

Safety Data Sheet
Warthin-Starry Stain Kit (EU)



Safety Data Sheet
Warthin-Starry Stain Kit (EU)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name Warthin-Starry Stain Kit (EU)
Product number KT036
Brand Warthin-Starry Stain Kit

Other means of identification

Kit Component	Volume	Storage
1. SpiroPrep	125 ml	15-30°C
2. Gelatin (4%), Acidulated	125 ml	2-8°C
3. Silver Nitrate Solution (0.5%), Acidulated	125 ml	2-8°C
4. Hydroquinone Solution (0.1%), Acidulated	2x30 ml	2-8°C
5. Silver Nitrate Solution (2%), Acidulated	30 ml	2-8°C

1.2 Relevant identified uses of the substance or mixture and uses advised against

In Vitro Diagnostic Use

1.3 Details of the supplier of the safety data sheet

Name Diagnostic Biosystems
Address 6616 Owens Drive
Pleasanton CA 94588
USA

Telephone (888) 896-3350
email customersupport@dbiosys.com

1.4 Emergency telephone number

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

SECTION 2: Hazards identification

General hazard statement
For Professional IUsers Only

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2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

This product does not meet the criteria for classification in any hazard class according to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]

This product does not meet the criteria for classification in any hazard class according to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

2.3 Other hazards

This product does not meet the criteria for classification in any hazard class according to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Component 1

1. Zinc chloride

Concentration <= 0.5 % (weight)

Other names / synonyms Zinc chloride (ZnCl₂); Zinci chloridum
EC no. 231-592-0
CAS no. 7646-85-7
Index no. 030-003-00-2

- Acute toxicity, oral (chapter 3.1), Cat. 4
- Skin corrosion/irritation (chapter 3.2), Cat. 1B
- Hazardous to the aquatic environment, short-term (acute) (chapter 4.1), Cat. 1
- Hazardous to the aquatic environment, long-term (chronic) (chapter 4.1), Cat. 1

H302 Harmful if swallowed
H314 Causes severe skin burns and eye damage
H400 Very toxic to aquatic life
H410 Very toxic to aquatic life with long lasting effects
SCLs/M-factors/ATEs STOT SE 3; H335: C ≥ 5 %

Component 2

1. Gelatin

Concentration <= 5 % (weight)

Other names / synonyms Gelatina; Gelatins; Gelatins. A complex combination of proteins obtained by hydrolysis of collagen by boiling skin, tendons, ligaments, bones, etc.
CAS no. 9000-70-8

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2. Acetic acid

Concentration <= 0.1 % (volume)

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

EC no. 200-580-7

CAS no. 64-19-7

Index no. 607-002-00-6

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

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

Component 3

1. Silver nitrate

Concentration <= 0.5 % (weight)

Other names / synonyms Argenti nitras; Nitric acid silver(1++) salt;

EC no. 231-853-9

CAS no. 7761-88-8

Index no. 047-001-00-2

- Oxidizing solids (chapter 2.14), Cat. 2
- Skin corrosion/irritation (chapter 3.2), Cat. 1B
- Hazardous to the aquatic environment, short-term (acute) (chapter 4.1), Cat. 1
- Hazardous to the aquatic environment, long-term (chronic) (chapter 4.1), Cat. 1

H272 May intensify fire; oxidizer
H314 Causes severe skin burns and eye damage
H400 Very toxic to aquatic life
H410 Very toxic to aquatic life with long lasting effects

2. Acetic acid

Concentration <= 0.02 % (volume)

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

EC no. 200-580-7

CAS no. 64-19-7

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- Flammable liquids (chapter 2.6), Cat. 3

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- Skin corrosion/irritation (chapter 3.2), Cat. 1A

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

Component 4

1. Hydroquinone

Concentration <= 0.1 % (weight)

Other names / synonyms 1,4 -Dihydroxybenzene (Hydroquinone), with the exception of entry 14 in Annex III; 1,4-Benzenediol; 1,4-DIHYDROXYBENZENE; AIDA; ALPHA-HYDROQUINONE; ARCTUVIN; BENZENE, P-DIHYDROXY-; BENZOHYDROQUINONE; BENZOQUINOL; BETA-QUINOL; BLACK AND WHITE BLEACHING CREAM; DIHYDROXYBENZENE; ELDOPAQUE; ELDOQUIN; HYDROQUINOL; HYDROQUINOLE; NCI-C55834; P-BENZENEDIOL; P-DIHYDROXYBENZENE; P-DIOXOBENZENE; P-HYDROQUINONE; P-HYDROXYPHENOL; QUINNONE; QUINOL; TECQUINOL; TENOX HQ; TEQUINOL; UN 2662; USAF EK-356

EC no.	204-617-8
CAS no.	123-31-9
Index no.	604-005-00-4

- Hazardous to the aquatic environment, long-term (chronic) (chapter 4.1), Cat. 1
- Carcinogenicity (chapter 3.6), Cat. 2
- Germ cell mutagenicity (chapter 3.5), Cat. 2
- Acute toxicity, oral (chapter 3.1), Cat. 4
- Eye damage/irritation (chapter 3.3), Cat. 1
- Sensitization - skin (chapter 3.4), Cat. 1
- Hazardous to the aquatic environment, short-term (acute) (chapter 4.1), Cat. 1

H302	Harmful if swallowed
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H341	Suspected of causing genetic defects [route]
H351	Suspected of causing cancer [route]
H400	Very toxic to aquatic life
SCLs/M-factors/ATEs	M=10

2. Acetic acid

Concentration <= 0.1 % (volume)

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

EC no.	200-580-7
CAS no.	64-19-7
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- Flammable liquids (chapter 2.6), Cat. 3
- Skin corrosion/irritation (chapter 3.2), Cat. 1A

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

Component 5

1. Silver nitrate

Concentration $\leq 2 \%$ (weight)

Other names / synonyms Argenti nitras; Nitric acid silver(1++) salt;
EC no. 231-853-9
CAS no. 7761-88-8
Index no. 047-001-00-2

- Oxidizing solids (chapter 2.14), Cat. 2
- Skin corrosion/irritation (chapter 3.2), Cat. 1B
- Hazardous to the aquatic environment, short-term (acute) (chapter 4.1), Cat. 1
- Hazardous to the aquatic environment, long-term (chronic) (chapter 4.1), Cat. 1

H272 May intensify fire; oxidizer
H314 Causes severe skin burns and eye damage
H400 Very toxic to aquatic life
H410 Very toxic to aquatic life with long lasting effects

2. Acetic acid

Concentration $\leq 0.02 \%$ (volume)

Other names / synonyms acetic acid ... %; ACETIC ACID; ACETIC ACID, GLACIAL; ACETICACID;
Acidum aceticum; ETHANOIC ACID; ETHYLIC ACID; GLACIAL ACETIC
ACID; METHANECARBOXYLIC ACID; UN 2789; UN 2790; VINEGAR ACID
EC no. 200-580-7
CAS no. 64-19-7
Index no. 607-002-00-6

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

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Skin Irrit. 2; H315: $10 \% \leq C < 25 \%$
Eye Irrit. 2; H319: $10 \% \leq C < 25 \%$

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SECTION 4: First aid measures

4.1 Description of first aid measures

General notes	Consult a physician. Show this safety data sheet to the doctor in attendance.
Following inhalation	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Following skin contact	Rinse with plenty of water. Get medical attention if irritation develops and persists.
Following eye contact	Rinse thoroughly with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.
Following ingestion	Call a poison center or doctor if you feel unwell. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Acute and delayed symptoms and effects: May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.
Self-protection of the first aider	Ensure adequate ventilation. Use personal protective equipment. For personal protection see section 8.

4.2 Most important symptoms and effects, both acute and delayed

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

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Use extinguishing media appropriate for surrounding fire.

5.2 Special hazards arising from the substance or mixture

No data available

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Further information

No data available.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

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

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

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

6.2 Environmental precautions

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

6.3 Methods and material for containment and cleaning up

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

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

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

7.2 Conditions for safe storage, including any incompatibilities

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

7.3 Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

CAS: 123-31-9

Hydroquinone

ACGIH: 1 mg/m³ PEL inhalation; Cal/OSHA: 2 mg/m³ PEL inhalation; NIOSH: (C) 2 mg/m³ [15-min] REL inhalation; OSHA: 2 mg/m³ PEL inhalation

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

Acetic acid

ACGIH (USA): 15 ppm STEL inhalation; 10 ppm, (ST) 15 ppm TLV® inhalation; 10 ppm TWA inhalation; Cal/OSHA (USA): 40 ppm C inhalation; 10 ppm, (ST) 15 ppm, (C) 40 ppm PEL inhalation; 10 ppm, 25 mg/m³ PEL inhalation; 15 ppm, 37 mg/m³ STEL inhalation; NIOSH (USA): 10 ppm, (ST) 15 ppm REL inhalation; 15 ppm, 37 mg/m³ ST inhalation; 10 ppm, 25 mg/m³ TWA inhalation; OSHA (USA): 25 mg/m³ PEL inhalation; 10 ppm PEL inhalation; 10 ppm, 25 mg/m³ TWA inhalation

CAS: 7646-85-7

Zinc chloride

Cal/OSHA: 1 mg/m³, (ST) 2 mg/m³ PEL inhalation; NIOSH: 1 mg/m³, (ST) 2 mg/m³ REL inhalation; OSHA: 1 mg/m³ PEL inhalation

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8.2 Exposure controls

Appropriate engineering controls

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

Individual protection measures, such as personal protective equipment

Pictograms



Eye and face protection

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

Skin protection

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

Body protection

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

Respiratory protection

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

Thermal hazards

No data available

Control banding approach

No data available.

Environmental exposure controls

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

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Clear
Colour	Colorless
Odour	Odorless
Odour threshold	No data available.
pH	No data available
Melting point/freezing point	No data available.
Boiling point or initial boiling point and boiling range	No data available.
Flash point	No data available.
Evaporation rate	No data available.
Flammability	No data available.
Lower and upper explosion limit/flammability limit	No data available.

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

Particle characteristics

No data available.

9.2 Other information

9.2.1 Information with regard to physical hazard classes

No data available.

9.2.2 Other safety characteristics

No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity

None under normal use conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

None under normal use conditions.

10.4 Conditions to avoid

Exposure to moisture.

Avoid storing in direct sunlight and avoid extremes of temperature.

Heat, flames and sparks.

10.5 Incompatible materials

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

Hydroquinone: Strong bases, Strong oxidizing agents

10.6 Hazardous decomposition products

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

Acetic acid: Hazardous decomposition products formed under fire conditions. - Carbon oxides

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

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Hydroquinone
LD50 Oral - Rat - 367.3 mg/kg

Skin corrosion/irritation

Acetic acid
LD50 Skin - Rat - 1,112 mg/kg

Hydroquinone
LD50 Skin - Rabbit - > 2,000 mg/kg

Hydroquinone
OECD Test Guideline 429 - Mouse
Result: May cause sensitisation by skin contact.

Serious eye damage/irritation

No data available

Respiratory or skin sensitization

Acetic acid
LC50 Inhalation - Mouse - 5620 ppm - 1 h
Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Conjunctive irritation. Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Other. Blood:Other changes.

Acetic acid
LC50 Inhalation - Rat - 11.4 mg/l - 4 h

Hydroquinone
OECD Test Guideline 429 - Mouse
Result: May cause sensitisation by skin contact.

Germ cell mutagenicity

Hydroquinone
- Mouse
Result: Laboratory experiments have shown mutagenic effects. Mutagenicity (micronucleus test). Result: positive

Carcinogenicity

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

Reproductive toxicity

Based on available data, classification data are not met

STOT-single exposure

No data available.

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STOT-repeated exposure

No data available.

Aspiration hazard

No data available.

11.2 Information on other hazards

Endocrine disrupting properties

No data available.

Other information

No data available.

SECTION 12: Ecological information

12.1 Toxicity

Acetic acid

LC50 - *Oncorhynchus mykiss* (rainbow trout) - >1,000 mg/l - 96 h

Citation: (OECD Test Guideline 203)

Acetic acid

EC50 - *Daphnia magna* (water flea) - >300.82 mg/l - 48 h

Citation: (OECD Test Guideline 202)

Hydroquinone

LC50 - *Oncorhynchus mykiss* (rainbow trout) - 0.04 - 0.1 mg/l - 96 h

Hydroquinone

EC50 - *Daphnia magna* (water flea) - 0.13 mg/l - 48 h

Hydroquinone

EC50 - *Pseudokirchneriella subcapitata* (green algae) - 0.335 mg/l - 72 h

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 PBT and vPvB assessment

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

12.6 Endocrine disrupting properties

No data available.

12.7 Other adverse effects

No data available.

SECTION 13: Disposal considerations

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13.1 Waste treatment methods

Product disposal

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

Packaging disposal

Dispose of as unused product.

Waste treatment

No data available

Sewage disposal

Do not let product enter drains

Other disposal recommendations

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

SECTION 14: Transport information

DOT (US)

UN Number: UN1840

Class: 8

Packing Group: III

Proper Shipping Name: Zinc chloride, solution

Reportable quantity (RQ):

Marine pollutant:

Poison inhalation hazard:

IMDG

UN Number: UN1840

Class: 8

Packing Group: III

EMS Number:

Proper Shipping Name: Zinc chloride, solution

IATA

UN Number: UN1840

Class: 8

Packing Group: III

Proper Shipping Name: Zinc chloride, solution

SECTION 15: Regulatory information

15.2 Chemical Safety Assessment

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

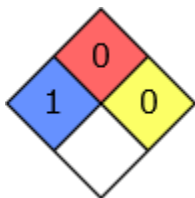
HMIS Rating

Warthin-Starry Stain Kit (EU)	
HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	B

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NFPA Rating



SECTION 16: Other information

SDS-0057, Rev. C

Further information/disclaimer

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