

Product name: UranyLess TEM staining solution
Document Nr.: SDS00129005030-01

Date: April 15th 2022
Version: 2.0

Section 1: Identification of the substance or mixture and the company

1.1. Product Identifier

UranyLess TEM staining solution

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

Staining of TEM thin tissue section or tissue particles

1.3. Details of the supplier of the Safety Data Sheet

Rave Scientific
100 Franklin Square Dr.
Suite 101
Somerset, NJ 08873
Telephone: 1-732-898-3828
Email: info@ravescientific.com
Web: www.ravescientific.com

1.4 Emergency telephone number

911 (USA) or your national emergency telephone number for chemical spills, leaks, fires, exposures or accidents

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Physical:	None
Health:	Skin irritation category 1 Eye irritation, category 1
Environment:	None
Other hazards:	None

Classification according to Regulation EC Nr. 1272/2008

Health:	R36: Irritating to eyes R38: Irritating to skin
Environment:	Not classified
Other hazards:	Not classified

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2.2 Labeling elements

Labelling accordance to Regulation EC Nr. 1272/2008

Hazard pictogramm(s):



Signal word:

Warning

Hazard statement(s):

H315: Causes skin irritation
H319: Causes serious eye irritation
H335: May cause respiratory irritation

Precautionary statement(s)

Prevention:

P102: Keep out of reach of children
P260: Do not breath dust/fumes/gas/mist/vapours/spray
P270: Do not eat, drink or smoke when using this product
P 271: Use outdoors or in well ventilated area (fume hood)
P 273: Avoid release to the environment
P280: Wear protective gloves/protective clothing/eye protection/face protection

Response:

P312: Call a poison center/doctor/physician/first aider if you feel unwell
P305+P351+P338: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical attention
P302+P352: If on skin: Wash with plenty of water and soap.
P304+P340: If inhaled: Remove person to fresh air and keep comfortable for breathing
P332+P313: If skin irritation occurs: Get medical attention
P362+P364: Take of contaminated clothing and wash before reuse
P391: Collect spillage

Storage:

None

Disposal:

P501-2: Dispose of contents/container to an authorised waste collection point

Supplemental hazard info:

None

2.3 Other hazards

None known

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Section 3: Composition / information on components

3.1. Substances

Not applicable

3.2 Mixtures

Proprietary mix of lanthanides (<1%) in aqueous solution

Section 4: First aid measures

4.1. Description of first aid measures

Contact with eyes:	Rinse cautiously with water for several minutes. If possible, remove contact lenses. Continue rinsing. Seek medical attention if irritation persists.
Contact with skin:	Wash with water and soap. Seek medical attention if irritation persists.
Inhalation:	Fresh air, keep warm and at rest. Seek medical attention if ill effects occur
Ingestion:	If swallowed, do not induce vomiting Seek immediate medical advice If vomiting appears imminent or occurs hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus. Never give liquid to a person with reduced awareness Give water to rinse out mouth, then provide water slowly as much as casually can comfortably drink Avoid giving milk or oils Avoid giving alcohol

4.2. Important symptoms and effects, either immediate or delayed

Inhalation:	No information available
Ingestion:	No information available
Skin contact:	Mildly irritating to skin Symptoms: redness and pain
Eye contact:	Irritating to eyes Symptoms: redness and pain, impaired vision

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4.3. Indication of any immediate medical attention and special treatment

General advise: If you feel unwell, seek medical advice; show product label if possible
If symptoms persist, always call a doctor

Section 5: Firefighting Measures

5.1. Extinguishing media

Use CO2 or water spray.

5.2 Special hazards arising from the substance or mixture

None known

5.3 Advice to firefighters

No special measures required

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Not required

6.2 Environmental precautions

Dilute with plenty of water
Do not allow to enter public sewers and waterways

6.3 Methods and material for containment and clean up

Absorb spillage with liquid binding material (sand, diatomite, sawdust, universal binders)
Clean up spills immediately
Wash spill area with soap and water to remove last traces of residue

6.4 Reference to other sections

For further information see section 8

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Section 7: Handling and storage

7.1. Precautions for safe handling

Ensure good ventilation at workplace
Prevent formation of aerosols

7.2 Conditions for safe storage, including any incompatibilities

No special requirement, store at room temperature
Keep out of reach of children

7.3 Specific end uses(s)

Staining of tissue for TEM imaging

Section 8: Exposure control and personal protection

8.1. Control parameters

This product does not contain any relevant quantities of materials with critical values which have to be monitored at the workplace

8.2 Exposure controls

Control procedures: Ensure adequate ventilation
Keep away from foodstuffs, beverages and feed
Immediately removed all soiled and contaminated clothing
Wash hands before breaks and at end of work

Personal protection: Take precautions to avoid contact with eyes and skin when handling the products

Inhalation: In case of insufficient ventilation, wear suitable respiratory equipment

Hands and skin: Wear suitable gloves against chemicals; recommended gloves:
Nitrile

Eyes: Wear safety goggles

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Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance/physical state:	Liquid
Colour:	Transparent
Odour:	Not determined
pH	7
Boiling point/range:	100°C
Flammability:	Not flammable
Flash point:	Not applicable
Evaporation rate:	Not determined
Explosion limits: upper limit:	Not determined
 lower limit:	Not determined
Vapour pressure:	Not determined
Relative density:	1 g/cm ³ @ 20°C
Solubility in water:	Fully miscible with water
Auto-ignition:	This product is not selfigniting
Viscosity:	1cP

9.2 Other information

VOC: None

Section 10: Stability and reactivity

10.1. Reactivity

No hazardous reactions known if used for its intended purposes

10.2 Chemical stability

Stable at normal temperatures and pressures

10.3 Possibility of hazardous reactions

No hazardous reactions known if used for its intended purposes

10.4 Conditions to avoid

Prevent freezing

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10.5 Incompatible materials

No further relevant information available

10.6 Hazardous decomposition products

No dangerous decomposition products known

Section 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure:

Inhalation: Irritant to mucous membranes
Skin contact: Irritant to skin
Eye contact: Irritation to eyes

No toxicological data available

Section 12: Ecological information

12.1. Toxicity

No further relevant information available

12.2 Persistence and degradability

No further relevant information available

12.3 Bioaccumulative potential

No further relevant information available

12.4 Mobility in soil

No further relevant information available

12.5 Results of PBT and vPvB assessment

Not applicable

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12.6 Hazardous decomposition products

No experimental data available

Section 13: Disposal considerations

13.1. Waste treatment methods

Product: Do not discharge into drains or the environment, dispose to an authorised waste collection point.
National regulations: Disposal should be in accordance with local, state or national legislation.

Section 14: Transport information

14.1. UN number

Not applicable

14.2 UN proper shipping name

Not applicable

14.3 Transport hazard class(es)

Not applicable

14.4 Packing group

Not applicable

14.5 Incompatible materials

Not applicable

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC code

Not applicable

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Section 15: Regulatory information

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

None of the ingredients is listed

15.2 Chemical safety assessment

No information available

Section 16: Other information

RoHS Directive Compliant

This product is fully compliant with the directive 2100/65/EU Annex II (RoHS). It does not contain any lead, cadmium, mercury, hexavalent chromium, PBB's or PBDE's.

WEEE

This product is not a piece of electrical or electronic equipment, and it therefore not governed by Directive 2002/96/EC on waste electrical and electronic equipment (WEEE)

Abbreviations:

Exp.	Exposure
Flam.	Flammable
GHS	Global Harmonised System of Classification of Labelling Chemicals
Irrit.	Irritant
LC50	Lethal Concentration 50%
LCLo	Lowest published lethal concentration
LD50	Lethal Dose 50%
N/A	Not applicable
N/E	Not estimated
PBT	Persistent Bioaccumulative and Toxic
WEL	Workplace Exposure Limit
Repr.	Reproductive toxicant
RoHS	Restriction of Hazardous Substance
SEM	Scanning Electron Microscope
STEL	Short-Term Exposure Limit
STOT	Specific Target Organ Toxicity
TEM	Transmission Electron Microscope
TCLo	Lowest published toxic concentration
vPvB	very Persistent and very Bioaccumulative
WEEE	Waste Electrical and Electronic Equipment

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Full Text Risk and Hazard codes

H315 – Causes skin irritation.
H319 – Causes serious eye irritation
H335 – May cause respiratory irritation.

R36 – Irritating to eyes.
R38 – Irritating to skin.

Safety advice:

S02 – Keep out of reach of children.
S13 – Keep away from food, drink and animal feeding stuff.
S23 – Do not breath gas/fumes/vapour/spray.
S26 – In case of contact with eyes, rinse with plenty of water and seek medical help.
S281 – After contact with skin, wash immediately with detergent and plenty of waterways.
S29 – Do not empty in drains.
S35 – This materials and its container must be disposed of in a safe way.
S36 – Wear suitable protective clothing.
S37 – Wear suitable gloves.
S38 – In case of insufficient ventilation, wear suitable respiratory equipment.
S39 - Wear eye / face protection.
S45 – In case of accident or if you feel unwell, immediately contact Doctor or Poisons information center (show label if possible).
S61 – Avoid release to the environment
S64 – If swallowed, rinse mouth with water (only if person is conscious)

This product should be stored, handled and used in accordance with good industrial hygiene practices and in accordance with any legal regulation.

The information contained herewith is based on the present state of our knowledge and is intended to describe the product from the point of view of safety requirements. It does not guarantee any specific properties.

It is the responsibility of the user to query and verify any information seeming suspect or where doubt on the validity may exist. The buyer assumes all responsibility of using and handling the product in accordance with local, state, federal and international regulations.