12.5. Other Adverse Ecological Effects

Data not available.

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

Data not available.

SECTION 14: Transportation Information

14.1 Transportation by Land - Department of Transportation (DOT, United States of America)

Not regulated according to DOT regulations.

14.2 Transportation by Air - International Air Transport Association (IATA)

Not regulated according to IATA Dangerous Goods Regulations.

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14.3 Transportation of Dangerous Goods (TDG, Canada)

Not regulated according to TDG regulations.

SECTION 15: Regulatory Information

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15.01. Occupational Safety and Health Administration (OSHA) Hazards

Chemical Name	CAS Number	Regulatory Information
No data found.		

15.02. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Chemical Name	CAS Number	RQ
No data found.		

15.03. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Chemical Name	CAS Number	Regulatory Information
Ethylene Glycol	107-21-1	5000 lb final RQ; 2270 kg final RQ
Acetic Acid	64-19-7	5000 lb final RQ; 2270 kg final RQ
Aluminum Sulfate Hydrate	7784-31-8	"5000 lb final RQ; 2270 kg final RQ" As Aluminum sulfate [10043-01-3]

15.04. Superfund Amendments and Reauthorization Act (SARA) 313 Toxics Release Inventory (TRI)

Chemical Name	CAS Number	List	Regulatory Information
Ethylene Glycol	107-21-1	Emission Reporting	1.0 % de minimis concentration

15.05. Massachusetts Right-to-Know Substance List

Chemical Name	CAS Number	Regulatory Information
Ethylene Glycol	107-21-1	Present
Acetic Acid	64-19-7	Present (including glacial)
Aluminum Sulfate Hydrate	7784-31-8	"Present" As Aluminum sulfate [10043-01-3]

15.06. Pennsylvania Right-to-Know Hazardous Substances

Chemical Name	CAS Number	Regulatory Information
Ethylene Glycol	107-21-1	Environmental hazard
Acetic Acid	64-19-7	Environmental hazard; Environmental hazard (water solutions)
Aluminum Sulfate Hydrate	7784-31-8	"Environmental hazard" As Sulfuric acid, aluminum salt (3:2) [10043-01-3]; "Present" As Aluminum soluble salts [RR-00021-5]

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15.07. New Jersey Worker and Community Right-to-Know Components

Chemical Name	CAS Number	Regulatory Information
Ethylene Glycol	107-21-1	sn 0878
Acetic Acid	64-19-7	sn 0004
Aluminum Sulfate Hydrate	7784-31-8	"sn 0068" As Aluminum sulfate [10043-01-3]

15.08. California Proposition 65

Chemical Name	CAS Number	Regulatory Information
Ethylene Glycol	107-21-1	developmental toxicity, 6/19/2015 (ingested)

15.09. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Chemical Name	CAS Number	List	Status
Ethylene Glycol	107-21-1	DSL	Present
Hematoxylin	517-28-2	DSL	Present
Acetic Acid	64-19-7	DSL	Present
Acetic Acid	64-19-7	NDSL	"Present" As Carboxylic acids, C1-5 [68937-68-8]
Sodium Iodate	7681-55-2	DSL	Present
Water	7732-18-5	DSL	Present
Aluminum Sulfate Hydrate	7784-31-8	DSL	"Present" As Aluminum sulfate [10043-01-3]

15.10. United States of America Toxic Substances Control Act (TSCA) List

Chemical Name	CAS Number	Status
Ethylene Glycol	107-21-1	Present (ACTIVE)
Hematoxylin	517-28-2	Present (ACTIVE)
Acetic Acid	64-19-7	Present (ACTIVE)
Sodium Iodate	7681-55-2	Present (ACTIVE)
Water	7732-18-5	Present [XU] (ACTIVE)
Aluminum Sulfate Hydrate	7784-31-8	"Present (ACTIVE)" As Sulfuric acid, aluminum salt (3:2) [10043-01-3]

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15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Chemical Name	CAS Number	List	Number
Ethylene Glycol	107-21-1	EINECS	203-473-3
Hematoxylin	517-28-2	EINECS	208-237-3
Acetic Acid	64-19-7	EINECS	200-580-7
Sodium Iodate	7681-55-2	EINECS	231-672-5
Water	7732-18-5	EINECS	231-791-2
Aluminum Sulfate Hydrate	7784-31-8	EINECS	"233-135-0" As Aluminium sulphate [10043-01-3]

15.12. China - Inventory of Existing chemical Substances (IECSC)

Chemical Name	CAS Number	Status
Ethylene Glycol	107-21-1	Present [38204]
Hematoxylin	517-28-2	Present [32387]
Acetic Acid	64-19-7	Present [39068]
Sodium Iodate	7681-55-2	Present [05809]
Water	7732-18-5	Present [32224]
Aluminum Sulfate Hydrate	7784-31-8	Present [30017]

15.13. Korea - Existing Chemicals Inventory (KECI/KECL)

Chemical Name	CAS Number	List	Status
Ethylene Glycol	107-21-1	Annex 1	Present [KE-13169]
Hematoxylin	517-28-2	Annex 1	Present [KE-10609]
Acetic Acid	64-19-7	Annex 1	Present [KE-00013]
Sodium Iodate	7681-55-2	Annex 1	Present [KE-31509]
Water	7732-18-5	Annex 1	Present [KE-35400]
Aluminum Sulfate Hydrate	7784-31-8	Annex 1	"Present [KE-01042]" As Aluminum sulfate [10043-01-3]

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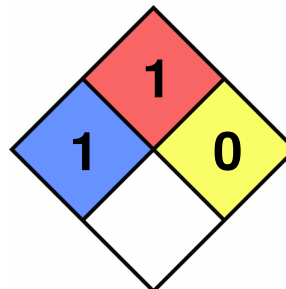
15.14. Japan - Existing and New Chemical Substances Inventory (ENCS)

Chemical Name	CAS Number	MITI No.
Ethylene Glycol	107-21-1	(2)-230
Hematoxylin	517-28-2	(5)-3664
Acetic Acid	64-19-7	(2)-688
Sodium Iodate	7681-55-2	(1)-443
Water	7732-18-5	- (listed on Japanese Pharmacopoeia 8th Edition)
Aluminum Sulfate Hydrate	7784-31-8	"(1)-25" As Dialuminum trisulfate [10043-01-3]

SECTION 16: Other Information

16.1 National Fire Protection Associate (NFPA) Rating

Health: 1
Flammability: 1
Reactivity: 0
Special Hazard:



16.2 Document Revision

Last Revision Date:
 2026-05-24

DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.