

## VON KOSSA KIT

The kit contains:

Lithium carbonate, solution

Nuclear Fast Red (Kernechtrot) reagent

Reducing buffer, solution

Silver ammonia reagent

Sodium thiosulfate, 5% solution

Trading name:	<b>LITHIUM CARBONATE, SOLUTION</b>				
Product code:	LK-OT-X**	Date of compilation:	21 Dec 2022	Version:	4

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

<b>1.1</b>	<b>Product identifier</b>	
	Trading name:	LITHIUM CARBONATE, SOLUTION
	Chemical name:	-
	Catalogue number:	LK-OT-X**
<b>1.2</b>	<b>Relevant identified uses of the substance or mixture and uses advised against</b>	
	Uses:	For use with Von-Kossa staining kit.
	Uses advised against:	Only the identified uses are advised.
	Reason why uses advised against:	The product is intended for use only as an <i>in vitro</i> diagnostic medical device, registered at the Agency for Medicinal Products and Medical Devices and there is no reason to use it for other purposes.
<b>1.3</b>	<b>Details of the supplier of the safety data sheet</b>	
	Supplier:	BioGnost Ltd.
	Address:	Medjugorska 59, Zagreb
	Telephone number:	+385 1 2409997
	Telefax.:	+385 1 2404039
	e-mail of competent person:	<a href="mailto:msds@biognost.hr">msds@biognost.hr</a>
	National contact:	-
<b>1.4</b>	<b>Emergency telephone number</b>	
	National Protection and Rescue Directorate:	112
	Medical information:	+385 1 2348 342
	Other information:	-

**SECTION 2. Hazards identification**

<b>2.1</b>	<b>Classification of the substance or mixture</b>	
<b>2.1.1</b>	<b>Classification according to Regulation (EC) No 1272/2008 (CLP)</b>	
	Hazard class and category code:	Hazard statements*:
	Not identified as hazardous substance.	-
<b>2.1.2.</b>	<b>Additional information</b>	
	-	
*For full text of Hazard- and EU Hazard-statements: see SECTION 16		
<b>2.2</b>	<b>Label elements</b>	
	Product identification:	LITHIUM CARBONATE, SOLUTION
	Identification number:	-
	Authorization number:	-
	Hazard pictograms:	-

Trading name:	<b>LITHIUM CARBONATE, SOLUTION</b>				
Product code:	LK-OT-X**	Date of compilation:	21 Dec 2022	Version:	4

Signal word:	-
Hazard statements:	-
Precautionary statements:	-
Supplemental hazard information (EU):	-

2.3	Other hazards
<p><b>Endocrine Disrupting Properties:</b>          No known endocrine disrupting properties</p> <p><b>Results of PBT and vPvB assessment:</b> According to the results of its assessment, this substance is not a PBT or a vPvB.</p>	

SECTION 3. Composition/information on ingredients				
CAS/ EC/ Index number	REACH Registration No	Weight % content (or range)	Identification name	Classification according to Regulation (EC) No 1272/2008 (CLP)
554-13-2/ 209-062-5/ -	-	< 1 %	lithium carbonate	Acute Tox. 4; H302 Eye Irr. 2; H319

SECTION 4. First aid measures		
4.1	Description of first aid measures	
General notes:	If the suggested first aid measures do not prove sufficient, seek medical attention.	
Following inhalation:	Carry the afflicted person out of the contaminated area into a well-ventilated area or out for fresh air. In case of difficult breathing, provide the afflicted person with oxygen.	
Following skin contact:	Remove contaminated clothing. Immediately wash with plenty of water for at least 20 minutes. Seek medical assistance if the symptoms of irritation remain.	
Following eye contact:	Rinse out with plenty of water with the eyelid held wide open for at least 20 minutes. If the symptoms remain, immediately call in ophthalmologist.	
Following ingestion:	Rinse the mouth thoroughly with 1-2 glasses of water. Immediately consult a physician and show the container or label. In case of swallowing large quantities, transport the afflicted person to the hospital.	
Self-protection of the first aider:	-	
4.2	Most important symptoms and effects, both acute and delayed	

Trading name:	<b>LITHIUM CARBONATE, SOLUTION</b>				
Product code:	LK-OT-X**	Date of compilation:	21 Dec 2022	Version:	4

	Following inhalation:	According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested.
	Following skin contact:	According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested.
	Following eye contact:	According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested.
	Following ingestion:	According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested.
4.3	Indication of any immediate medical attention and special treatment needed	
	-	

<b>SECTION 5. Firefighting measures</b>		
5.1	Extinguishing media	
	Suitable extinguishing media:	water spray, dry powder, CO <sub>2</sub> or alcohol resistant foam
	Unsuitable extinguishing media:	Water with full jet
5.2	Special hazards arising from the substance or mixture	
	Hazardous combustion products:	no information available
5.3	Advice for firefighters	
	Use a self-contained open-circuit compressed air breathing apparatus and fireproof clothing.	
5.4	Additional information	
	Cool endangered receptacles with water spray. Collect contaminated fire fighting water separately. Do not contaminate the environment with extinguishing media.	

<b>SECTION 6. Accidental release measures</b>		
6.1	Personal precautions, protective equipment and emergency procedures	
6.1.1.	For non-emergency personnel	
	Protective equipment:	Use personal protective equipment (see Section 8).
	Accident prevention methods:	Evacuate members of all non-essential personnel and those members without protective equipment. Avoid breathing vapors and avoid contact with skin and eyes. Do not smoke. Keep away from ignition sources.
	Emergency procedures:	Mark the area using proper signs.
6.1.2.	For emergency responders:	
	Use protective equipment; in case of inadequate ventilation use adequate airways protective equipment (see Section 8).	
6.2	Environmental precautions:	
	Do not dispose of in sewage, drainage system and waterways. In case of large spillage contact National Protection and Rescue Directorate (NPRD) on 112.	
6.3	Methods and material for containment and cleaning up	

Trading name:	<b>LITHIUM CARBONATE, SOLUTION</b>				
Product code:	LK-OT-X**	Date of compilation:	21 Dec 2022	Version:	4

6.3.1.	Bunding, covering of drains; capping procedures:	Sand protective barrier or barriers made of similar materials.
6.3.2.	Cleaning up:	Where possible, the substance can be absorbed by using absorbing material. Place the waste material in tightly closed impermeable containers. Store the substance in well ventilated storage rooms until disposal. Submit for disposal to the legal persons authorized by the Ministry of Environmental and Nature Protection. After disposal of the products, wash the area and involved materials with water.
6.3.3.	Other information:	Secure proper ventilation. Do not use incompatible materials (see Section 10).
6.4	Reference to other sections	
	See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.	

<b>SECTION 7. Handling and storage</b>		
7.1	Precautions for safe handling	
7.1.1.	Protection measures	
	Measures to prevent fire:	Use in well ventilated storage rooms. Keep away from sources of ignition and heat. Do not use tools that cause sparks. Do not smoke.
	Measures to prevent aerosol and dust generation:	Secure proper ventilation.
	Measures to protect the environment:	Prevent spilling into the sewage system and waterways.
	Other measures:	Protect against electrostatic charges.
7.1.2.	Advice on general occupational hygiene:	
	Do not eat, drink or smoke in the workspace. Thoroughly wash hands after work and before eating.	
7.2	Conditions for safe storage, including any incompatibilities	
	Technical measures and storage conditions:	Keep in tightly closed and upright set containers in a well ventilated storage rooms at temperatures ranging from 15 to 25 °C. Protect from heat and direct sunlight.
	Packaging materials:	Manufacturer's original packaging.
	Requirements for storage rooms and vessels:	Keep away from food and drink. Keep the containers tightly closed.
	Advices for storage equipment:	The storage must be made of hard material; floors must be resistant to chemicals. There must be no drain that directly leads into sewage system. Secure proper ventilation.

Trading name:	<b>LITHIUM CARBONATE, SOLUTION</b>				
Product code:	LK-OT-X**	Date of compilation:	21 Dec 2022	Version:	4

Further information on storage conditions:	Do not place the unused material in the storage room and do not use empty containers for storing other chemicals. Do not store with incompatible materials (see Section 10).
<b>7.3 Specific end use(s)</b>	
Recommendations:	-
Industrial sector specific solutions:	-

**SECTION 8. Exposure controls/personal protection**

<b>8.1 Control parameters</b>				
Substance	CAS No	Occupational exposure limit values/short term values		Biological limit values
		ppm	mg/m <sup>3</sup>	
-	-	-	-	-

Substance name:	-
EC No:	-
CAS No:	-

**DNEL**

<b>Industrial</b>				
Route of exposure:	Acute effect local	Acute effect systemic	Chronic effect local	Chronic effect systemic
Oral	-	-	-	-
Inhalation	-	-	-	-
Dermal	-	-	-	-

Critical physical parameters: solubility, flammability, corrosivity: -

**Consumer**

Route of exposure:	Acute effect local	Acute effect systemic	Chronic effect local	Chronic effect systemic
Oral	-	-	-	-
Inhalation	-	-	-	-
Dermal	-	-	-	-

**PNEC**

Environmental protection target	PNEC
Fresh water	no information available
Freshwater sediments	no information available
Marine water	no information available
Marine sediments	no information available

Trading name:	<b>LITHIUM CARBONATE, SOLUTION</b>				
Product code:	LK-OT-X**	Date of compilation:	21 Dec 2022	Version:	4

Food chain	no information available
Microorganisms in sewage treatment	no information available
Soil (agricultural)	no information available
Air	no information available

<b>8.2</b>	<b>Exposure controls</b>
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<b>8.2.1.</b>	<b>Appropriate engineering controls</b>
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	Substance/mixture related measures to prevent exposure during identified uses:	Use the product in well ventilated rooms. Use personal protective equipment. Do not eat, drink or smoke in the workspace.
	Structural measures to prevent exposure:	In accordance with Section 7.
	Organisational measures to prevent exposure:	Organization of work in order to reduce other worker's influence during work process.
	Technical measures to prevent exposure:	Secure proper workspace ventilation in order to keep concentration levels in air below permitted levels. Secure stations for rinsing eyes and showering.

<b>8.2.2.</b>	<b>Personal protection equipment</b>
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8.2.2.1.	Eye and face protection:	Safety glasses that stick to face (EN 166) or visor in case of lower levels of concentration in air; protective gas mask that covers the entire face in case of higher levels of concentration in air.
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8.2.2.2.	Skin protection
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	Hand protection:	The protective gloves have to satisfy the specification of Regulation (EU) 2016/425 and the related standard EN 374. Glove material: nitrile rubber Glove thickness: 0.40 mm Time until perforation: > 480 min
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	Other skin protection:	During everyday work use cotton clothing (EN 340) and suitable footwear, such as rubber boots (EN 20345) or shoes that cover the entire foot. In case of spilling hazard, use clothing made of impermeable material suitable for protection from liquid chemicals (Viton, PVC, himex) and footwear made from the same material.
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8.2.2.3.	Respiratory protection:	Protective full face mask (EN 136) or half mask (EN 140) equipped with a filter for organic vapors, type "A" (boiling point >65°C) according to EN 14387) used when concentration levels exceed GVI.
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8.2.2.4.	Thermal hazards:	No information available
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<b>8.2.3.</b>	<b>Environmental exposure controls</b>
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	Substance/mixture related measures to prevent exposure:	See Section 6
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Trading name:	<b>LITHIUM CARBONATE, SOLUTION</b>				
Product code:	LK-OT-X**	Date of compilation:	21 Dec 2022	Version:	4

Structural measures to prevent exposure:	Use modern equipment.
Organisational measures to prevent exposure:	Adapt the work process to the required working conditions of the workplace.
Technical measures to prevent exposure:	See Section 6

### SECTION 9. Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

	Value	Method
Physical state:	liquid	No information available
Colour:	colourless	No information available
Odour/odour threshold:	no information available/no information available	No information available
Melting point / freezing point:	No information available	No information available
Boiling point or initial boiling point and boiling range:	No information available	No information available
Flammability:	No information available	No information available
Lower and upper explosion limit:	No information available	No information available
Flash point:	No information available	No information available
Auto-ignition temperature:	No information available	No information available
Decomposition temperature:	No information available	No information available
pH:	No information available	No information available
Kinematic viscosity:	No information available	No information available
Solubility:	No information available	No information available
Partition coefficient n-octanol/water (log value):	No information available	No information available
Vapour pressure:	No information available	No information available
Density and/or relative density:	No information available	No information available
Relative vapour density:	No information available	No information available
Particle characteristics:	No information available	No information available

#### 9.2 Other information

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### SECTION 10. Stability and reactivity

10.1 Reactivity:	See subsections 10.3 through 10.5.
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Trading name:	<b>LITHIUM CARBONATE, SOLUTION</b>				
Product code:	LK-OT-X**	Date of compilation:	21 Dec 2022	Version:	4

10.2	Chemical stability:	The product is chemically stable under standard ambient conditions of storing and using (room temperature).
10.3	Possibility of hazardous reactions:	No information available
10.4	Conditions to avoid:	No information available
10.5	Incompatible materials:	No information available
10.6	Hazardous decomposition products:	No information available

**SECTION 11. Toxicological information**

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

Acute toxicity:

Route of exposure:	Method	Species	Dose LD <sub>50</sub> /LC <sub>50</sub> or ATE <sub>mix</sub>	Exposure time	Results
Oral:	No information available	-	No information available	-	-
Dermal:	No information available	-	No information available	-	-
Inhalation:	No information available	-	No information available	-	-

Specific target organ toxicity – single exposure (STOT SE):

	Specific effects	Target organ	Note
Oral:	No information available	No information available	-
Dermal:	No information available	No information available	-
Inhalation:	No information available	No information available	-

Aspiration hazard: No information available.

Irritation and corrosion

	Exposure time	Species	Evaluation	Method	Note
Skin corrosion/irritation:	-	-	-	-	-
Serious eye damage/irritation	-	-	-	-	-

Sensitization

Skin sensitization:	No information available.
Respiratory sensitization:	No information available.

Trading name:	<b>LITHIUM CARBONATE, SOLUTION</b>				
Product code:	LK-OT-X**	Date of compilation:	21 Dec 2022	Version:	4

Symptoms related to the physical, chemical and toxicological characteristics						
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Oral exposure:	No information available.
Dermal exposure:	No information available.
Inhalation exposure:	No information available.
Eye exposure:	No information available.

Repeated dose toxicity (subacute, subchronic, chronic)						
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	Dose	Exposure time	Species	Method	Evaluation	Note
Subacute oral	No information available	No information available	No information available	No information available	No information available	-
Subacute dermal	No information available	No information available	No information available	No information available	No information available	-
Subacute inhalation	No information available	No information available	No information available	No information available	No information available	-
Subchronic oral	No information available	No information available	No information available	No information available	No information available	-
Subchronic dermal	No information available	No information available	No information available	No information available	No information available	-
Subchronic inhalation	No information available	No information available	No information available	No information available	No information available	-
Chronic oral	No information available	No information available	No information available	No information available	No information available	-
Chronic dermal	No information available	No information available	No information available	No information available	No information available	-
Chronic inhalation	No information available	No information available	No information available	No information available	No information available	-

Specific target organ toxicity – repeated exposure (STOT RE):			
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	Specific effects	Target organ	Note
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Trading name:	<b>LITHIUM CARBONATE, SOLUTION</b>				
Product code:	LK-OT-X**	Date of compilation:	21 Dec 2022	Version:	4

Subacute oral	No information available	No information available	-
Subacute dermal	No information available	No information available	-
Subacute inhalation	No information available	No information available	-
Subchronic oral	No information available	No information available	-
Subchronic dermal	No information available	No information available	-
Subchronic inhalation	No information available	No information available	-
Chronic oral	No information available	No information available	-
Chronic dermal	No information available	No information available	-
Chronic inhalation	No information available	No information available	-

CMR effects (carcinogenicity; mutagenicity; reproductive toxicity)	
Carcinogenicity:	Based on available data, the classification criteria are not met.
Mutagenicity <i>in vitro</i> :	Based on available data, the classification criteria are not met.
Genotoxicity:	Based on available data, the classification criteria are not met.
Mutagenicity <i>in vivo</i> :	Based on available data, the classification criteria are not met.
Germ cell mutagenicity:	Based on available data, the classification criteria are not met.
Reproductive toxicity:	Based on available data, the classification criteria are not met.
Summary of evaluation of the CMR properties:	Based on available data, the classification criteria are not met.

11.2	Information on other hazards:
11.2.1.	Endocrine disrupting properties:
	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
11.2.2.	Other information:
	-

<b>SECTION 12. Ecological information</b>						
12.1	Toxicity					
Acute (short-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note

Trading name:	<b>LITHIUM CARBONATE, SOLUTION</b>				
Product code:	LK-OT-X**	Date of compilation:	21 Dec 2022	Version:	4

Fish	LC <sub>50</sub>	96 hours	No information available	No information available	No information available	-
Crustacea:	EC <sub>50</sub>	48 hours	No information available	No information available	No information available	-
Algae/aquatic plants	IC <sub>50</sub>	4 days	No information available	No information available	No information available	-
Other organisms	-	-	-	-	-	-
<b>Chronic (long-term) toxicity</b>	<b>Dose</b>	<b>Exposure time</b>	<b>Species</b>	<b>Method</b>	<b>Evaluation</b>	<b>Note</b>
Fish	LC <sub>50</sub>	96 hours	No information available	No information available	No information available	-
Crustacea:	EC <sub>50</sub>	48 hours	No information available	No information available	No information available	-
Algae/aquatic plants	IC <sub>50</sub>	72 hours	No information available	No information available	No information available	-
Other organisms	-	-	-	-	-	-

**12.2 Persistence and degradability**

**Abiotic degradation**

	Degradation half-lives	Method	Evaluation	Note
Marine water	No information available	No information available	No information available	-
Fresh water	No information available	No information available	No information available	-
Air	No information available	No information available	No information available	-
Soil	No information available	No information available	No information available	-

**Biodegradation**

% Degradation	Time (days)	Method	Evaluation	Note
No information available	No information available	No information available	No information available	No information available

Trading name:	<b>LITHIUM CARBONATE, SOLUTION</b>				
Product code:	LK-OT-X**	Date of compilation:	21 Dec 2022	Version:	4

12.3 Bioaccumulative potential						
Octanol-water partition coefficient (log Kow)						
Value	Concentration	pH	°C	Method	Evaluation	Note
-	-	-	-	-	-	-
Bioconcentration factor (BCF)						
Value	Species	Method	Evaluation	Note		
No information available	No information available	No information available	No information available	-		
Chronic ecotoxicity						
Value	Dose	Exposure time	Species	Method	Evaluation	Note
Chronic toxicity on fish	LC <sub>50</sub>	No information available	No information available	No information available	No information available	-
Chronic toxicity on crustacea ( <i>Daphnia</i> )	EC <sub>50</sub>	No information available	No information available	No information available	No information available	-
12.4 Mobility in soil						
Known or predicted distribution in environmental compartments:						
No information available						
Surface tension:						
Value	°C	Concentration	Method	Note		
No information available	No information available	No information available	No information available	-		

Trading name:	<b>LITHIUM CARBONATE, SOLUTION</b>				
Product code:	LK-OT-X**	Date of compilation:	21 Dec 2022	Version:	4

Adsorption / desorption						
Transport	A/D coefficient Henry's constant		log Kow	Evaporation rate	Method	Note
Soil-water	No available	information	No information available	No information available	No information available	-
Water-air	No available	information	No information available	No information available	No information available	-
Soil-air	No available	information	No information available	No information available	No information available	-

**12.5 Results of PBT and vPvB assessment**

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**12.6 Endocrine disrupting properties**

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**12.7 Other adverse effects**

No further relevant information available.

**SECTION 13. Disposal considerations**

**13.1 Waste treatment methods**

**13.1.1. Product/Packaging disposal:**

Submit for disposal to the legal person authorized by the Ministry of Environmental and Nature Protection.

**13.1.2. Waste codes/waste designations according to Law:**

15 01 10\*: Packaging that contains residual hazardous substances or is contaminated with hazardous substances

**13.1.3. Waste treatment – relevant information:**

No information available

**13.1.4. Sewage disposal – relevant information:**

Trading name:	<b>LITHIUM CARBONATE, SOLUTION</b>				
Product code:	LK-OT-X**	Date of compilation:	21 Dec 2022	Version:	4

	Waste must not be disposed of into the sewage system.
13.1.5.	Other disposal recommendations:  Do not dispose of the product's remains into the sewage system. Submit the remains to the collectors authorized by the ministry in charge. Do not dispose of the packaging into the sewage system. Submit the packaging to the collectors authorized by the ministry in charge.
13.1.6.	Relevant Community provisions:  Disposal must be made according to official regulations.

**SECTION 14. Transport information**

	Transporting/shipment by road (ADR)
UN number:	Not subject to transport regulations
UN proper shipping name:	-
Transport hazard class(es):	-
Packing group:	-
Environmentally hazardous:	-
Special precautions for user:	-
	Transporting/shipment by rail (RID)
UN number:	Not subject to transport regulations
UN proper shipping name:	-
Transport hazard class(es):	-
Packing group:	-
Environmentally hazardous:	-
Special precautions for user:	-
	Inland waterway transport (ADN)
UN number:	Not subject to transport regulations
UN proper shipping name:	-
Transport hazard class(es):	-
Packing group:	-
Environmentally hazardous:	-
Special precautions for user:	-
	Transporting/shipment by sea (IMDG)
UN number:	Not subject to transport regulations
UN proper shipping name:	-
Transport hazard class(es):	-
Packing group:	-

Trading name:	<b>LITHIUM CARBONATE, SOLUTION</b>				
Product code:	LK-OT-X**	Date of compilation:	21 Dec 2022	Version:	4

Environmentally hazardous:	-
Special precautions for user:	-
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:	-
Transporting/shipment by air (ICAO-TI/IATA-DGR)	
UN number:	Not subject to transport regulations
UN proper shipping name:	-
Transport hazard class(es):	-
Packing group:	-
Environmentally hazardous:	-
Special precautions for user:	-
Further information:	-

**SECTION 15. Regulatory information**

15.1	Safety, health and environmental regulations/legislation specific for the substance or mixture	
	EU regulations	
	Authorization and/or restrictions of use	
	Authorizations:	-
	Restrictions:	-
	Other EU regulations:	<p>Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC;</p> <p>Directive 2004/42/CE of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC;</p> <p>Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work;</p> <p>Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006;</p> <p>REACH Restrictions on the manufacturing, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII);</p>
	Information according 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline)	



Trading name:	<b>LITHIUM CARBONATE, SOLUTION</b>				
Product code:	LK-OT-X**	Date of compilation:	21 Dec 2022	Version:	4

National legislation:	Chemicals Act, Regulation on classification, packaging and labeling of dangerous substances, Ordinance on occupational exposure limit values and on biological limit values, Regulation on categories, types and classification of waste with a waste catalog and list of hazardous waste, Ordinance on writing Material safety data sheet, Transport of Hazardous Substances Act
15.2	Chemical safety assessment
	None

**SECTION 16. Other information**

16.1	Indication of changes:	-
16.2	Abbreviations and acronyms:	<p>ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)</p> <p>IMDG: International Maritime Code for Dangerous Goods</p> <p>IATA: International Air Transport Association</p> <p>GHS: Globally Harmonised System of Classification and Labelling of Chemicals</p> <p>EINECS: European Inventory of Existing Commercial Chemical Substances</p> <p>CAS: Chemical Abstracts Service (division of the American Chemical Society)</p> <p>DNEL: Derived No-Effect Level (UK REACH)</p> <p>LC50: Lethal concentration, 50 percent</p> <p>LD50: Lethal dose, 50 percent</p> <p>PBT: Persistent, Bioaccumulative and Toxic</p> <p>vPvB: very Persistent and very Bioaccumulative</p>
16.3.	Key literature references and source of data:	-
16.4.	Classification and procedure used to derive the classification for mixture according to Regulation (EC) 1272/2008 (CLP)	
	Classification	Classification procedure
	-	-
16.5.	Relevant H statements (number and full text)	
	H: 302 319	Harmful if swallowed. Causes serious eye irritation
16.6.	Training advice:	-
16.7.	Further information:	<p>** "X" in the product code marks different volumes (different packagings of the product)</p> <p>We are not responsible for consequences in case of failure to comply with instructions for use or improper use of the product described in this material safety data sheet.</p>

<b>ANNEX: Exposure scenario resulting to chemical safety assessment</b>
-

Trade name:	<b>NUCLEAR FAST RED (KERNECHTROT) REAGENT</b>			
Product code:	KR-OT-X**	Date of compilation:	14 November 2022	Version: 4

<b>SECTION 1. Identification of the substance/mixture and of the company/undertaking</b>		
1.1.	Product identifier	
	Trade name:	NUCLEAR FAST RED (KERNECHTROT) REAGENT
	Chemical name:	-
	Catalogue number:	KR-OT-X**
1.2.	Relevant identified uses of the substance or mixture and uses advised against	
	Uses:	Counterstain in many special staining kits.
	Uses advised against:	Only the identified uses are advised.
	Reason why uses advised against:	The product is intended for use only as an <i>in vitro</i> diagnostic medical device and there is no reason to use it for other purposes.
1.3.	Details of the supplier of the safety data sheet	
	Supplier:	BioGnost Ltd.
	Address:	Medjugorska 59, Zagreb
	Telephone number:	+385 1 2409997
	Telefax:	+385 1 2404039
	e-mail of competent person:	<a href="mailto:msds@biognost.hr">msds@biognost.hr</a>
	National contact:	-
1.4.	Emergency telephone number	
	National Protection and Rescue Directorate:	112
	Medical information:	+385 1 2348 342
	Other information:	-

<b>SECTION 2. Hazards identification</b>		
2.1.	Classification of the substance or mixture	
2.1.1.	Classification according to Regulation (EC) No 1272/2008 (CLP)	
	Hazard class and category code:	Hazard statement*:
	Not identified as hazardous substance.	-
2.1.2.	Additional information	
	-	
* For full text of Hazard- and EU Hazard-statements: see SECTION 16		
2.2.	Label elements	
	Product identification:	NUCLEAR FAST RED (KERNECHTROT) REAGENT
	Identification number:	-
	Authorisation number:	-
	Hazard pictograms:	-

Trade name:	<b>NUCLEAR FAST RED (KERNECHTROT) REAGENT</b>			
Product code:	KR-OT-X**	Date of compilation:	14 November 2022	Version: 4

Signal word:	-
Hazard statement:	-
Precautionary statements:	-
Supplemental hazard information (EU)	-

2.3.	Other hazards
	<b>Endocrine Disrupting Properties:</b> No known endocrine disrupting properties.

<b>SECTION 3. Composition/information on ingredients</b>
--

CAS/ EC/ Index number	REACH Registration No	Weight % content (or range)	Identification name	Classification according to Regulation (EC) No 1272/2008 (CLP)
6409-77-4/ 229-088-0/ -	-	≤ 1%	Disodium 1-amino-2,4-dihydroxy-9,10-dihydro-9,10-dioxoanthracene-3-sulphonate	Skin Irr. 2; H315 Eye Irr. 2; H319 STOT SE; H335

<b>SECTION 4. First aid measures</b>
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4.1.	Description of first aid measures
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General notes:	-
Following inhalation:	Remove person to fresh air. If breathing stops, immediately apply artificial respiration. If breathing difficulties occur, use emergency breathing apparatus. If the symptoms persist, immediately consult a physician.
Following skin contact:	Remove all contaminated clothes using sterile gauze. Immediately wash with plenty of water for at least 20 minutes. Seek medical assistance if the symptoms of irritation remain.
Following eye contact:	Rinse out with plenty of water with the eyelid held wide open for at least 20 minutes. If the symptoms remain, immediately call in ophthalmologist.
Following ingestion:	Rinse the oral cavity, drink 1-2 glasses of water. Do not induce vomiting. Immediately consult a physician and show the container or label. In case of swallowing large quantities, transport the afflicted person to the hospital.
Self-protection of the first aider:	-

4.2.	Most important symptoms and effects, both acute and delayed
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Following inhalation:	No information available
Following skin contact:	No information available
Following eye contact:	No information available
Following ingestion:	No information available

Trade name:	<b>NUCLEAR FAST RED (KERNECHTROT) REAGENT</b>			
Product code:	KR-OT-X**	Date of compilation:	14 November 2022	Version: 4

4.3.	Indication of any immediate medical attention and special treatment needed
	No information available

<b>SECTION 5. Firefighting measures</b>	
5.1.	Extinguishing media
	Suitable extinguishing media: Water, CO <sub>2</sub> , foam, dry powder
	Unsuitable extinguishing media: No information available
5.2.	Special hazards arising from the substance or mixture
	Hazardous combustion products: No information available.
5.3.	Advice for firefighters
	Firefighters must always use fireproof suit and self-sustaining breathing apparatus with open circle that contains pressurized air in case of fire in closed space.
5.4.	Additional information
	Prevent spills and water used for putting out fire from contaminating waterways by enclosing and covering drains.

<b>SECTION 6. Accidental release measures</b>	
6.1.	Personal precautions, protective equipment and emergency procedures
6.1.1.	For non-emergency personnel
	Protective equipment: Use protective equipment in accordance with Section 8. Do not get in eyes or on skin. Do not inhale vapor/aerosols. Remove the persons not directly involved in rescuing procedure from the scene of event.
	Accident prevention methods: Keep away from heat, flames and sparks. Secure proper ventilation. Prevent electrostatic charge buildup. Use only grounded devices and equipment. Do not release in drains - explosion hazard.
	Emergency procedures: In case of accident secure the location and evacuate the personnel not involved in recovery.
6.1.2.	For emergency responders:
	Use protective equipment; in case of inadequate ventilation use adequate airways protective equipment (see Section 8).
6.2.	Environmental precautions:
	Do not dispose of in sewage, drainage system and waterways. In case of large spillage contact National Protection and Rescue Directorate (NPRD) on 112.
6.3.	Methods and material for containment and cleaning up

Trade name:	<b>NUCLEAR FAST RED (KERNECHTROT) REAGENT</b>			
Product code:	KR-OT-X**	Date of compilation:	14 November 2022	Version: 4

6.3.1.	Bundling, covering of drains; capping procedures:	Sand bags.
6.3.2.	Cleaning up:	Where possible, soak up the product using inert matter, such as sand, silica gel, saw dust). Place the waste material in tightly closed impermeable containers. Store the substance in well ventilated storage rooms until disposal. Submit for disposal to the legal persons authorized by the Ministry of Environmental and Nature Protection. After disposal of the products, wash the area and involved materials with water.
6.3.3.	Other information:	Recovery of contaminated area should only be conducted by qualified person that uses stipulated protective equipment. Prevent the waste water from entering waterways.
6.4.	Reference to other sections	
	See Section 7 for information about secure handling. See Section 8 for information about personal protective equipment. See Section 13 for information about containment.	

<b>SECTION 7. Handling and storage</b>		
7.1.	Precautions for safe handling	
7.1.1.	Protective measures	
	Measures to prevent fire:	Keep away from heat, flames and sparks. Secure proper ventilation.
	Measures to prevent aerosol and dust generation:	Adequate ventilation of the rooms where the product is kept and handled. Containers must be firmly closed.
	Measures to protect the environment:	Keep the containers firmly closed in vertical position when the product is not used. Prevent the product from entering waterways, sewerage and drainage systems by using barrage and semi-barrage made of sand, as well as covering the drainage by using plastic foil.
	Other measures:	-
7.1.2.	Advice on general occupational hygiene:	
	Do not eat, drink or smoke in the workspace. Thoroughly wash hands after work and before eating.	
7.2.	Conditions for safe storage, including any incompatibilities	
	Technical measures and storage conditions:	In dry, cold and well-ventilated space. Containers must be firmly closed. Maintain adequate ventilation of the rooms where the product is kept and handled.
	Packaging materials:	Manufacturer's original packaging.
	Requirements for storage rooms and vessels:	Keep away from food and drink. Keep the containers tightly closed.

Trade name:	<b>NUCLEAR FAST RED (KERNECHTROT) REAGENT</b>			
Product code:	KR-OT-X**	Date of compilation:	14 November 2022	Version: 4

Advices for storage equipment:	Keep away from heat, flames, sparks and sunlight.
Further information on storage conditions:	Do not place the unused material in the storage room and do not use empty containers for storing other chemicals. Do not store with incompatible materials (see Section 9).
<b>7.3. Specific end use(s)</b>	
Recommendations:	Secure stations for rinsing eyes and showering in the vicinity of work area.
Industrial sector specific solutions:	-

**SECTION 8. Exposure controls/personal protection**

**8.1. Control parameters**

Substance	CAS No	Occupational exposure limit values/short term values		Biological limit values
		ppm	mg/m <sup>3</sup>	
-	-	-	-	-

Substance name:	-
EC No:	-
CAS No:	-

**DNEL**

**Industrial**

Route of exposure:	Acute effect local	Acute effect systemic	Chronic effect local	Chronic effect systemic
Oral	-	-	-	-
Inhalation	-	-	-	-
Dermal	-	-	-	-

Critical physical parameters: solubility, flammability, corrosivity:

**Consumer**

Route of exposure:	Acute effect local	Acute effect systemic	Chronic effect local	Chronic effect systemic
Oral	-	-	-	-
Inhalation	-	-	-	-
Dermal	-	-	-	-

**PNEC**

Environmental protection target	<b>PNEC</b>
Fresh water	No information available

Trade name:	<b>NUCLEAR FAST RED (KERNECHTROT) REAGENT</b>			
Product code:	KR-OT-X**	Date of compilation:	14 November 2022	Version: 4

Freshwater sediments	No information available
Marine water	No information available
Marine sediments	No information available
Food chain	No information available
Microorganisms in sewage treatment	No information available
Soil (agricultural)	No information available
Air	No information available

<b>8.2.</b>	<b>Exposure controls</b>
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<b>8.2.1.</b>	<b>Appropriate engineering controls</b>
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	Substance/mixture related measures to prevent exposure during identified uses:	Use the product in well ventilated rooms. Use personal protective equipment. Do not eat, drink or smoke in the workspace.
	Structural measures to prevent exposure:	In accordance with Section 7.
	Organisational measures to prevent exposure:	Organization of work in order to reduce other worker's influence during work process.
	Technical measures to prevent exposure:	Secure proper workspace ventilation in order to keep concentration levels in air below permitted levels.

<b>8.2.2.</b>	<b>Personal protection equipment</b>
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<b>8.2.2.1.</b>	Eye and face protection:	Safety glasses that stick to face (EN 166) or visor in case of lower levels of concentration in air; protective gas mask that covers the entire face in case of higher levels of concentration in air.
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<b>8.2.2.2.</b>	<b>Skin protection</b>
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	Hand protection:	Protective gloves must be according to the EU Directive 2016/425/EEC and standard EN 374. Glove material: nitrile rubber Glove thickness: ≥0.50 mm Break through time: >480 min
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	Other skin protection:	Wear antistatic clothing made of natural fibers (such as cotton) with long sleeves (EN 13034), and shoes that cover the entire foot (EN 10335).
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<b>8.2.2.3.</b>	Respiratory protection:	Suitable mask or half mask equipped with a combined "A-P" filter and used when concentration levels exceed GVI.
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<b>8.2.2.4.</b>	Thermal hazards:	No information available
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<b>8.2.3.</b>	<b>Environmental exposure controls</b>
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	Substance/mixture related measures to prevent exposure:	See Section 6
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Trade name:	<b>NUCLEAR FAST RED (KERNECHTROT) REAGENT</b>		
Product code:	KR-OT-X**	Date of compilation:	14 November 2022
		Version:	4

Structural measures to prevent exposure:	Use modern equipment.
Organisational measures to prevent exposure:	Adapt the work process to the required working conditions of the workplace.
Technical measures to prevent exposure:	See Section 6

<b>SECTION 9. Physical and chemical properties</b>			
9.1.	Information on basic physical and chemical properties		
		Value	Method
	Physical state:	liquid	No information available
	Colour:	red	No information available
	Odour/odour threshold:	No information available	No information available
	Melting point / freezing point:	No information available	No information available
	Boiling point or initial boiling point and boiling range:	No information available	No information available
	Flammability:	No information available	No information available
	Lower and upper explosion limit:	No information available	No information available
	Flash point:	No information available	No information available
	Auto-ignition temperature:	No information available	No information available
	Decomposition temperature:	No information available	No information available
	pH:	No information available	No information available
	Kinematic viscosity:	No information available	No information available
	Solubility:	No information available	No information available
	Partition coefficient n-octanol/water (log value):	No information available	No information available
	Vapour pressure:	No information available	No information available
	Density and/or relative density	No information available	No information available
	Relative vapour density:	No information available	No information available
	Particle characteristics:	No information available	No information available
9.2.	Other information		
	-		

<b>SECTION 10.: Stability and reactivity</b>	
10.1.	Reactivity: See subsections 10.3 through 10.5.



Trade name:	<b>NUCLEAR FAST RED (KERNECHTROT) REAGENT</b>				
Product code:	KR-OT-X**	Date of compilation:	14 November 2022	Version:	4

10.2.	Chemical stability:	The product is chemically stable under standard ambient conditions of storing and using.
10.3.	Possibility of hazardous reactions:	No information available.
10.4.	Conditions to avoid:	No information available.
10.5.	Incompatible materials:	No information available.
10.6.	Hazardous decomposition products:	No information available.

**SECTION 11. Toxicological information**

**11.1. Information on toxicological effects**

Acute toxicity:

Route of exposure:	Method	Species	Effective dose LD <sub>50</sub> /LC <sub>50</sub> or ATE <sub>mixture</sub>	Exposure time	Results
Oral:	No information available	-	No information available	No information available	-
Dermal:	No information available	-	No information available	No information available	-
Inhalation:	No information available	-	No information available	No information available	-

Specific target organ toxicity – single exposure (STOT SE):

	Specific effects	Target organ	Note
Oral:	No information available	No information available	-
Dermal:	No information available	No information available	-
Inhalation:	No information available	No information available	-

Aspiration hazard:

Aspiration hazard:	-
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Irritation and corrosion

	Exposure time	Species	Evaluation	Method	Note
Skin corrosion/irritation:	-	-	-	-	No information available
Serious eye damage/irritation	-	-	-	-	No information available

Trade name:	<b>NUCLEAR FAST RED (KERNECHTROT) REAGENT</b>				
Product code:	KR-OT-X**	Date of compilation:	14 November 2022	Version:	4

Sensitization	
Dermal exposure:	No information available
Inhalation exposure:	No information available

Symptoms related to the physical, chemical and toxicological characteristics	
Oral exposure:	No information available
Dermal exposure:	No information available
Inhalation exposure:	No information available
Eye exposure:	No information available

Repeated dose toxicity (subacute, subchronic, chronic)						
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	Dose	Exposure time	Species	Method	Evaluation	Note
Subacute oral	No information available	No information available	No information available	No information available	No information available	-
Subacute dermal	No information available	No information available	No information available	No information available	No information available	-
Subacute inhalation	No information available	No information available	No information available	No information available	No information available	-
Subchronic oral	No information available	No information available	No information available	No information available	No information available	-
Subchronic dermal	No information available	No information available	No information available	No information available	No information available	-
Subchronic inhalation	No information available	No information available	No information available	No information available	No information available	-
Chronic oral	No information available	No information available	No information available	No information available	No information available	-
Chronic dermal	No information available	No information available	No information available	No information available	No information available	-

Trade name:	<b>NUCLEAR FAST RED (KERNECHTROT) REAGENT</b>				
Product code:	KR-OT-X**	Date of compilation:	14 November 2022	Version:	4

Chronic inhalation	No information available	No information available	No information available	No information available	No information available	-
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Specific target organ toxicity – repeated exposure (STOT RE):						
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	Specific effects	Target organ	Note
Subacute oral	No information available	No information available	-
Subacute dermal	No information available	No information available	-
Subacute inhalation	No information available	No information available	-
Subchronic oral	No information available	No information available	-
Subchronic dermal	No information available	No information available	-
Subchronic inhalation	No information available	No information available	-
Chronic oral	No information available	No information available	-
Chronic dermal	No information available	No information available	-
Chronic inhalation	No information available	No information available	-

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CMR effects (carcinogenicity; mutagenicity; reproductive toxicity)						
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	Carcinogenicity:	No information available
	Mutagenicity <i>in-vitro</i> :	No information available
	Genotoxicity:	No information available
	Mutagenicity <i>in-vivo</i> :	No information available
	Germ cell mutagenicity:	No information available
	Reproductive toxicity:	No information available

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	Summary of evaluation of the CMR properties:	No information available
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11.2.	Information on other hazards:					
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11.2.1.	Endocrine disrupting properties:					
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	No known endocrine disrupting properties that affect human health.					
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11.2.2.	Other information:					
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<b>SECTION 12. General notes:</b>
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12.1.	Toxicity
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Trade name:	<b>NUCLEAR FAST RED (KERNECHTROT) REAGENT</b>				
Product code:	KR-OT-X**	Date of compilation:	14 November 2022	Version:	4

Acute (short-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note
Fish	LC <sub>50</sub>	96 hours	No information available	-	No information available	-
Crustacea:	EC <sub>50</sub>	48 hours	No information available	-	No information available	-
Algae/aquatic plants	IC <sub>50</sub>	72 hours	No information available	-	No information available	-
Other organisms	-	-	-	-	-	-

Chronic (long-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note
Fish	LC <sub>50</sub>	96 hours	No information available	-	No information available	-
Crustacea:	EC <sub>50</sub>	48 hours	No information available	-	No information available	-
Algae/aquatic plants	IC <sub>50</sub>	72 hours	No information available	-	No information available	-
Other organisms	-	-	-	-	-	-

<b>12.2.</b>	<b>Persistence and degradability</b>
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Abiotic degradation				
	Degradation half-lives	Method	Evaluation	Note
Marine water	No information available	No information available	No information available	-
Fresh water	No information available	No information available	No information available	-
Air	No information available	No information available	No information available	-
Soil	No information available	No information available	No information available	-

Biodegradation				
% Degradation	Time (days)	Method	Evaluation	Note
No information available	No information available	No information available	No information available	No information available

<b>12.3.</b>	<b>Bioaccumulative potential</b>
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Octanol-water partition coefficient (log K <sub>ow</sub> )						
Value	Concentration	pH	°C	Method	Evaluation	Note

Trade name:	<b>NUCLEAR FAST RED (KERNECHTROT) REAGENT</b>				
Product code:	KR-OT-X**	Date of compilation:	14 November 2022	Version:	4

No information available	No information available	-	-	No information available	No information available	No information available
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Bioconcentration factor (BCF)				
Value	Species	Method	Evaluation	Note
No information available	No information available	No information available	No information available	No information available

Chronic ecotoxicity						
Value	Dose	Exposure time	Species	Method	Evaluation	Note
Chronic toxicity on fish	LC <sub>50</sub>	No information available	No information available	No information available	No information available	-
Chronic toxicity on crustacea (Daphnia)	EC <sub>50</sub>	No information available	No information available	No information available	No information available	-

<b>12.4. Mobility in soil</b>						
Known or predicted distribution in environmental compartments:						
No information available						
Surface tension:						
Value	°C	Concentration	Method	Note		
No information available	No information available	No information available	No information available	-		

Adsorption / desorption					
Transport	A/D coefficient Henry's constant	log Kow	Evaporation rate	Method	Note

Trade name:	<b>NUCLEAR FAST RED (KERNECHTROT) REAGENT</b>				
Product code:	KR-OT-X**	Date of compilation:	14 November 2022	Version:	4

Soil-water	No information available	No information available	No information available	No information available	-
Water-air	No information available	No information available	No information available	No information available	-
Soil-air	No information available	No information available	No information available	No information available	-

<b>12.5.</b>	<b>Results of PBT and vPvB assessment</b>
	No information available

<b>12.6.</b>	<b>Endocrine disrupting properties</b>
	No known endocrine disrupting properties that affect the environment.

<b>12.7.</b>	<b>Other adverse effects</b>
	No information available

**SECTION 13. Disposal considerations**

<b>13.1.</b>	<b>Waste treatment methods</b>
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<b>13.1.1.</b>	<b>Product/Packaging disposal:</b>
	Submit for disposal to the legal person authorized by the Ministry of Environmental and Nature Protection.

<b>13.1.2.</b>	<b>Waste codes/waste designations according to Low:</b>
	15 01 10*: packaging that contains residual hazardous substances or is contaminated with hazardous substances

<b>13.1.3.</b>	<b>Waste treatment – relevant information:</b>
	No information available

<b>13.1.4.</b>	<b>Sewage disposal – relevant information:</b>
	Waste must not be disposed of into the sewage system.

<b>13.1.5.</b>	<b>Other disposal recommendations:</b>
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Trade name:	<b>NUCLEAR FAST RED (KERNECHTROT) REAGENT</b>			
Product code:	KR-OT-X**	Date of compilation:	14 November 2022	Version: 4

Do not dispose of the product's remains into the sewage system. Submit the remains to the collectors authorized by the ministry in charge. Do not dispose of the packaging into the sewage system. Submit the packaging to the collectors authorized by the ministry in charge. Do not dispose of in places where ignition may occur.

13.1.6.	Relevant Community provisions:
	Sustainable Waste Management Act, Ordinance on Waste Management, Regulation on categories, types and classification of waste with waste catalog and list of hazardous waste

**SECTION 14. Transport information**

Transporting/shipment by road (ADR)	
UN number:	Not subject to transport regulations
UN proper shipping name:	-
Transport hazard class(es):	-
Packing group:	-
Environmental hazards:	-
Special precautions for user:	-
Transporting/shipment by rail (RID)	
UN number:	Not subject to transport regulations
UN proper shipping name:	-
Transport hazard class(es):	-
Packing group:	-
Environmental hazards:	-
Special precautions for user:	-
Transporting/shipment by inland waterways (ADN)	
UN number:	Not subject to transport regulations
UN proper shipping name:	-
Transport hazard class(es):	-
Packing group:	-
Environmental hazards:	-
Special precautions for user:	-
Transporting/shipment by sea (IMDG)	
UN number:	Not subject to transport regulations
UN proper shipping name:	-
Transport hazard class(es):	-
Packing group:	-
Environmental hazards:	Not subject to transport regulations

Trade name:	<b>NUCLEAR FAST RED (KERNECHTROT) REAGENT</b>			
Product code:	KR-OT-X**	Date of compilation:	14 November 2022	Version: 4

Special precautions for user:	-
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:	-
Transporting/shipment by air (ICAO-TI/IATA-DGR)	
UN number:	Not subject to transport regulations
UN proper shipping name:	-
Transport hazard class(es):	-
Packing group:	-
Environmental hazards:	-
Special precautions for user:	-
Further information:	-

**SECTION 15. Regulatory information**

15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture	
	EU regulations	
	Authorisations and/or restrictions of use	
	Authorisations:	-
	Restrictions:	-
	Other EU regulations:	<p>Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC;</p> <p>Directive 2004/42/CE of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC;</p> <p>Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work;</p> <p>Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006;</p> <p>REACH Restrictions on the manufacturing, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII);</p>
	Information according 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline)	



Trade name:	<b>NUCLEAR FAST RED (KERNECHTROT) REAGENT</b>			
Product code:	KR-OT-X**	Date of compilation:	14 November 2022	Version: 4

National regulation:	Chemicals Act, Regulation on classification, packaging and labeling of dangerous substances, Ordinance on occupational exposure limit values and on biological limit values, Regulation on categories, types and classification of waste with a waste catalog and list of hazardous waste, Transport of Hazardous Substances Act
15.2. Chemical safety assessment	None

**SECTION 16. Other information**

16.1. Indication of changes:	-
16.2. Abbreviations and acronyms:	<p>ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)</p> <p>IMDG: International Maritime Code for Dangerous Goods</p> <p>IATA: International Air Transport Association</p> <p>GHS: Globally Harmonised System of Classification and Labelling of Chemicals</p> <p>EINECS: European Inventory of Existing Commercial Chemical Substances</p> <p>CAS: Chemical Abstracts Service (division of the American Chemical Society)</p> <p>DNEL: Derived No-Effect Level (UK REACH)</p> <p>LC50: Lethal concentration, 50 percent</p> <p>LD50: Lethal dose, 50 percent</p> <p>PBT: Persistent, Bioaccumulative and Toxic</p> <p>vPvB: very Persistent and very Bioaccumulative</p>
16.3. Key literature references and source of data:	-
16.4. Classification and procedure used to derive the classification for mixture according to Regulation (EC) 1272/2008 (CLP)	
Classification	Classification procedure
-	-
16.5. Relevant H statements (number and full text)	
H: H315	Causes skin irritation.
H: H319	Causes serious eye irritation.
H: H335	May cause respiratory irritation.
16.6. Training advice:	-
16.7. Further information:	<p>** "X" in the product code marks different volumes (different packagings of the product)</p> <p>We are not responsible for consequences in case of failure to comply with instructions for use or improper use of the product described in this material safety data sheet.</p>

**ANNEX:**  
**EXPOSURE SCENARIO RESULTING TO CHEMICAL SAFETY ASSESSMENT**

Trade name:	<b>NUCLEAR FAST RED (KERNECHTROT) REAGENT</b>				
Product code:	KR-OT-X**	Date of compilation:	14 November 2022	Version:	4



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Trade name:	<b>REDUCING BUFFER, SOLUTION</b>				
Product code:	RP-OT-X**	Date of compilation:	21 December 2022	Version:	4

<b>SECTION 1: Identification of the substance/mixture and of the company/undertaking</b>		
1.1.	Product identifier	
	Trade name:	REDUCING BUFFER, SOLUTION
	Chemical name:	-
	Catalogue number:	RP-OT-X**
1.2.	Relevant identified uses of the substance or mixture and uses advised against	
	Uses:	For use with Von Kossa kit.
	Uses advised against:	Only the identified uses are advised.
	Reasons why uses advised against:	The product is intended for use only as an <i>in vitro</i> diagnostic medical device, registered at the Agency for Medicinal Products and Medical Devices and there is no reason to use it for other purposes.
1.3.	Details of the supplier of the safety data sheet	
	Supplier:	BioGnost Ltd.
	Address:	Medjugorska 59, Zagreb
	Telephone number :	+385 1 2409997
	Telefax:	+385 1 2404039
	e-mail of competent person:	<a href="mailto:msds@biognost.hr">msds@biognost.hr</a>
	National contact:	-
1.4.	Emergency telephone numbers	
	National Protection and Rescue Directorate:	112
	Medical information:	+385 1 2348 342
	Other information:	-

<b>SECTION 2. Hazards identification</b>		
2.1.	Classification of the substance or mixture	
2.1.1.	Classification according to Regulation (EC) No 1272/2008 (CLP)	
	Hazard class and category code:	Hazard statement*:
	Skin Sens. 1	H317
	Muta. 2	H341
	Carc. 1B	H350
2.1.2.	Additional information	
	-	
*For full text of Hazard- and EU Hazard-statements: see Section 16.		
2.2.	Label elements	
	Product identification:	REDUCING BUFFER, SOLUTION
	Identification number:	-

Trade name:	<b>REDUCING BUFFER, SOLUTION</b>				
Product code:	RP-OT-X**	Date of compilation:	21 December 2022	Version:	4

Authorisation number:	-
Hazard pictograms:	  GHS08                      GHS07
Signal word:	Danger
Hazard statement:	H317 May cause an allergic skin reaction. H341 Suspected of causing genetic defects. H350 May cause cancer.
Precautionary statement:	P280 Wear protective gloves/protective clothing/eye/protection/face protection. P302 + P352 IF ON SKIN: Wash with plenty of water. P308+P313 IF exposed or concerned: Get medical advice/attention.
Supplemental hazard information (EU):	-
<b>2.3. Other hazards</b>	
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.	

<b>SECTION 3. Composition/information on ingredients</b>				
CAS/EC/ Index number	REACH Registration No	Weight % content (or range)	Identification name	Classification according to Regulation (EC) No 1272/2008 (CLP)
30525-89-4/ 608-494-5/ -	-	3 – 4 %	paraformaldehyde	Acute Tox. 4; H302 Skin Irr. 2; H315 Skin Sens. 1; H317 Eye Dam. 1; H318 Acute Tox. 4; H332 STOT SE 3; H335 Muta. 2; H341 Carc. 1B; H350

<b>SECTION 4. First aid measures</b>	
<b>4.1.</b>	<b>Description of first aid measures</b>
General notes:	If the suggested first aid measures do not prove sufficient, seek medical attention.
Following inhalation:	Carry the afflicted person out of the contaminated area into a well-ventilated area or out for fresh air. In case of difficult breathing, provide the afflicted person with oxygen.

Trade name:	<b>REDUCING BUFFER, SOLUTION</b>				
Product code:	RP-OT-X**	Date of compilation:	21 December 2022	Version:	4

Following skin contact:	Remove all contaminated clothes using sterile gauze. Immediately wash with plenty of water for at least 20 minutes. Seek medical assistance if the symptoms of irritation remain.
Following eye contact:	Rinse out with plenty of water with the eyelid held wide open for at least 20 minutes. If the symptoms remain, immediately call in ophthalmologist.
Following ingestion:	Rinse the oral cavity, drink 1-2 glasses of water. Do not induce vomiting. Immediately consult a physician and show the container or label. In case of swallowing large quantities, transport the afflicted person to the hospital.
Self-protection of the first aider	-

**4.2. Most important symptoms and effects, both acute and delayed**

Following inhalation:	Depending on concentration and exposure time, irritation of the mucous membrane of the nose/throat may occur (burning sensation, urge to sneeze, runny nose). High concentration levels may cause difficult breathing, coughing, chest tightness, headache, pneumonia and pulmonary edema.
Following skin contact:	Depending on concentration and exposure time, redness accompanied by sensation of stinging and pain may occur, defatting, skin cracking, rash, swelling, burns, blisters and delayed onset of inflammations.
Following eye contact:	Depending on concentration and exposure time, mucosa stinging, lacrimation, redness and pain may occur, as well as bleeding, delayed onset of inflammations and permanent eyesight damage.
Following ingestion:	Depending on concentration and exposure time, stinging and possible damage to the mucous membrane of the digestive tract is possible, as well as abdominal pain, nausea, vomiting (bloody vomit is possible), vertigo, headache, eyesight disorders and permanent blindness due to optical nerve damage, loss of consciousness.

**4.3. Indication of any immediate medical attention and special treatment needed**

-

**SECTION 5. Firefighting measures**

**5.1. Extinguishing media**

Suitable extinguishing media:	water spray or alcohol-resistant foam, dry powder, CO <sub>2</sub>
Unsuitable extinguishing media:	No information available

**5.2. Special hazards arising from the substance or mixture**

Hazardous by products of fire:	Possible liberation of toxic carbon monoxide and formaldehyde gases due to thermal decomposition (increased temperature). Explosive mixtures of formaldehyde vapors and air also present danger.
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**5.3. Advice for firefighters**

Use a self-contained open-circuit compressed air breathing apparatus and fireproof clothing. Cool closed containers exposed to fire with water spray, in order to prevent explosion.

Trade name:	<b>REDUCING BUFFER, SOLUTION</b>				
Product code:	RP-OT-X**	Date of compilation:	21 December 2022	Version:	4

5.4.	Additional information
	Remove sources of heat and ignition. Do not contaminate the environment with extinguishing media.

<b>SECTION 6. Accidental release measures</b>	
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6.1.	Personal precautions, protective equipment and emergency procedures
6.1.1.	For non-emergency personnel:
	Protective equipment: Use personal protective equipment (see Section 8).
	Accident prevention methods: Evacuate members of all non-essential personnel and those members without protective equipment. Avoid breathing vapors and avoid contact with skin and eyes. Remove all sources of sparks and ignition. Do not smoke.
	Emergency procedures: Mark the area using proper signs.
6.1.2.	For emergency responders:
	Use protective equipment; in case of inadequate ventilation use adequate airways protective equipment (see Section 8).
6.2.	Environmental precautions:
	Do not dispose of in sewage, drainage system and waterways. In case of large spillage contact National Protection and Rescue Directorate (NPRD) on 112.
6.3.	Methods and materials for containment and cleaning up
6.3.1.	Bunding, covering of drains; capping procedures: Sand or clay barriers.
6.3.2.	Cleaning up: Where possible, the substance can be absorbed by using inflammable material (sand, diatomaceous earth, vermiculite). Place the waste material in tightly closed impermeable containers. Store the substance in well ventilated storage rooms until disposal. Submit for disposal to the legal persons authorized by the Ministry of Environmental and Nature Protection. After disposal of the products, wash the area and involved materials with water.
6.3.3.	Other information: Do not use incompatible materials (see Section 10).
6.4.	Reference to other sections
	-

<b>SECTION 7. Handling and storage</b>	
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7.1.	Precautions for safe handling
7.1.1.	Protection measures
	Measures to prevent fire: Use in well ventilated storage rooms. Keep away from sources of heat and ignition. Carry out measures for preventing static electricity.
	Measures to prevent aerosol and dust formation: Secure proper ventilation.

Trade name:	<b>REDUCING BUFFER, SOLUTION</b>				
Product code:	RP-OT-X**	Date of compilation:	21 December 2022	Version:	4

	Measures to protect the environment:	Prevent spilling into the sewage system and waterways.
	Other measures:	-
7.1.2.	Advice on general occupational hygiene:	
	Do not eat, drink or smoke in the workspace. Thoroughly wash hands after work and before eating.	
7.2.	Conditions for safe storage, including any incompatibilities	
	Technical measures and storage conditions:	Keep in tightly closed and upright set containers in a well ventilated storage rooms at temperatures ranging from 15 to 25 °C.
	Containers materials:	Manufacturer's original packaging.
	Requirements for storage and containers:	Keep away from food and drink. Keep the containers tightly closed.
	Advices for storage equipment:	The storage must be made of hard material; floors must be resistant to chemicals. There must be no drain that directly leads into sewage system. Secure proper ventilation.
	Other information on storage conditions:	Do not place the unused material in the storage room and do not use empty containers for storing other chemicals. Do not store with incompatible materials (see Section 10).
7.3.	Specific end use(s)	
	Recommendations:	-
	Industrial sector specific solutions:	-

<b>SECTION 8. Exposure controls/personal protection</b>				
8.1.	Control parameters			
Substance	CAS No	Occupational exposure limit values/short term values		Biological limit values
		ppm	mg/m <sup>3</sup>	
-	-	-	-	-
Substance:	-			
EC No:	-	CAS No.:	-	
<b>DNEL</b>				
<b>Industrial</b>				
Route of exposure:	Acute effect local	Acute effect systemic	Chronic effect local	Chronic effect systemic
Oral	-	-	-	-

Trade name:	<b>REDUCING BUFFER, SOLUTION</b>				
Product code:	RP-OT-X**	Date of compilation:	21 December 2022	Version:	4

Inhalation	-	-	-	-
Dermal	-	-	-	-

Critical physical parameters: solubility, flammability, corrosivity: -

**Consumer**

Route of exposure:	Acute effect local	Acute effect systemic	Chronic effect local	Chronic effect systemic
Oral	-	-	-	-
Inhalation	-	-	-	-
Dermal	-	-	-	-

**PNEC**

Environmental protection target	PNEC
Fresh water	No information available
Fresh water sediments	No information available
Salt water	No information available
Salt water sediments	No information available
Food chain	No information available
Microorganisms in sewage treatment	No information available
Soil (agricultural)	No information available
Air	No information available

**8.2. Exposure controls**

**8.2.1. Appropriate engineering controls**

Substance/mixture related measures to prevent exposure during identified uses:	Use the product in well ventilated rooms. Use personal protective equipment. Do not eat, drink or smoke in the workspace.
Structural measures to prevent exposure:	No information available
Organisational measures to prevent exposure:	Organization of work in order to reduce other worker's influence during work process.
Technical measures to prevent exposure:	Secure proper workspace ventilation in order to keep concentration levels in air below permitted levels.

**8.2.2. Personal protection equipment**

8.2.2.1. Eye and face protection:	Safety glasses that stick to face (EN 166) or visor in case of lower levels of concentration in air; protective gas mask that covers the entire face in case of higher levels of concentration in air.
8.2.2.2. Skin protection	



Trade name:	<b>REDUCING BUFFER, SOLUTION</b>				
Product code:	RP-OT-X**	Date of compilation:	21 December 2022	Version:	4

	Hand protection:	The protective gloves have to satisfy the specification of Regulation (EU) 2016/425 and the related standard EN374. Full contact: Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Splash contact: Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min
	Other skin protection:	Complete suit protecting against chemicals (EN 340) The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace and shoes that cover the entire foot.
8.2.2.3.	Respiratory protection:	Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type P3 (EN 143) respirator cartridges as a backup to engineering controls.
8.2.2.4.	Thermal hazards:	No information available
8.2.3.	Environmental exposure controls	
	Substance/mixture related measures to prevent exposure:	See Section 6
	Structural measures to prevent exposure:	Use modern equipment.
	Organisational measures to prevent exposure:	Adapt the work process to the required working conditions of the workplace.
	Technical measures to prevent exposure:	See Section 6

**SECTION 9. Physical and chemical properties**

9.1.	Information on basic physical and chemical properties		
		Value	Method
	Physical state:	liquid	No information available
	Color:	colorless	No information available
	Odour/odour threshold:	sharp/no information available	No information available
	Melting point / freezing point:	No information available	No information available
	Boiling point or initial boiling point and boiling range:	No information available	No information available
	Flammability:	No information available	No information available
	Lower and upper explosion limit:	No information available	No information available

Trade name:	<b>REDUCING BUFFER, SOLUTION</b>				
Product code:	RP-OT-X**	Date of compilation:	21 December 2022	Version:	4

Flash point:	No information available	No information available
Auto-ignition temperature:	No information available	No information available
Decomposition temperature:	No information available	No information available
pH:	No information available	No information available
Kinematic viscosity:	No information available	No information available
Solubility:	No information available	No information available
Partition coefficient n-octanol/water (log value):	No information available	No information available
Vapour pressure:	No information available	No information available
Density and/or relative density	No information available	No information available
Relative vapour density:	No information available	No information available
Particle characteristics:	No information available	No information available
<b>9.2.</b>	<b>Other information</b>	
	-	

<b>SECTION 10.: Stability and reactivity</b>		
10.1.	Reactivity:	See subsections 10.3 through 10.5.
10.2.	Chemical stability:	The product is chemically stable under standard ambient conditions of storing and using (room temperature).
10.3.	Possibility of hazardous reactions:	No information available
10.4.	Conditions to avoid:	No information available
10.5.	Incompatible materials:	Strong oxidizing agents.
10.6.	Hazardous decomposition products:	Carbon oxides.

<b>SECTION 11. Toxicological information</b>					
11.1. Information on toxicological effects					
Acute toxicity:					
Route of exposure:	Method	Species	Effective Dose LD <sub>50</sub> /LC <sub>50</sub> or ATE <sub>mixture</sub>	Exposure time	Results
Oral	No information available	rat (paraformaldehyde)	LD <sub>50</sub>	No information available	800 mg/kg
Dermal	No information available	rabbit (paraformaldehyde)	LD <sub>50</sub>	No information available	10.000 mg/kg

Trade name:	<b>REDUCING BUFFER, SOLUTION</b>				
Product code:	RP-OT-X**	Date of compilation:	21 December 2022	Version:	4

Inhalation	No information available	rat (paraformaldehyde)	LC <sub>50</sub>	4 h	1.07 mg/l
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**Specific target organ toxicity - single exposure (STOT-SE):**

	Specific effects	Target organ	Note
Oral	No information available	No information available	-
Dermal	No information available	No information available	-
Inhalation	No information available	No information available	May cause respiratory irritation. - Respiratory system

**Aspiration hazard:**

no information available
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**Irritation and corrosion**

	Exposure time	Species	Evaluation	Method	Note
Skin corrosion/irritation:	-	-	-	-	no information available
Serious eye damage/irritation:	-	-	-	-	no information available

**Sensitization**

Skin sensitization:	May cause an allergic skin reaction.
Respiratory sensitization:	Allergic persons may display irritation.

**Symptoms related to the physical, chemical and toxicological characteristics**

Oral exposure:	Depending on concentration and exposure time, mucous membranes with retrosternal and abdominal pain, cramps, bloody vomiting, cyanosis, respiratory insufficiency, danger of perforation of the esophagus, stomach and small intestine; absorptive-toxic effects; delayed development of strictures possible.
Dermal exposure:	Depending on concentration and exposure time, superficial coagulation necrosis with hardening and tanning of the skin as well as anesthesia, allergic skin reactions (periorbital edema, urticaria, delayed development of eczema).
Inhalation exposure:	Depending on concentration and exposure time, irritation to the mucous membranes of the nose/throat (burning sensation, urge to sneeze, running nose), possibly even asthmoid reactions; for higher concentrations severe difficulty in breathing, fits of coughing, tightness in the chest, headache, reactions of the circulatory system, danger of glottic edema/cramp, bronchospasm, possible bronchiolitis, pneumonia, pulmonary edema

Trade name:	<b>REDUCING BUFFER, SOLUTION</b>				
Product code:	RP-OT-X**	Date of compilation:	21 December 2022	Version:	4

Eye exposure:	Dependent on the intensity of exposure slight, reversible irritation through to permanent corneal lesion: seriousness probably only visible after a latency period of some hours.
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Repeated dose toxicity (subacute, subchronic, chronic)

	Dose	Exposure time	Species	Method	Evaluation	Note
Subacute oral	No information available	No information available	No information available	No information available	No information available	-
Subacute dermal	No information available	No information available	No information available	No information available	No information available	-
Subacute inhalation	No information available	No information available	No information available	No information available	No information available	-
Subchronic oral	No information available	No information available	No information available	No information available	No information available	-
Subchronic dermal	No information available	No information available	No information available	No information available	No information available	-
Subchronic inhalation	No information available	No information available	No information available	No information available	No information available	-
Chronic oral	No information available	No information available	No information available	No information available	No information available	-
Chronic dermal	No information available	No information available	No information available	No information available	No information available	-
Chronic inhalation	No information available	No information available	No information available	No information available	No information available	-

Specific target organ toxicity - repeated exposure (STOT-RE):

	Specific effects	Target organ	Note
Subacute oral	No information available	No information available	-
Subacute dermal	No information available	No information available	-
Subacute inhaling	No information available	No information available	-
Subchronic oral	No information available	No information available	-

Trade name:	<b>REDUCING BUFFER, SOLUTION</b>				
Product code:	RP-OT-X**	Date of compilation:	21 December 2022	Version:	4

Subchronic dermal	No information available	No information available	-
Subchronic inhaling	No information available	No information available	-
Chronic oral	No information available	No information available	-
Chronic dermal	No information available	No information available	-
Chronic inhaling	No information available	No information available	-

CMR effects (carcinogenicity, mutagenicity, reproductive toxicity)	
Carcinogenicity:	Presumed to have carcinogenic potential for humans
Mutagenicity <i>In-vitro</i> :	No information available
Genotoxicity:	No information available
Mutagenicity <i>In-vivo</i> :	No information available
Germ cell mutagenicity:	Suspected of causing genetic defects.
Reproductive toxicity:	No information available
Summary of evaluation of the CMR properties:	No information available

11.2.	Information on other hazards:
11.2.1.	Endocrine disrupting properties:
	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
11.2.2.	Other information:
	-

<b>SECTION 12. Ecological information</b>						
12.1.	Toxicity					
Acute (short-term) toxicity	Dose	Exposure time	species	Method	Evaluation	Note
Fish	LC <sub>50</sub>	96 hours	<i>Oncorhynchus mykiss</i> (rainbow trout)	No information available	46 – 78 mg/l (paraformaldehyde)	-
Crustacea:	EC <sub>50</sub>	48 hours	<i>Daphnia magna</i> (water flea)	No information available	42 mg/l (paraformaldehyde)	-

Trade name:	<b>REDUCING BUFFER, SOLUTION</b>				
Product code:	RP-OT-X**	Date of compilation:	21 December 2022	Version:	4

Algae/aquatic plants:	IC <sub>50</sub>	8 days	No information available	No information available	No information available	-
Other organisms:	-	-	-	-	-	-
Chronic (long-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note
Fish	LC <sub>50</sub>	96 hours	No information available	No information available	No information available	-
Crustacea:	EC <sub>50</sub>	48 hours	No information available	No information available	No information available	-
Algae/aquatic plants:	IC <sub>50</sub>	72 hours	No information available	No information available	No information available	-
Other organisms:	-	-	-	-	-	-

**12.2. Persistence and degradability**

Abiotic degradation					
	Degradation half-lives	Method		Evaluation	Note
Marine water	No information available	No information available		No information available	-
Fresh water	No information available	No information available		No information available	-
Air	No information available	No information available		No information available	-
Soil	No information available	No information available		No information available	-

**Biodegradation**

% Degradation	Time (days)	Method	Evaluation	Note
No information available	No information available	No information available	No information available	No information available

**12.3. Bioaccumulative potential**

**Octanol/water partition coefficient (log Pow):**

Value	Concentration	pH	°C	Method	Evaluation	Note
No information available	No information available	-	-	No information available	No information available	No information available

Trade name:	<b>REDUCING BUFFER, SOLUTION</b>				
Product code:	RP-OT-X**	Date of compilation:	21 December 2022	Version:	4

Bioconcentration Factor (BCF)				
Value	Species	Method	Evaluation	Note
No information available	No information available	No information available	No information available	-

Chronic ecotoxicity						
Value	Dose	Exposure time	Species	Method	Evaluation	Note
Chronic toxicity on fish	LC <sub>50</sub>	No information available	No information available	No information available	No information available	-
Chronic toxicity on Crustacea (Daphnia)	EC <sub>50</sub>	No information available	No information available	No information available	No information available	-

<b>12.4. Mobility in soil</b>						
Known or predicted distribution in environmental compartments:						
No information available						
Surface tension:						
Value	°C	Concentration	Method	Note		
No information available	No information available	No information available	No information available	-		

Adsorption / desorption						
Transport	A/D coefficient Henry's constant	log Kow	Evaporation rate	Method	Note	
Soil-Water	No information available	No information available	No information available	No information available	-	
Water-Air	No information available	No information available	No information available	No information available	-	

Trade name:	<b>REDUCING BUFFER, SOLUTION</b>				
Product code:	RP-OT-X**	Date of compilation:	21 December 2022	Version:	4

Soil-Air	No information available	No information available	No information available	No information available	-
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**12.5. Results of PBT and vPvB assessment**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**12.6. Endocrine disrupting properties**

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**12.7. Other adverse effects**

No information available

**SECTION 13. Disposal considerations**

**13.1. Waste treatment methods**

**13.1.1. Product/packaging disposal:**

Submit for disposal to the legal person authorized by the Ministry of Environmental and Nature Protection.

**13.1.2. Waste codes/waste designations according to law:**

15 01 10\*: packaging that contains residual hazardous substances or is contaminated with hazardous substances

**13.1.3. Waste treatment – relevant information:**

No information available

**13.1.4. Sewage disposal – relevant information:**

Waste must not be disposed of into the sewage system.

**13.1.5. Other disposal recommendations:**

Do not dispose of the product's remains into the sewage system. Submit the remains to the collectors authorized by the ministry in charge. Do not dispose of the packaging into the sewage system. Submit the packaging to the collectors authorized by the ministry in charge.

**13.1.6. Relevant Community provisions:**



Trade name:	<b>REDUCING BUFFER, SOLUTION</b>			
Product code:	RP-OT-X**	Date of compilation:	21 December 2022	Version: 4

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**SECTION 14. Transport information**

Transporting/shipment by road (ADR)

UN number	Not subject to transport regulations.
UN proper shipping name:	-
Transport hazard classes:	-
Packing group:	-
Environmental hazards:	-
Special precautions for user:	-

Transporting/shipment by rail (RID)

UN number	Not subject to transport regulations.
UN proper shipping name:	-
Transport hazard classes:	-
Packing group:	-
Environmental hazards:	-
Special precautions for user:	-

Transporting/shipment by inland waterways (ADN)

UN number	Not subject to transport regulations.
UN proper shipping name:	-
Transport hazard classes:	-
Packing group:	-
Environmental hazards:	-
Special precautions for user:	-

Transporting/shipment by sea (IMDG)

UN number	Not subject to transport regulations.
UN proper shipping name:	-
Transport hazard classes:	-
Packing group:	-
Environmental hazards:	-
Special precautions for user:	-

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code: -

Transporting/shipment by air (ICAO-TI/IATA-DGR)

UN number	3334
UN Proper shipping name:	Aviation regulated liquid, n.o.s. (formaldehyde)

Trade name:	<b>REDUCING BUFFER, SOLUTION</b>				
Product code:	RP-OT-X**	Date of compilation:	21 December 2022	Version:	4

Transport hazard classes:	9
Packing group:	III
Environmentally hazardous:	no
Special precautions for user:	-

Further information:	No information available
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**SECTION 15. Regulatory information**

15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture	
	EU regulations	
	Authorisation and/or restrictions on use	
	Authorisations:	-
	Restrictions:	-
	Other EU regulations:	<p>Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC;</p> <p>Directive 2004/42/CE of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC;</p> <p>Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work;</p> <p>Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006;</p> <p>REACH Restrictions on the manufacturing, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII);</p>
	Information according 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline):	
	National legislation:	Chemicals Act, Regulation on classification, packaging and labeling of dangerous substances, Ordinance on occupational exposure limit values and on biological limit values, Regulation on categories, types and classification of waste with a waste catalog and list of hazardous waste, Transport of Hazardous Substances Act
15.2.	Chemical safety assessment	
	None	

**SECTION 16. Other information**

Trade name:	<b>REDUCING BUFFER, SOLUTION</b>				
Product code:	RP-OT-X**	Date of compilation:	21 December 2022	Version:	4

16.1.	Indication of changes:	-																
16.2.	Abbreviations and acronyms:	<p>ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)</p> <p>IMDG: International Maritime Code for Dangerous Goods</p> <p>IATA: International Air Transport Association</p> <p>GHS: Globally Harmonised System of Classification and Labelling of Chemicals</p> <p>EINECS: European Inventory of Existing Commercial Chemical Substances</p> <p>CAS: Chemical Abstracts Service (division of the American Chemical Society)</p> <p>DNEL: Derived No-Effect Level (UK REACH)</p> <p>LC50: Lethal concentration, 50 percent</p> <p>LD50: Lethal dose, 50 percent</p> <p>PBT: Persistent, Bioaccumulative and Toxic</p> <p>vPvB: very Persistent and very Bioaccumulative</p>																
16.3.	Key literature references and source of data:	-																
16.4.	Classification and procedure used to derive the classification for mixture according to Regulation (EC) 1272/2008 (CLP)																	
	Classification	Classification procedure																
	-	-																
16.5.	Relevant H statements (number and full text)																	
	<table style="border: none;"> <tr><td style="padding-right: 10px;">302</td><td style="padding-right: 10px;">Harmful if swallowed.</td></tr> <tr><td style="padding-right: 10px;">315</td><td style="padding-right: 10px;">Causes skin irritation.</td></tr> <tr><td style="padding-right: 10px;">H: 317</td><td style="padding-right: 10px;">May cause allergic skin reaction.</td></tr> <tr><td style="padding-right: 10px;">318</td><td style="padding-right: 10px;">Causes serious eye damage.</td></tr> <tr><td style="padding-right: 10px;">332</td><td style="padding-right: 10px;">Harmful if inhaled.</td></tr> <tr><td style="padding-right: 10px;">335</td><td style="padding-right: 10px;">May cause respiratory irritation.</td></tr> <tr><td style="padding-right: 10px;">341</td><td style="padding-right: 10px;">Suspected of causing genetic defects.</td></tr> <tr><td style="padding-right: 10px;">350</td><td style="padding-right: 10px;">May cause cancer.</td></tr> </table>	302	Harmful if swallowed.	315	Causes skin irritation.	H: 317	May cause allergic skin reaction.	318	Causes serious eye damage.	332	Harmful if inhaled.	335	May cause respiratory irritation.	341	Suspected of causing genetic defects.	350	May cause cancer.	
302	Harmful if swallowed.																	
315	Causes skin irritation.																	
H: 317	May cause allergic skin reaction.																	
318	Causes serious eye damage.																	
332	Harmful if inhaled.																	
335	May cause respiratory irritation.																	
341	Suspected of causing genetic defects.																	
350	May cause cancer.																	
16.6.	Training advice:	-																
16.7.	Further notice:	<p>** "X" in the product code marks different volumes (different packaging of the product).</p> <p>We are not responsible for consequences in case of failure to comply with instructions for use or improper use of the product described in this material safety data sheet.</p>																

<b>ANNEX: Exposure scenario resulting to Chemical safety assessment</b>
-

Trading name:	<b>SILVER AMMONIA REAGENT</b>				
Product code:	SAR-OT-X**	Date of compilation:	21 Dec 2022	Version:	6

<b>SECTION 1: Identification of the substance/mixture and of the company/undertaking</b>	
1.1	Product identifier
	Trading name: SILVER AMMONIA REAGENT
	Chemical name: -
	Catalogue number: SAR-OT-X**
1.2	Relevant identified uses of the substance or mixture and uses advised against
	Uses: For use with Von Kossa ana Masson Fontana staining kits.
	Uses advised against: Only the identified uses are advised.
	Reason why uses advised against: The product is intended for use only as an <i>in vitro</i> diagnostic medical device, registered at the Agency for Medicinal Products and Medical Devices and there is no reason to use it for other purposes.
1.3	Details of the supplier of the safety data sheet
	Supplier: BioGnost Ltd.
	Address: Medjugorska 59, Zagreb
	Telephone number: +385 1 2409997
	Telefax.: +385 1 2404039
	e-mail of competent person: <a href="mailto:msds@biognost.hr">msds@biognost.hr</a>
	National contact: -
1.4	Emergency telephone number
	National Protection and Rescue Directorate: 112
	Medical information: +385 1 2348 342
	Other information: -

<b>SECTION 2. Hazards identification</b>					
2.1	Classification of the substance or mixture				
2.1.1	Classification according to Regulation (EC) No 1272/2008 (CLP)				
	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;">Hazard class and category code:</td> <td style="width: 50%; padding: 5px;">Hazard statements*:</td> </tr> <tr> <td style="padding: 5px;">Aquatic Chronic 3</td> <td style="padding: 5px;">H412</td> </tr> </table>	Hazard class and category code:	Hazard statements*:	Aquatic Chronic 3	H412
Hazard class and category code:	Hazard statements*:				
Aquatic Chronic 3	H412				
2.1.2.	Additional information				
	-				
*For full text of Hazard- and EU Hazard-statements: see SECTION 16					
2.2	Label elements				
	Product identification: SILVER AMMONIA REAGENT				
	Identification number: -				
	Authorization number: -				
	Hazard pictograms: -				

Trading name:	<b>SILVER AMMONIA REAGENT</b>				
Product code:	SAR-OT-X**	Date of compilation:	21 Dec 2022	Version:	6

Signal word:	-
Hazard statements:	H412 Harmful to aquatic life with long lasting effects.
Precautionary statements:	P273 Avoid release to the environment. P501 Dispose of contents/container in accordance with local regulations.
Supplemental hazard information (EU):	-
<b>2.3</b>	<b>Other hazards</b>
<p><b>Endocrine Disrupting Properties:</b> No known endocrine disrupting properties</p> <p><b>Results of PBT and vPvB assessment:</b> According to the results of its assessment, this substance is not a PBT or a vPvB.</p>	

<b>SECTION 3. Composition/information on ingredients</b>				
CAS/ EC/ Index number	REACH Registration No	Weight % content (or range)	Identification name	Classification according to Regulation (EC) No 1272/2008 (CLP)
7761-88-8/ 231-853-9/ 047-001-00-2	-	< 1 %	silver nitrate	Ox. Sol. 2; H272 Skin Corr. 1B; H314 Aquatic Acute 1; H400 Aquatic Chronic 1; H410
1336-21-6/ 215-647-6/ 007-001-01-2	-	< 1 %	ammonia	Skin Corr. 1B; H314 Aquatic Acute 1; H400

<b>SECTION 4. First aid measures</b>	
<b>4.1</b>	<b>Description of first aid measures</b>
General notes:	If the suggested first aid measures do not prove sufficient, seek medical attention.
Following inhalation:	Carry the afflicted person out of the contaminated area into a well-ventilated area or out for fresh air. In case of difficult breathing, provide the afflicted person with oxygen.
Following skin contact:	Remove contaminated clothing. Immediately wash with plenty of water for at least 20 minutes. Seek medical assistance if the symptoms of irritation remain.
Following eye contact:	Rinse out with plenty of water with the eyelid held wide open for at least 20 minutes. If the symptoms remain, immediately call in ophthalmologist.
Following ingestion:	Rinse the oral cavity, drink 1-2 glasses of water. Immediately consult a physician and show the container or label. In case of swallowing large quantities, transport the afflicted person to the hospital.

Trading name:	<b>SILVER AMMONIA REAGENT</b>				
Product code:	SAR-OT-X**	Date of compilation:	21 Dec 2022	Version:	6

	Self-protection of the first aider:	-
4.2	Most important symptoms and effects, both acute and delayed	
	Following inhalation:	Depending on concentration and exposure time, it may lead to mucosa irritation, cough, and dyspnea.
	Following skin contact:	Depending on concentration and exposure time, it may lead to irritation, rash, skin drying and skin cracking.
	Following eye contact:	Depending on concentration and exposure time, it may lead to irritation, tearing, redness and pain.
	Following ingestion:	Danger of gastric perforation.
4.3	Indication of any immediate medical attention and special treatment needed	
	-	

<b>SECTION 5. Firefighting measures</b>		
5.1	Extinguishing media	
	Suitable extinguishing media:	Water spray, foam, dry powder, CO <sub>2</sub> or alcohol resistant foam.
	Unsuitable extinguishing media:	Water with full jet.
5.2	Special hazards arising from the substance or mixture	
	Hazardous combustion products:	Nitrogen oxides (NO <sub>x</sub> ). During heating or in case of fire poisonous gases are produced.
5.3	Advice for firefighters	
	Use a self-contained open-circuit compressed air breathing apparatus and fireproof clothing.	
5.4	Additional information	
	Do not contaminate the environment with extinguishing media.	

<b>SECTION 6. Accidental release measures</b>		
6.1	Personal precautions, protective equipment and emergency procedures	
6.1.1.	For non-emergency personnel	
	Protective equipment:	Use personal protective equipment (see Section 8).
	Accident prevention methods:	Evacuate members of all non-essential personnel and those members without protective equipment. Avoid breathing vapors and avoid contact with skin and eyes. Do not smoke.
	Emergency procedures:	Mark the area using proper signs.
6.1.2.	For emergency responders:	
	Use protective equipment; in case of inadequate ventilation use adequate airways protective equipment (see Section 8).	
6.2	Environmental precautions:	

Trading name:	<b>SILVER AMMONIA REAGENT</b>				
Product code:	SAR-OT-X**	Date of compilation:	21 Dec 2022	Version:	6

	Do not dispose of in sewage, drainage system and waterways. In case of large spillage contact National Protection and Rescue Directorate (NPRD) on 112.	
<b>6.3</b>	<b>Methods and material for containment and cleaning up</b>	
6.3.1.	Bundling, covering of drains; capping procedures:	Sand or clay barriers.
6.3.2.	Cleaning up:	Where possible, the substance can be absorbed by using absorbing material. Place the waste material in tightly closed impermeable containers. Store the substance in well ventilated storage rooms until disposal. Submit for disposal to the legal persons authorized by the Ministry of Environmental and Nature Protection. After disposal of the products, wash the area and involved materials with water.
6.3.3.	Other information:	Do not use incompatible materials (see Section 10).
<b>6.4</b>	<b>Reference to other sections</b>	
	See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.	

<b>SECTION 7. Handling and storage</b>		
<b>7.1</b>	<b>Precautions for safe handling</b>	
7.1.1.	<b>Protection measures</b>	
	Measures to prevent fire:	Use in well ventilated storage rooms. Keep away from sources of ignition and heat.
	Measures to prevent aerosol and dust generation:	Secure proper ventilation.
	Measures to protect the environment:	Prevent spilling into the sewage system and waterways.
	Other measures:	-
7.1.2.	<b>Advice on general occupational hygiene:</b>	
	Do not eat, drink or smoke in the workspace. Thoroughly wash hands after work and before eating.	
<b>7.2</b>	<b>Conditions for safe storage, including any incompatibilities</b>	
	Technical measures and storage conditions:	Keep in tightly closed and upright set containers at temperatures ranging from +2 to +8 °C.
	Packaging materials:	Manufacturer's original packaging. Avoid metal containers.
	Requirements for storage rooms and vessels:	Keep away from food and drink. Keep the containers tightly closed.
	Advices for storage equipment:	The storage must be made of hard material; floors must be resistant to chemicals. There must be no drain that directly leads into sewage system. Secure proper ventilation.

Trading name:	<b>SILVER AMMONIA REAGENT</b>				
Product code:	SAR-OT-X**	Date of compilation:	21 Dec 2022	Version:	6

Further information on storage conditions:	Do not place the unused material in the storage room and do not use empty containers for storing other chemicals. Do not store with incompatible materials (see Section 10).
7.3	Specific end use(s)
Recommendations:	-
Industrial sector specific solutions:	-

**SECTION 8. Exposure controls/personal protection**

8.1 Control parameters				
Substance	CAS No	Occupational exposure limit values/short term values		Biological limit values
		ppm	mg/m <sup>3</sup>	
-	-	-	-	-

Substance name:	-
EC No:	-
CAS No:	-

**DNEL**

Industrial				
Route of exposure:	Acute effect local	Acute effect systemic	Chronic effect local	Chronic effect systemic
Oral	-	-	-	-
Inhalation	-	-	-	-
Dermal	-	-	-	-

Critical physical parameters: solubility, flammability, corrosivity: -

**Consumer**

Route of exposure:	Acute effect local	Acute effect systemic	Chronic effect local	Chronic effect systemic
Oral	-	-	-	-
Inhalation	-	-	-	-
Dermal	-	-	-	-

**PNEC**

Environmental protection target	PNEC
Fresh water	no information available
Freshwater sediments	no information available
Marine water	no information available
Marine sediments	no information available



Trading name:	<b>SILVER AMMONIA REAGENT</b>				
Product code:	SAR-OT-X**	Date of compilation:	21 Dec 2022	Version:	6

Food chain	no information available
Microorganisms in sewage treatment	no information available
Soil (agricultural)	no information available
Air	no information available

8.2	Exposure controls
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8.2.1.	Appropriate engineering controls
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	Substance/mixture related measures to prevent exposure during identified uses:	Use the product in well ventilated rooms. Use personal protective equipment. Do not eat, drink or smoke in the workspace.
	Structural measures to prevent exposure:	In accordance with Section 7.
	Organisational measures to prevent exposure:	Organization of work in order to reduce other worker's influence during work process.
	Technical measures to prevent exposure:	Secure proper workspace ventilation in order to keep concentration levels in air below permitted levels. Secure stations for rinsing eyes and showering.

8.2.2.	Personal protection equipment
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8.2.2.1.	Eye and face protection:	Safety glasses that stick to face (EN 166) or visor in case of lower levels of concentration in air; protective gas mask that covers the entire face in case of higher levels of concentration in air.
8.2.2.2.	Skin protection	
	Hand protection:	Protective nitrile gloves, >0.11 mm thick (EN 374).
	Other skin protection:	Wear antistatic clothing made of natural fibers (such as cotton) with long sleeves (EN 340) and shoes that cover the entire foot.
8.2.2.3.	Respiratory protection:	Not required under normal conditions of use. Use suitable respiratory protective device when high concentrations are present.
8.2.2.4.	Thermal hazards:	No information available

8.2.3.	Environmental exposure controls
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	Substance/mixture related measures to prevent exposure:	See Section 6
	Structural measures to prevent exposure:	Use modern equipment.
	Organisational measures to prevent exposure:	Adapt the work process to the required working conditions of the workplace.
	Technical measures to prevent exposure:	See Section 6

Trading name:	<b>SILVER AMMONIA REAGENT</b>				
Product code:	SAR-OT-X**	Date of compilation:	21 Dec 2022	Version:	6

### SECTION 9. Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

		Value	Method
	Physical state:	liquid	No information available
	Colour:	colourless	No information available
	Odour/odour threshold:	mild ammonia like/no information available	No information available
	Melting point / freezing point:	No information available	No information available
	Boiling point or initial boiling point and boiling range:	No information available	No information available
	Flammability:	No information available	No information available
	Lower and upper explosion limit:	No information available	No information available
	Flash point:	No information available	No information available
	Auto-ignition temperature:	No information available	No information available
	Decomposition temperature:	No information available	No information available
	pH:	No information available	No information available
	Kinematic viscosity:	No information available	No information available
	Solubility:	No information available	No information available
	Partition coefficient n-octanol/water (log value):	No information available	No information available
	Vapour pressure:	No information available	No information available
	Density and/or relative density:	No information available	No information available
	Relative vapour density:	No information available	No information available
	Particle characteristics:	No information available	No information available

#### 9.2 Other information

-

### SECTION 10. Stability and reactivity

10.1	Reactivity:	See subsections 10.3 through 10.5.
10.2	Chemical stability:	The product is chemically stable under standard ambient conditions of storing and using.
10.3	Possibility of hazardous reactions:	No dangerous reactions known.
10.4	Conditions to avoid:	No information available
10.5	Incompatible materials:	No information available
10.6	Hazardous decomposition products:	No information available

Trading name:	<b>SILVER AMMONIA REAGENT</b>				
Product code:	SAR-OT-X**	Date of compilation:	21 Dec 2022	Version:	6

**SECTION 11. Toxicological information**

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

Acute toxicity:

Route of exposure:	Method	Species	Dose LD <sub>50</sub> /LC <sub>50</sub> or ATE <sub>mix</sub>	Exposure time	Results
Oral:	-	No information available	-	No information available	-
Dermal:	-	No information available	-	No information available	-
Inhalation:	-	No information available	-	No information available	-

Specific target organ toxicity – single exposure (STOT SE):

	Specific effects	Target organ	Note
Oral:	No information available	No information available	-
Dermal:	No information available	No information available	-
Inhalation:	No information available	No information available	-

Aspiration hazard: No information available.

Irritation and corrosion

	Exposure time	Species	Evaluation	Method	Note
Skin corrosion/irritation:	-	-	-	-	-
Serious eye damage/irritation	-	-	-	-	-

Sensitization

Skin sensitization:	-
Respiratory sensitization:	-

Symptoms related to the physical, chemical and toxicological characteristics

Oral exposure:	No information available.
Dermal exposure:	No information available.
Inhalation exposure:	No information available.
Eye exposure:	No information available.

Trading name:	<b>SILVER AMMONIA REAGENT</b>				
Product code:	SAR-OT-X**	Date of compilation:	21 Dec 2022	Version:	6

Repeated dose toxicity (subacute, subchronic, chronic)						
	Dose	Exposure time	Species	Method	Evaluation	Note
Subacute oral	No information available	No information available	No information available	No information available	No information available	-
Subacute dermal	No information available	No information available	No information available	No information available	No information available	-
Subacute inhalation	No information available	No information available	No information available	No information available	No information available	-
Subchronic oral	No information available	No information available	No information available	No information available	No information available	-
Subchronic dermal	No information available	No information available	No information available	No information available	No information available	-
Subchronic inhalation	No information available	No information available	No information available	No information available	No information available	-
Chronic oral	No information available	No information available	No information available	No information available	No information available	-
Chronic dermal	No information available	No information available	No information available	No information available	No information available	-
Chronic inhalation	No information available	No information available	No information available	No information available	No information available	-
Specific target organ toxicity – repeated exposure (STOT RE):						
	Specific effects		Target organ		Note	
Subacute oral	No information available		No information available		-	
Subacute dermal	No information available		No information available		-	
Subacute inhalation	No information available		No information available		-	
Subchronic oral	No information available		No information available		-	
Subchronic dermal	No information available		No information available		-	
Subchronic inhalation	No information available		No information available		-	

Trading name:	<b>SILVER AMMONIA REAGENT</b>				
Product code:	SAR-OT-X**	Date of compilation:	21 Dec 2022	Version:	6

Chronic oral	No information available	No information available	-
Chronic dermal	No information available	No information available	-
Chronic inhalation	No information available	No information available	-

CMR effects (carcinogenicity; mutagenicity; reproductive toxicity)	
Carcinogenicity:	No information available.
Mutagenicity <i>in vitro</i> :	No information available.
Genotoxicity:	No information available.
Mutagenicity <i>in vivo</i> :	No information available.
Germ cell mutagenicity:	No information available.
Reproductive toxicity:	No information available.
Summary of evaluation of the CMR properties:	No information available.

11.2.	Information on other hazards:
11.2.1.	Endocrine disrupting properties:
	No known endocrine disrupting properties that affect human health.
11.2.2.	Other information:
	-

**SECTION 12. Ecological information**

12.1 Toxicity						
Acute (short-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note
Fish	LC <sub>50</sub>	96 hours	Leuciscus idus (Golden orfe)	-	-	0.011 mg/l (silver nitrate)
Crustacea:	EC <sub>50</sub>	48 hours	<i>Daphnia magna</i> (Water flea)	-	-	0.0082 mg/l (silver nitrate)
Algae/aquatic plants	IC <sub>50</sub>	4 days	Pseudokirchneriella subcapitata (green algae)	-	-	0.19 mg/l (silver nitrate)
Other organisms	-	-	-	-	-	-
Chronic (long-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note

Trading name:	<b>SILVER AMMONIA REAGENT</b>				
Product code:	SAR-OT-X**	Date of compilation:	21 Dec 2022	Version:	6

Fish	LC <sub>50</sub>	96 hours	No information available	No information available	No information available	-
Crustacea:	EC <sub>50</sub>	48 hours	No information available	No information available	No information available	-
Algae/aquatic plants	IC <sub>50</sub>	72 hours	No information available	No information available	No information available	-
Other organisms	-	-	-	-	-	-

**12.2 Persistence and degradability**

**Abiotic degradation**

	Degradation half-lives	Method	Evaluation	Note
Marine water	No information available	No information available	No information available	-
Fresh water	No information available	No information available	No information available	-
Air	No information available	No information available	No information available	-
Soil	No information available	No information available	No information available	-

**Biodegradation**

% Degradation	Time (days)	Method	Evaluation	Note
No information available	No information available	No information available	No information available	No information available

**12.3 Bioaccumulative potential**

**Octanol-water partition coefficient (log Kow)**

Value	Concentration	pH	°C	Method	Evaluation	Note
-	-	-	-	-	-	-

**Bioconcentration factor (BCF)**

Trading name:	<b>SILVER AMMONIA REAGENT</b>				
Product code:	SAR-OT-X**	Date of compilation:	21 Dec 2022	Version:	6

Value	Species	Method	Evaluation	Note
No information available	No information available	No information available	No information available	-

Chronic ecotoxicity

Value	Dose	Exposure time	Species	Method	Evaluation	Note
Chronic toxicity on fish	LC <sub>50</sub>	No information available	No information available	No information available	No information available	-
Chronic toxicity on crustacea ( <i>Daphnia</i> )	EC <sub>50</sub>	No information available	No information available	No information available	No information available	-

**12.4 Mobility in soil**

Known or predicted distribution in environmental compartments:

No information available

Surface tension:

Value	°C	Concentration	Method	Note
No information available	No information available	No information available	No information available	-

Adsorption / desorption

Transport	A/D coefficient Henry's constant	log Kow	Evaporation rate	Method	Note
Soil-water	No information available	No information available	No information available	No information available	-
Water-air	No information available	No information available	No information available	No information available	-
Soil-air	No information available	No information available	No information available	No information available	-

**12.5 Results of PBT and vPvB assessment**

Trading name:	<b>SILVER AMMONIA REAGENT</b>				
Product code:	SAR-OT-X**	Date of compilation:	21 Dec 2022	Version:	6

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**12.6. Endocrine disrupting properties**

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**12.7. Other adverse effects**

No information available

**SECTION 13. Disposal considerations**

**13.1 Waste treatment methods**

**13.1.1. Product/Packaging disposal:**

Submit for disposal to the legal person authorized by the Ministry of Environmental and Nature Protection.

**13.1.2. Waste codes/waste designations according to Law:**

Packaging that contains residual hazardous substances or is contaminated with hazardous substances

**13.1.3. Waste treatment – relevant information:**

No information available

**13.1.4. Sewage disposal – relevant information:**

Waste must not be disposed of into the sewage system.

**13.1.5. Other disposal recommendations:**

Do not dispose of the product's remains into the sewage system. Submit the remains to the collectors authorized by the ministry in charge. Do not dispose of the packaging into the sewage system. Submit the packaging to the collectors authorized by the ministry in charge.

**13.1.6. Relevant Community provisions:**

-

**SECTION 14 TRANSPORT INFORMATION**

Transporting/shipment by road (ADR)

UN number: 3082



Trading name:	<b>SILVER AMMONIA REAGENT</b>				
Product code:	SAR-OT-X**	Date of compilation:	21 Dec 2022	Version:	6

UN proper shipping name:	Environmentally hazardous substance, liquid, n.o.s. (silver ammonium)
Transport hazard class(es):	9
Packing group:	III
Environmentally hazardous:	-
Special precautions for user:	-

Transporting/shipment by rail (RID)

UN number:	3082
UN proper shipping name:	Environmentally hazardous substance, liquid, n.o.s. (silver ammonium)
Transport hazard class(es):	9
Packing group:	III
Environmentally hazardous:	-
Special precautions for user:	-

Inland waterway transport (ADN)

UN number:	3082
UN proper shipping name:	Environmentally hazardous substance, liquid, n.o.s. (silver ammonium)
Transport hazard class(es):	9
Packing group:	III
Environmentally hazardous:	-
Special precautions for user:	-

Transporting/shipment by sea (IMDG)

UN number:	3082
UN proper shipping name:	Environmentally hazardous substance, liquid, n.o.s. (silver ammonium)
Transport hazard class(es):	9
Packing group:	III
Environmentally hazardous:	-
Special precautions for user:	-
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:	-

Transporting/shipment by air (ICAO-TI/IATA-DGR)

UN number:	3082
UN proper shipping name:	Environmentally hazardous substance, liquid, n.o.s. (silver ammonium)
Transport hazard class(es):	9
Packing group:	III
Environmentally hazardous:	-
Special precautions for user:	-

Trading name:	<b>SILVER AMMONIA REAGENT</b>				
Product code:	SAR-OT-X**	Date of compilation:	21 Dec 2022	Version:	6

Further information:	Packages smaller than or equal to 5 kg / L, not dangerous goods of Class 9.
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**SECTION 15. Regulatory information**

15.1	Safety, health and environmental regulations/legislation specific for the substance or mixture	
	EU regulations	
	Authorization and/or restrictions of use	
	Authorizations:	-
	Restrictions:	-
	Other EU regulations:	<p>Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC;</p> <p>Directive 2004/42/CE of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC;</p> <p>Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work;</p> <p>Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006;</p> <p>REACH Restrictions on the manufacturing, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII);</p>
	Information according 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline)	
	National legislation:	<p>Chemicals Act, Regulation on classification, packaging and labeling of dangerous substances, Ordinance on occupational exposure limit values and on biological limit values, Regulation on categories, types and classification of waste with a waste catalog and list of hazardous waste, Ordinance on writing Material safety data sheet, Transport of Hazardous Substances Act</p>
15.2	Chemical safety assessment	
	None	

**SECTION 16. Other information**

16.1	Indication of changes:	-
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Trading name:	<b>SILVER AMMONIA REAGENT</b>				
Product code:	SAR-OT-X**	Date of compilation:	21 Dec 2022	Version:	6

16.2	Abbreviations and acronyms:	<p>ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)</p> <p>IMDG: International Maritime Code for Dangerous Goods</p> <p>IATA: International Air Transport Association</p> <p>GHS: Globally Harmonised System of Classification and Labelling of Chemicals</p> <p>EINECS: European Inventory of Existing Commercial Chemical Substances</p> <p>CAS: Chemical Abstracts Service (division of the American Chemical Society)</p> <p>DNEL: Derived No-Effect Level (UK REACH)</p> <p>LC50: Lethal concentration, 50 percent</p> <p>LD50: Lethal dose, 50 percent</p> <p>PBT: Persistent, Bioaccumulative and Toxic</p> <p>vPvB: very Persistent and very Bioaccumulative</p>
16.3.	Key literature references and source of data:	-
16.4.	Classification and procedure used to derive the classification for mixture according to Regulation (EC) 1272/2008 (CLP)	
	Classification	Classification procedure
	-	-
16.5.	Relevant H statements (number and full text)	
	272	May intensify fire; oxidiser.
	314	Causes severe skin burns and eye damage.
	H: 400	Very toxic to aquatic life.
	410	Very toxic to aquatic life with long lasting effects.
	412	Harmful to aquatic life with long lasting effects
16.6.	Training advice:	
		-
16.7.	Further information:	
		<p>** "X" in the product code marks different volumes (different packagings of the product)</p> <p>We are not responsible for consequences in case of failure to comply with instructions for use or improper use of the product described in this material safety data sheet.</p>

<b>ANNEX: Exposure scenario resulting to chemical safety assessment</b>
-

Trading name:	<b>SODIUM THIOSULFATE, 5% SOLUTION</b>		
Product code:	NT5-OT-X**	Date of compilation:	21 Dec 2022
		Version:	4

### SECTION 1. Identification of the substance/mixture and of the company/undertaking

1.1.	Product identifier	
	Trading name:	SODIUM THIOSULFATE, 5% SOLUTION
	Chemical name:	-
	Catalogue number:	NT5-OT-X**
1.2.	Relevant identified uses of the substance or mixture and uses advised against	
	Uses:	For use with special staining kits.
	Uses advised against:	Only the identified uses are advised.
	Reason why uses advised against:	The product is intended for use only as an <i>in vitro</i> diagnostic medical device, registered at the Agency for Medicinal Products and Medical Devices and there is no reason to use it for other purposes
1.3.	Details of the supplier of the safety data sheet	
	Supplier:	BioGnost Ltd.
	Address:	Medjugorska 59, Zagreb
	Telephone number:	+385 1 2409997
	Fax no.:	+385 1 2404039
	e-mail of competent person:	<a href="mailto:msds@biognost.hr">msds@biognost.hr</a>
	National contact:	-
1.4.	Emergency telephone number	
	National Protection and Rescue Directorate:	112
	Medical information:	+385 1 2348 342
	Other information:	-

### SECTION 2. Hazards identification

2.1.	Classification of the substance or mixture	
2.1.1.	Classification according to Regulation (EC) No 1272/2008 (CLP)	
	Hazard class and category code:	Hazard statements*:
	Not identified as hazardous substance.	-
2.1.2.	Additional information	
	-	
*For full text of Hazard- and EU Hazard-statements: see Section 16		
2.2.	Label elements	
	Product identification:	SODIUM THIOSULFATE, 5% SOLUTION
	Identification number:	-
	Authorization no.:	-
	Hazard pictograms:	-

Trading name:	<b>SODIUM THIOSULFATE, 5% SOLUTION</b>			
Product code:	NT5-OT-X**	Date of compilation:	21 Dec 2022	Version: 4

Signal word:	-
Hazard statements:	-
Precautionary statements:	-
Further information:	-

2.3.	Other hazards
<p><b>Endocrine Disrupting Properties:</b>          No known endocrine disrupting properties</p> <p><b>Results of PBT and vPvB assessment:</b> According to the results of its assessment, this substance is not a PBT or a vPvB.</p>	

<b>SECTION 3. Composition/information on ingredients</b>				
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CAS/ EC/ Index no.	REACH Registration No	Weight % content (or range)	Identification name	Classification according to Regulation (EC) No 1272/2008 (CLP)
7772-98-7/ 231-867-5/ -	-	5 %	sodium thiosulphate	not classified

<b>SECTION 4. First aid measures</b>	
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4.1.	Description of first aid measures
General notes:	-
Following inhalation:	Carry the afflicted person out of the contaminated area into a well-ventilated area or out for fresh air. If breathing becomes erratic or it stops, immediately apply artificial respiration (other than mouth-to-mouth) and contact a physician.
Following skin contact:	Remove contaminated clothing. Immediately wash with plenty of water and soap. Seek medical assistance if the symptoms of irritation remain.
Following eye contact:	Rinse out with plenty of water with the eyelid held wide open using clean fingers. If the symptoms remain, immediately call a physician.
Following ingestion:	Do not induce vomiting. Make the afflicted person drink a glass of water. If spontaneous vomiting occurs, wash the mouth with water, then make the person drink 100-200 ml of water and seek medical attention.
Self-protection of the first aider:	Treat symptomatically.
4.2.	Most important symptoms and effects, both acute and delayed
Following inhalation:	According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested.
Following skin contact:	According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested.

Trading name:	<b>SODIUM THIOSULFATE, 5% SOLUTION</b>		
Product code:	NT5-OT-X**	Date of compilation:	21 Dec 2022
		Version:	4

	Following eye contact:	According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested.
	Following ingestion:	According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested.
4.3.	Indication of any immediate medical attention and special treatment needed	
	-	

<b>SECTION 5. Firefighting measures</b>		
5.1.	Extinguishing media	
	Suitable extinguishing media:	Small fire - water spray, dry powder, CO <sub>2</sub> Large fire - water spray or alcohol-resistant foam
	Unsuitable extinguishing media:	water jet
5.2.	Special hazards arising from the substance or mixture	
	Hazardous combustion products:	No information available
5.3.	Advice for firefighters	
	Use a self-contained open-circuit compressed air breathing apparatus and fireproof clothing. Cool closed containers exposed to fire with water spray or vapor.	
5.4.	Additional information	
	Remove sources of heat and ignition. Do not contaminate the environment with extinguishing media.	

<b>SECTION 6. Accidental release measures</b>		
6.1.	Personal precautions, protective equipment and emergency procedures	
6.1.1.	For non-emergency personnel	
	Protective equipment:	Use personal protective equipment (see Section 8).
	Accident prevention methods:	Evacuate members of all non-essential personnel and those members without protective equipment. Remove all sources of sparks and ignition. Do not smoke.
	Emergency procedures:	Mark the area using proper signs.
6.1.2.	For emergency responders:	
	Wear protective equipment (see Section 8).	
6.2.	Environmental precautions:	
	Do not dispose of in sewage, drainage system and waterways. In case of large spillage contact National Protection and Rescue Directorate (NPRD) on 112.	
6.3.	Methods and material for containment and cleaning up	
6.3.1.	Bundling, covering of drains; capping procedures:	Sand or clay barriers.

Trading name:	<b>SODIUM THIOSULFATE, 5% SOLUTION</b>				
Product code:	NT5-OT-X**	Date of compilation:	21 Dec 2022	Version:	4

6.3.2.	Cleaning up:	Where possible, the substance can be absorbed by using inflammable material (sand, diatomaceous earth, vermiculite). Place the waste material in tightly closed impermeable containers. Store the substance in well ventilated storage rooms until disposal. Submit for disposal to the legal persons authorized by the Ministry of Environmental and Nature Protection. After disposal of the products, wash the area and involved materials with water.
6.3.3.	Other information:	-
6.4.	Reference to other sections	
	-	

<b>SECTION 7. Handling and storage</b>		
7.1.	Precautions for safe handling	
7.1.1.	Protection measures	
	Measures to prevent fire:	Keep away from sources of heat and ignition. Do not smoke.
	Measures to prevent aerosol and dust generation:	Secure proper ventilation.
	Measures to protect the environment:	Prevent spilling into the sewage system and waterways.
	Other measures:	-
7.1.2.	Advice on general occupational hygiene:	
	Do not eat, drink or smoke in the workspace. Thoroughly wash hands after work and before eating.	
7.2.	Conditions for safe storage, including any incompatibilities	
	Technical measures and storage conditions:	Keep in tightly closed and upright set containers in a well ventilated storage rooms, and away from sources of heat, sunlight, and other incompatible substances.
	Packaging materials:	Manufacturer's original packaging.
	Requirements for storage rooms and vessels:	Keep away from food and drink. Keep the containers tightly closed.
	Advices for storage equipment:	The storage must be made of hard material; floors must be resistant to chemicals. There must be no drain that directly leads into sewage system. Secure proper ventilation.
	Further information on storage conditions:	Do not place the unused material in the storage room and do not use empty containers for storing other chemicals. Do not store with incompatible materials (see Section 9).
7.3.	Specific end use(s)	
	Recommendations:	-
	Industrial sector specific solutions:	-

Trading name:	<b>SODIUM THIOSULFATE, 5% SOLUTION</b>			
Product code:	NT5-OT-X**	Date of compilation:	21 Dec 2022	Version: 4

**SECTION 8. Exposure controls/personal protection**

**8.1. Control parameters**

Substance	CAS No	Occupational exposure limit values/short term values		Biological limit values
		ppm	mg/m <sup>3</sup>	
-	-	-	-	No information available

Substance name: -

EC No: - CAS No: -

**DNEL**

**Industrial**

Route of exposure:	Acute effect local	Acute effect systemic	Chronic effect local	Chronic effect systemic
Oral	-	-	-	-
Inhalation	-	-	-	-
Dermal	-	-	-	-

Critical physical parameters: solubility, flammability, corrosivity: -

**Consumer**

Route of exposure:	Acute effect local	Acute effect systemic	Chronic effect local	Chronic effect systemic
Oral	-	-	-	-
Inhalation	-	-	-	-
Dermal	-	-	-	-

**PNEC**

Environmental protection target	PNEC
Fresh water	No information available
Freshwater sediments	No information available
Marine water	No information available
Marine sediments	No information available
Food chain	No information available
Microorganisms in sewage treatment	No information available
Soil (agricultural)	No information available
Air	No information available



Trading name:	<b>SODIUM THIOSULFATE, 5% SOLUTION</b>		
Product code:	NT5-OT-X**	Date of compilation:	21 Dec 2022
		Version:	4

8.2.	Exposure controls	
8.2.1.	Engineering measures	
	Substance/mixture related measures to prevent exposure during identified uses:	Use the product in well ventilated rooms. Use personal protective equipment. Do not eat, drink or smoke in the workspace.
	Structural measures to prevent exposure:	No information available
	Organisational measures to prevent exposure:	Organization of work in order to reduce other worker's influence during work process.
	Technical measures to prevent exposure:	Secure proper workspace ventilation in order to keep concentration levels in air below permitted levels.
8.2.2.	Personal protection equipment	
8.2.2.1.	Eye and face protection:	Safety glasses that stick to face (preventing splashing) (EN 166) or visor.
8.2.2.2.	Skin protection	
	Hand protection:	Protective gloves must be according to the EU Directive 2016/425/EEC and standard EN 374. Glove material: nitrile rubber Glove thickness: ≥0.50 mm Break through time: >480 min
	Other skin protection:	Wear antistatic clothing made of natural fibers (such as cotton) with long sleeves (EN 13034), and shoes that cover the entire foot (EN 10335).
8.2.2.3.	Respiratory protection:	Protective full face mask (EN 136) or half mask (EN 140) equipped with a filter for organic vapors, type "A" (boiling point >65°C) according to EN 14387) used when concentration levels exceed GVI.
8.2.2.4.	Thermal hazards:	No information available
8.2.3.	Environmental exposure controls	
	Substance/mixture related measures to prevent exposure:	See Section 6
	Structural measures to prevent exposure:	Use modern equipment.
	Organisational measures to prevent exposure:	Adapt the work process to the required working conditions of the workplace.
	Technical measures to prevent exposure:	See Section 6

**SECTION 9. Physical and chemical properties**

9.1.	Information on basic physical and chemical properties		
		Value	Method

Trading name:	<b>SODIUM THIOSULFATE, 5% SOLUTION</b>		
Product code:	NT5-OT-X**	Date of compilation:	21 Dec 2022
		Version:	4

Physical state:	liquid	No information available
Colour:	colourless	No information available
Odour/odour threshold:	no information available	No information available
Melting point / freezing point:	No information available	No information available
Boiling point or initial boiling point and boiling range:	No information available	No information available
Flammability:	No information available	No information available
Lower and upper explosion limit:	No information available	No information available
Flash point:	No information available	No information available
Auto-ignition temperature:	No information available	No information available
Decomposition temperature:	No information available	No information available
pH:	No information available	No information available
Kinematic viscosity:	No information available	No information available
Solubility:	No information available	No information available
Partition coefficient n-octanol/water (log value):	No information available	No information available
Vapour pressure:	No information available	No information available
Density and/or relative density:	No information available	No information available
Relative vapour density:	No information available	No information available
Particle characteristics:	No information available	No information available
<b>9.2.</b>	<b>Other information</b>	
	-	

<b>SECTION 10. Stability and reactivity</b>		
10.1.	Reactivity:	See subsections 10.3 through 10.5.
10.2.	Chemical stability:	The product is chemically stable under standard ambient conditions of storing and using.
10.3.	Possibility of hazardous reactions:	No information available
10.4.	Conditions to avoid:	No information available
10.5.	Incompatible materials:	No information available
10.6.	Hazardous decomposition products:	No information available

<b>SECTION 11. Toxicological information</b>	
11.1.	Information on hazard classes as defined in Regulation (EC) No 1272/2008
	Acute toxicity:

Trading name:	<b>SODIUM THIOSULFATE, 5% SOLUTION</b>			
Product code:	NT5-OT-X**	Date of compilation:	21 Dec 2022	Version: 4

Route of exposure:	Method	Species	Effective dose LD <sub>50</sub> /LC <sub>50</sub> or ATE <sub>mixture</sub>	Exposure time	Results
Oral exposure:	No information available	-	LD <sub>50</sub>	-	-
Dermal exposure:	No information available	-	LD <sub>50</sub>	-	-
Inhalation exposure:	No information available	-	LC <sub>50</sub>	-	-

**Specific target organ toxicity – single exposure (STOT SE):**

	Specific effects	Target organ	Note
Oral exposure:	No information available	No information available	-
Dermal exposure:	No information available	No information available	-
Inhalation exposure:	No information available	No information available	-

**Respiratory irritation:** No information available

**Irritation and corrosion**

	Exposure time	Species	Evaluation	Method	Note
Skin irritation:	-	-	-	-	-
Eye irritation:	-	-	-	-	-

**Sensitization**

Dermal exposure:	No information available
Inhalation exposure:	No information available

**Symptoms related to the physical, chemical and toxicological characteristics**

Oral exposure:	No information available
Dermal exposure:	No information available
Inhalation exposure:	No information available
Eye exposure:	No information available

**Repeated dose toxicity (subacute, subchronic, chronic)**

Trading name:	<b>SODIUM THIOSULFATE, 5% SOLUTION</b>		
Product code:	NT5-OT-X**	Date of compilation:	21 Dec 2022
		Version:	4

	Dose	Exposure time	Species	Method	Evaluation	Note
Subacute oral	No information available	No information available	No information available	No information available	No information available	-
Subacute dermal	No information available	No information available	No information available	No information available	No information available	-
Subacute inhalation	No information available	No information available	No information available	No information available	No information available	-
Subchronic oral	No information available	No information available	No information available	No information available	No information available	-
Subchronic dermal	No information available	No information available	No information available	No information available	No information available	-
Subchronic inhalation	No information available	No information available	No information available	No information available	No information available	-
Chronic oral	No information available	No information available	No information available	No information available	No information available	-
Chronic dermal	No information available	No information available	No information available	No information available	No information available	-
Chronic inhalation	No information available	No information available	No information available	No information available	No information available	-

Specific target organ toxicity – repeated exposure (STOT RE):

	Specific effects	Target organ	Note
Subacute oral	No information available	No information available	-
Subacute dermal	No information available	No information available	-
Subacute inhalation	No information available	No information available	-
Subchronic oral	No information available	No information available	-
Subchronic dermal	No information available	No information available	-
Subchronic inhalation	No information available	No information available	-
Chronic oral	No information available	No information available	-
Chronic dermal	No information available	No information available	-

Trading name:	<b>SODIUM THIOSULFATE, 5% SOLUTION</b>				
Product code:	NT5-OT-X**	Date of compilation:	21 Dec 2022	Version:	4

Chronic inhalation	No information available	No information available	-
CMR effects (carcinogenicity, mutagenicity, reproductive toxicity)			
Carcinogenicity:	Based on available data, the classification criteria are not met.		
Mutagenicity <i>in-vitro</i> :	Based on available data, the classification criteria are not met.		
Genotoxicity:	Based on available data, the classification criteria are not met.		
Mutagenicity <i>in-vivo</i> :	Based on available data, the classification criteria are not met.		
Germ cell mutagenicity:	Based on available data, the classification criteria are not met.		
Reproductive toxicity:	Based on available data, the classification criteria are not met.		
Summary of evaluation of the CMR properties: -			
<b>11.2</b>	<b>Information on other hazards:</b>		
<b>11.2.1.</b>	<b>Endocrine disrupting properties:</b>		
	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.		
<b>11.2.2.</b>	<b>Other information:</b>		
	-		

<b>SECTION 12. Ecological information</b>						
12.1. Toxicity						
Acute toxicity	Dose	Exposure time	Species	Method	Evaluation	Note
Fish	LC <sub>50</sub>	96 hours	No information available	No information available	-	-
Crustacea:	EC <sub>50</sub>	48 hours	No information available	No information available	-	-
Algae/aquatic plants	IC <sub>50</sub>	8 days	No information available	No information available	-	-
Microorganisms	LC <sub>50</sub>	72 hours	-	-	-	-

Trading name:	<b>SODIUM THIOSULFATE, 5% SOLUTION</b>			
Product code:	NT5-OT-X**	Date of compilation:	21 Dec 2022	Version: 4

Chronic toxicity	Dose	Exposure time	Species	Method	Evaluation	Note
Fish	LC <sub>50</sub>	96 hours	No information available	No information available	No information available	-
Crustacea:	EC <sub>50</sub>	48 hours	No information available	No information available	No information available	-
Algae/aquatic plants	IC <sub>50</sub>	72 hours	No information available	No information available	No information available	-
Other organisms	-	-	-	-	-	-

**12.2. Persistence and degradability**

Abiotic degradation

	Degradation half-lives	Method	Evaluation	Note
Marine water	No information available	No information available	No information available	-
Fresh water	No information available	No information available	No information available	-
Air	No information available	No information available	No information available	-
Soil	No information available	No information available	No information available	-

Biodegradation

% Degradation	Time (days)	Method	Evaluation	Note
No information available	No information available	No information available	No information available	No information available

**12.3. Bioaccumulative potential**

Partition coefficient: n-octanol/water (log K<sub>ow</sub>):

Value	Concentration	pH	°C	Method	Evaluation	Note
-	No information available	-	-	No information available	No information available	-

Bioconcentration factor (BCF)

Trading name:	<b>SODIUM THIOSULFATE, 5% SOLUTION</b>			
Product code:	NT5-OT-X**	Date of compilation:	21 Dec 2022	Version: 4

Value	Species	Method	Evaluation	Note
No information available	No information available	No information available	No information available	No information available

Chronic ecotoxicity

Value	Dose	Exposure time	Species	Method	Evaluation	Note
Chronic toxicity on fish	LC <sub>50</sub>	No information available	No information available	No information available	No information available	-
Chronic toxicity on crustacea ( <i>Daphnia</i> )	EC <sub>50</sub>	No information available	No information available	No information available	No information available	-

**12.4. Mobility in soil**

Known or predicted distribution in environmental compartments:

No information available

Surface tension:

Value	°C	Concentration	Method	Note
No information available	No information available	No information available	No information available	-

Adsorption / desorption

Transport	A/D coefficient Henry's constant	log Kow	Evaporation rate	Method	Note
Soil-water	No information available	No information available	No information available	No information available	-
Water-air	No information available	No information available	No information available	No information available	-
Soil-air	No information available	No information available	No information available	No information available	-

Trading name:	<b>SODIUM THIOSULFATE, 5% SOLUTION</b>		
Product code:	NT5-OT-X**	Date of compilation:	21 Dec 2022
		Version:	4

12.5.	Results of PBT and vPvB assessment
	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
12.6.	Endocrine disrupting properties
	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
12.7.	Other adverse effects
	No information available
<b>SECTION 13. Disposal considerations</b>	
13.1.	Waste treatment methods
13.1.1.	Product/Packaging disposal:
	Submit for disposal to the legal person authorized by the Ministry of Environmental and Nature Protection.
13.1.2.	Waste codes/waste designations according to Law:
	No information available
13.1.3.	Waste treatment – relevant information:
	No information available
13.1.4.	Sewage disposal – relevant information:
	Waste must not be disposed of into the sewage system.
13.1.5.	Other disposal recommendations:
	Do not dispose of the product's remains into the sewage system. Submit the remains to the collectors authorized by the ministry in charge. Do not dispose of the packaging into the sewage system. Submit the packaging to the collectors authorized by the ministry in charge. Do not dispose of in places where ignition may occur.
13.1.6.	Relevant Community provisions:
	-



Trading name:	<b>SODIUM THIOSULFATE, 5% SOLUTION</b>		
Product code:	NT5-OT-X**	Date of compilation:	21 Dec 2022
		Version:	4

**SECTION 14. Transport information**

Transporting/shipment by road (ADR)

UN number:	Not subject to transport regulations.
UN proper shipping name:	-
Transport hazard class(es):	-
Packing group:	-
Environmentally hazardous:	-
Special precautions for user:	-

Transporting/shipment by rail (RID)

UN number:	Not subject to transport regulations.
UN proper shipping name:	-
Transport hazard class(es):	-
Packing group:	-
Environmentally hazardous:	-
Special precautions for user:	-

Inland waterway transport (ADN)

UN number:	Not subject to transport regulations.
UN proper shipping name:	-
Transport hazard class(es):	-
Packing group:	-
Environmentally hazardous:	-
Special precautions for user:	-

Transporting/shipment by sea (IMDG)

UN number:	Not subject to transport regulations.
UN proper shipping name:	-
Transport hazard class(es):	-
Packing group:	-
Environmentally hazardous:	-
Special precautions for user:	-

Transporting/shipment by air (ICAO-TI/IATA-DGR)

UN number:	Not subject to transport regulations.
UN proper shipping name:	-
Transport hazard class(es):	-
Packing group:	-
Environmentally hazardous:	-

Trading name:	<b>SODIUM THIOSULFATE, 5% SOLUTION</b>		
Product code:	NT5-OT-X**	Date of compilation:	21 Dec 2022
		Version:	4

Special precautions for user:	-
Further information:	-

**SECTION 15. Regulatory information**

15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture	
	EU regulations	
	Authorization and/or restrictions of use	
	Authorizations:	-
	Restrictions:	-
	Other EU regulations:	<p>Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC;</p> <p>Directive 2004/42/CE of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC;</p> <p>Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work;</p> <p>Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006;</p> <p>REACH Restrictions on the manufacturing, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII);</p>
	Information according 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline)	
	National legislation:	<p>Chemicals Act, Regulation on classification, packaging and labeling of dangerous substances, Ordinance on occupational exposure limit values and on biological limit values, Regulation on categories, types and classification of waste with a waste catalog and list of hazardous waste, Ordinance on writing Material safety data sheet, Transport of Hazardous Substances Act</p>
15.2.	Chemical safety assessment	
	None	

**SECTION 16. Other information**

16.1.	Indication of changes:	-
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Trading name:	<b>SODIUM THIOSULFATE, 5% SOLUTION</b>		
Product code:	NT5-OT-X**	Date of compilation:	21 Dec 2022
		Version:	4

16.2.	Abbreviations and acronyms:	<p>ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)</p> <p>IMDG: International Maritime Code for Dangerous Goods</p> <p>IATA: International Air Transport Association</p> <p>GHS: Globally Harmonised System of Classification and Labelling of Chemicals</p> <p>EINECS: European Inventory of Existing Commercial Chemical Substances</p> <p>CAS: Chemical Abstracts Service (division of the American Chemical Society)</p> <p>DNEL: Derived No-Effect Level (UK REACH)</p> <p>LC50: Lethal concentration, 50 percent</p> <p>LD50: Lethal dose, 50 percent</p> <p>PBT: Persistent, Bioaccumulative and Toxic</p> <p>vPvB: very Persistent and very Bioaccumulative</p>
16.3.	Key literature references and source of data:	-
16.4.	Classification and procedure used to derive the classification for mixture according to Regulation (EC) 1272/2008 (CLP)	
	Classification	Classification procedure
	-	-
16.5.	Relevant H statements (number and full text)	
	H:	-
16.6.	Training advice:	
		-
16.7.	Further information:	<p>** "X" in the product code marks different volumes (different packagings of the product)</p> <p>We are not responsible for consequences in case of failure to comply with instructions for use or improper use of the product described in this material safety data sheet.</p>

<b>ANNEX:</b>
<b>Exposure scenario resulting to Chemical safety assessment</b>
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