ULTRAVIEW SILVER CHROMOGEN B (US)

Version 1.1 Revision Date 11-18-2013 Print Date 03-18-2014

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : ULTRAVIEW SILVER CHROMOGEN B (US)

Mat.-No./ Genisys-No. : 05262771001

Manufacturer or supplier's details

Company : Roche Diagnostics Limited
Charles Avenue

Address : Burgess Hill
RH15 9RY West Sussex

Telephone : +44 1444 256000
Telefax : +44 1444 256239
Emergency telephone number : +49(0)621-759-2012 oder +49(0)621-759-4848 oder +49(0)8856-60-2629

Emergency telephone number:

In case of emergencies: (Roche Diagnostics Ltd.) :	Health, Safety & Environment	+44 1444 256500 or +44 7802 260498
	-	
	Product Safety / Vigilance	+44 1444 256561 or +44 7710 391653
	-	
Toxicology 24Hr help-line: :	NPIS:	+44 844 892 0111
Health Advice 24Hr help-line:	NHS Direct:	+44 845 4647
	NHS 24:	+44 8454 242424

Recommended use of the chemical and restrictions on use

Restrictions on use : For professional users only.

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Physical state	liquid
Colour	clear
Odour	No information available.

GHS Classification

Skin sensitisation : Category 1
Carcinogenicity : Category 2

GHS Label element

Hazard pictograms :

Signal word : Warning

Hazard statements : H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.

Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves.
P281 Use personal protective equipment as required.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.
Storage:
P405 Store locked up.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Potential Health Effects

Carcinogenicity:

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.

ACGIH Confirmed animal carcinogen with unknown relevance to humans
Hydroquinone

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.

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.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Preparation

Hazardous components

Chemical Name	CAS-No.	Concentration [%]
Citric acid monohydrate	5949-29-1	>= 1 - < 5
hydroquinone	123-31-9	>= 0.1 - < 1

SECTION 4. FIRST AID MEASURES

General advice	:	Do not leave the victim unattended.
If inhaled	:	Move to fresh air. Move to fresh air. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	:	If on skin, rinse well with water.
In case of eye contact	:	Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. If eye irritation persists, consult a specialist.
If swallowed	:	Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Rinse mouth with water.
Notes to physician	:	The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Specific hazards during firefighting	:	No information available.
Further information	:	Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special protective equipment for firefighters	:	Wear self contained breathing apparatus for fire fighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	:	Wipe up with absorbent material (e.g. cloth, fleece). Keep in suitable, closed containers for disposal. Use neutralizing agents.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.

Conditions for safe storage : Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid : No materials to be especially mentioned.
Keep away from oxidising agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
hydroquinone	123-31-9	TWA	1 mg/m3	ACGIH
		C	2 mg/m3	NIOSH REL
		TWA	2 mg/m3	OSHA Z-1
		TWA	2 mg/m3	OSHA P0

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Hand protection
Material : Protective gloves

Remarks : The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. This recommendation is only valid for the product mentioned in the safety data sheet and provided by us and for the application specified by us. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Safety glasses

Skin and body protection : Protective suit

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	clear
Odour	:	No information available.
pH	:	3.8
Melting point/range	:	no data available
Boiling point/boiling range	:	no data available
Flash point	:	does not flash
Flammability (solid, gas)	:	The product is not flammable.
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Density	:	1.010 g/cm3
Solubility(ies)		
Water solubility	:	completely miscible
Auto-ignition temperature	:	no data available
Thermal decomposition	:	no data available
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Reacts with the following substances: Oxidizing agents Metals Acids Bases Stable under recommended storage conditions. No hazards to be specially mentioned.
Conditions to avoid	:	no data available
Incompatible materials	:	Oxidizing agents Acids Bases Metals
Hazardous decomposition products	:	Carbon oxides Sodium oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute inhalation toxicity : Acute toxicity estimate : 30.48 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Components:

Citric acid monohydrate:
Acute oral toxicity : LD50 mouse: 5,400 mg/kg

LD50 rat: > 6,730 mg/kg

LD50 rabbit: > 7,000 mg/kg

hydroquinone:
Acute oral toxicity : LD50 Oral rat: 302 mg/kg

Acute dermal toxicity : LD50 Dermal rabbit: > 2,001 mg/kg

Skin corrosion/irritation

Components:

Citric acid monohydrate:
Remarks: Extremely corrosive and destructive to tissue.

hydroquinone:
Remarks: May cause skin irritation and/or dermatitis.

Serious eye damage/eye irritation

Components:

Citric acid monohydrate:
Result: Irritating to eyes.
Remarks: May cause irreversible eye damage.

hydroquinone:
Result: Risk of serious damage to eyes.
Remarks: May cause irreversible eye damage.

Respiratory or skin sensitisation

Components:

Citric acid monohydrate:
Classification: Did not cause sensitisation on laboratory animals.

hydroquinone:
Species: rabbit
Result: May cause sensitisation by skin contact.

Germ cell mutagenicity

Components:

hydroquinone:
Germ cell mutagenicity- Assessment : In vitro tests showed mutagenic effects

Carcinogenicity

Components:

hydroquinone:
Carcinogenicity - Assessment : Limited evidence of a carcinogenic effect.

Reproductive toxicity

no data available

STOT - single exposure

Components:

Citric acid monohydrate:
Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

hydroquinone:
Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Components:

Citric acid monohydrate:
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration toxicity

Components:
Citric acid monohydrate:
no data available

hydroquinone:
no data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

Toxicity Data on Soil	:	Not expected to adsorb on soil.
Other organisms relevant to the environment	:	no data available

Components:
Citric acid monohydrate :

Toxicity to fish	:	LC0 (Carassius auratus (goldfish)): 625 mg/l
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 120 mg/l Exposure time: 72 h

Ecotoxicology Assessment

Acute aquatic toxicity	:	This product has no known ecotoxicological effects.
Chronic aquatic toxicity	:	This product has no known ecotoxicological effects.
Toxicity Data on Soil	:	Not expected to adsorb on soil.
Other organisms relevant to the environment	:	no data available

hydroquinone :

Toxicity to fish	:	LC50 (Leuciscus idus (Golden orfe)): 0.15 mg/l Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Daphnia magna (Water flea)): 0.15 mg/l
Toxicity to algae	:	EC0 (Scenedesmus quadricauda (Green algae)): 0.93 mg/l Exposure time: 168 h
Toxicity to bacteria	:	EC0 (Pseudomonas putida): 58 mg/l Exposure time: 16 h

Ecotoxicology Assessment

Acute aquatic toxicity	:	Very toxic to aquatic life.
Toxicity Data on Soil	:	Not expected to adsorb on soil.
Other organisms relevant to the environment	:	no data available

Persistence and degradability

Components:
Citric acid monohydrate :

Biodegradability	:	Remarks: Expected to be ultimately biodegradable

hydroquinone :

Biodegradability	:	Biodegradation: 92 % Exposure time: 28 d Biodegradation: 65 % Exposure time: 14 d

Biodegradation: 48 %
Exposure time: 7 d

Biodegradation: 35 %
Exposure time: 5 d

Method: OECD Test Guideline 302
Remarks: According to the results of tests of biodegradability this product is considered as being readily biodegradable.

Bioaccumulative potential

Components:
Citric acid monohydrate :
Partition coefficient: n-octanol/water : log Pow: 1.72

Mobility in soil

no data available

Other adverse effects

no data available

Product:

Regulation	40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks	This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Can be disposed as waste water, when in compliance with local regulations.
Contaminated packaging	:	Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International regulation

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR
Not regulated as a dangerous good

Special precautions for user

Remarks : Not dangerous goods in the meaning of ADR/RID, ADNR, IMDG-Code, ICAO/IATA-DGR

SECTION 15. REGULATORY INFORMATION

OSHA Hazards : Moderate eye irritant, Carcinogen

WHMIS Classification : D2A: Very Toxic Material Causing Other Toxic Effects
Toxic Material Causing Other Toxic Effects

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Hydroquinone	123-31-9	100	
hydroquinone	123-31-9	100	

SARA 302 : The following components are subject to reporting levels established by SARA Title III, Section 302:
hydroquinone 123-31-9 0.18 %

SARA 313 : SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):
hydroquinone 123-31-9 0.18 %
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489):
hydroquinone 123-31-9 0.18 %

Clean Water Act
This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.
This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.
This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

hydroquinone	123-31-9	0.1 - 1 %

Pennsylvania Right To Know

water	7732-18-5	90 - 100 %
hydroquinone	123-31-9	0.1 - 1 %

New Jersey Right To Know

water	7732-18-5	90 - 100 %
Citric acid monohydrate	5949-29-1	1 - 5 %
Sodium citrate	6132-04-3	1 - 5 %

California Prop 65 : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

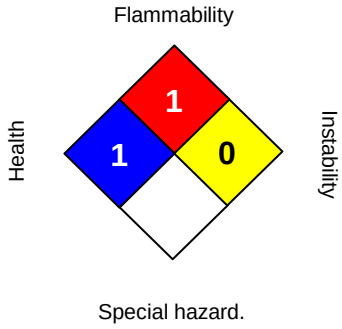
Inventories

AICS (Australia), DSL (Canada), IECSC (China), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	2*
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.