

## RHODANINE KIT

The kit contains:

Formaldehyde NB 4%

Hematoxylin M

Rhodanine reagent

Sodium acetate, solution

Trading name:	<b>4% NB FORMALDEHYDE</b>				
Product code:	FNB4-X**	Revision date:	21 Dec 2022	Version:	6

**SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**


1.1	Product identifier	
	Trading name:	4% NB FORMALDEHYDE
	Chemical name:	-
	Catalogue number:	FNB4-X**
1.2	Relevant identified uses of the substance or mixture and uses advised against	
	Uses:	Fixative for use in histology.
	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 INFORMATION**

2.1	Classification of the substance or mixture	
2.1.1	Classification according to (EC) Regulation No. elements	
	Hazard class and category code:	Hazard statements*:
	Acute Tox. 4	H302
	Acute Tox. 4	H312
	Acute Tox. 4	H332
	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

Trading name:	<b>4% NB FORMALDEHYDE</b>				
Product code:	FNB4-X**	Revision date:	21 Dec 2022	Version:	6

<b>2.2 Label elements</b>	
Product identification:	4% NB FORMALDEHYDE (10% neutral buffered and stabilized formalin solution, pH 7.0)
Identification number:	-
Authorization no.:	-
Hazard pictograms:	
Signal word:	Danger
Hazard statements:	H302 Harmful if swallowed. H312 Harmful in contact with skin. H317 May cause an allergic skin reaction. H332 Harmful if inhaled. H341 Suspected of causing genetic defects. H350 May cause cancer.
Precautionary statements:	P280 Wear protective gloves/protective clothing/eye/protection/face protection. P301+P312 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. P302 + P352 IF ON SKIN: Wash with plenty of water. P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P308 + P313 IF exposed or concerned: Get medical advice/ attention.
Further information:	-

<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 no.	REACH Registration No	Weight % content (or range)	Identification name	Classification according to Regulation (EC) No 1272/2008 (CLP)

Trading name:	<b>4% NB FORMALDEHYDE</b>				
Product code:	FNB4-X**	Revision date:	21 Dec 2022	Version:	6

50-00-0/ 200-001-8/ 605-001-00-5	01-2119488953-20-XXXX	3 – 5 %	formaldehyde, 37 %	Acute Tox. 3; H301 Acute Tox. 3; H311 Acute Tox. 3; H331 Skin Corr. 1B; H314 Skin. Sens. 1; H317 Muta. 2; H341 Carc. 1B; H350
67-56-1/ 200-659-6/ 603-001-00-X	01-2119433307-44-XXXX	1 – 3 %	methanol	Flam. Liq. 2; H225 Acute Tox. 3; H301 Acute Tox. 3; H311 Acute Tox. 3; H331 STOT SE 1; H370

<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.
	Self-protection of the first aider:	-
<b>4.2</b>	<b>Most important symptoms and effects, both acute and delayed</b>	
	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:	Depending on concentration and exposure time, it may lead to stinging and digestive mucus damage, abdominal pain, nausea, vomiting.
<b>4.3</b>	<b>Indication of any immediate medical attention and special treatment needed</b>	
	-	

Trading name:	<b>4% NB FORMALDEHYDE</b>				
Product code:	FNB4-X**	Revision date:	21 Dec 2022	Version:	6

<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: No information available
5.2	Special hazards arising from the substance or mixture
	Hazardous combustion products: Not flammable. Surrounding fire may cause hazardous fumes to be released.
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:
	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.
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).

Trading name:	<b>4% NB FORMALDEHYDE</b>				
Product code:	FNB4-X**	Revision date:	21 Dec 2022	Version:	6

6.4	Reference to other sections
	-

**SECTION 7 HANDLING AN STORAGE**

**7.1 Precautions for safe handling**

**7.1.1. Protection measures**

Measures to prevent fire:	Use in well ventilated storage rooms.
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 at temperatures ranging from 15 to 25 °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.
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>	

Trading name:	<b>4% NB FORMALDEHYDE</b>				
Product code:	FNB4-X**	Revision date:	21 Dec 2022	Version:	6

Formaldehyde	50-00-0	0.3/0.6	0.37/0.74	-
Methanol	67-56-1	200/-	260/-	-

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	0.75 mg/m <sup>3</sup> (formaldehyde) 130 mg/m <sup>3</sup> (methanol)	130 mg/m <sup>3</sup> (methanol)	0.375 mg/m <sup>3</sup> (formaldehyde) 130 mg/m <sup>3</sup> (methanol)	9 mg/m <sup>3</sup> (formaldehyde) 130 mg/m <sup>3</sup> (methanol)
Dermal	-	20 mg/kg (methanol)	0.037 mg/cm <sup>2</sup> (formaldehyde)	240 mg/kg (formaldehyde) 20 mg/kg (methanol)

Critical physical parameters: solubility, flammability, corrosivity: -

**Consumer**

Route of exposure:	Acute effect local	Acute effect systemic	Chronic effect local	Chronic effect systemic
Oral	-	4 mg/kg (methanol)	-	4.1 mg/kg (formaldehyde) 4 mg/kg (methanol)
Inhalation	26 mg/m <sup>3</sup> (methanol)	26 mg/m <sup>3</sup> (methanol)	0.1 mg/m <sup>3</sup> (formaldehyde) 50 mg/m <sup>3</sup> (methanol)	3.2 mg/m <sup>3</sup> (formaldehyde) 26 mg/m <sup>3</sup> (methanol)
Dermal	-	4 mg/kg (methanol)	0.012 mg/cm <sup>2</sup> (formaldehyde)	102 mg/kg (formaldehyde) 4mg/kg (methanol)

**PNEC**

Environmental protection target	PNEC
Fresh water	0.44 mg/l (formaldehyde) 20.8 mg/l (methanol)
Freshwater sediments	2.3 mg/kg (formaldehyde) 77 mg/kg (methanol)
Marine water	0.44 mg/l (formaldehyde) 2.08 mg/l (methanol)
Marine sediments	2.3 mg/kg (formaldehyde) 7.7 mg/kg (methanol)
Food chain	No information available

Trading name:	<b>4% NB FORMALDEHYDE</b>				
Product code:	FNB4-X**	Revision date:	21 Dec 2022	Version:	6

Microorganisms in sewage treatment	0.19 mg/l (formaldehyde) 100 mg/l (methanol)
Soil (agricultural)	0.2 mg/kg (formaldehyde) 100 mg/kg (methanol)
Air	No information available

**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:	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**

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:	Suitable mask (EN 136) or half mask (EN 140) equipped with a combined "A1 + Form" filter (EN 143) 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



Trading name:	<b>4% NB FORMALDEHYDE</b>		
Product code:	FNB4-X**	Revision date:	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:	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:	cca 100 °C at 1,013 hPa	No information available
Flammability:	No information available	No information available
Lover and upper explosion limit:	No information available	No information available
Flash point:	Not applicable	No information available
Auto-ignition temperature:	No information available	No information available
Decomposition temperature:	No information available	No information available
pH:	6.8-7.2 (neutral buffered)	No information available
Kinematic viscosity:	No information available	No information available
Solubility:	completely soluble in water	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

4% NB Formaldehyde (10% neutral buffered and stabilized formalin solution) is non-flammable aqueous solution because it is stabilized using methanol in concentration <1%.

**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 (room temperature).
10.3	Possibility of hazardous reactions:	Acids, nitrogen oxides, hydrogen peroxide, oxidizing agents, polymerization initiators, alkaline metals.
10.4	Conditions to avoid:	Heat sources, low temperatures.
10.5	Incompatible materials:	Various metals, alloys, plastic, magnesium, zinc alloys.

Trading name:	<b>4% NB FORMALDEHYDE</b>				
Product code:	FNB4-X**	Revision date:	21 Dec 2022	Version:	6

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	Dose LD <sub>50</sub> /LC <sub>50</sub> or ATE <sub>mix</sub>	Exposure time	Results
Oral:	-	rat	LD <sub>50</sub>	No information available	100 mg/kg (formaldehyde) 100.1 mg/kg (methanol)
Dermal:	-	rabbit	LD <sub>50</sub>	No information available	270 mg/kg (formaldehyde) 300.1 mg/kg (methanol)
Inhalation:	-	rat	LC <sub>50</sub>	4 h	0.57 mg/l (formaldehyde) 3.1 mg/l (methanol)

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:	-	rabbit	-	-	No skin irritation.
Serious eye damage/irritation	-	rabbit	-	-	No eye irritation.

Sensitization

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

Trading name:	<b>4% NB FORMALDEHYDE</b>				
Product code:	FNB4-X**	Revision date:	21 Dec 2022	Version:	6

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

Oral exposure:	If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.
Dermal exposure:	Depending on concentration and exposure time, redness accompanied by sensation of stinging and pain may occur, as well as skin cracking and rash.
Inhalation exposure:	Depending on concentration and exposure time, it may lead to mucosal irritations, cough, shortness of breath, possible damages: damage of respiratory tract
Eye exposure:	Depending on concentration and exposure time, it may lead to stinging, tearing, and pain. Risk of blindness.

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	-

Trading name:	<b>4% NB FORMALDEHYDE</b>				
Product code:	FNB4-X**	Revision date:	21 Dec 2022	Version:	6

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	-
Chronic inhalation	No information available	No information available	-
CMR effects (carcinogenicity; mutagenicity; reproductive toxicity)			
	Carcinogenicity:	Did not show carcinogenic effects in animal experiments.	
	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:		
	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 informations:		
	-		

<b>SECTION 12 ECOLOGICAL INFORMATION:</b>	
12.1	Toxicity

Trading name:	<b>4% NB FORMALDEHYDE</b>				
Product code:	FNB4-X**	Revision date:	21 Dec 2022	Version:	6

Acute (short-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note
Fish	LC <sub>50</sub>	96 hours	fish ( <i>Morone saxatilis</i> )	-	6.7 mg/l (formaldehyde) 15.400 mg/l (methanol)	-
Crustacea:	EC <sub>50</sub>	48 hours	water flea ( <i>Daphnia magna</i> )	-	5.8 mg/l (formaldehyde) 18.260 mg/l (methanol)	-
Algae/aquatic plants	IC <sub>50</sub>	4 days	green algae	-	4.89 mg/l (formaldehyde) 22.000 mg/l (methanol)	-
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	-	-	-	-	-	-

<b>12.2</b>	<b>Persistence and degradability</b>				
	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	-	

Trading name:	<b>4% NB FORMALDEHYDE</b>				
Product code:	FNB4-X**	Revision date:	21 Dec 2022	Version:	6

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 Kow):						
Value	Concentration	pH	°C	Method	Evaluation	Note
0,021	-	-	-	formaldehyde	-	-
-0.77	-	-	-	methanol	-	-

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

Trading name:	<b>4% NB FORMALDEHYDE</b>				
Product code:	FNB4-X**	Revision date:	21 Dec 2022	Version:	6

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

**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.

**12.6. 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

Trading name:	<b>4% NB FORMALDEHYDE</b>		
Product code:	FNB4-X**	Revision date:	21 Dec 2022
		Version:	6

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



Trading name:	<b>4% NB FORMALDEHYDE</b>				
Product code:	FNB4-X**	Revision date:	21 Dec 2022	Version:	6

UN number:	Not applicable
UN proper shipping name:	-
Transport hazard class(es):	-
Packing group:	-
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:	3334
UN proper shipping name:	Aviation regulated liquid, n.o.s. (formaldehyde)
Transport hazard class(es):	9
Packing group:	III
Environmentally hazardous:	None
Special precautions for user:	no information
Further information:	Formaldehyde solutions, nonflammable, containing less than 25% of formaldehyde do not adhere to the ADR regulations.

<b>SECTION 15 REGULATORY INFORMATION</b>	
15.1	Safety, health and environmental regulations/legislation specific for the substance or mixture
	EU regulations
	Authorization and/or restrictions of use
	Authorizations: -
	Restrictions: -

Trading name:	<b>4% NB FORMALDEHYDE</b>				
Product code:	FNB4-X**	Revision date:	21 Dec 2022	Version:	6

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; 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

<b>SECTION 16 Other information</b>	
16.1	Indication of changes: -
16.2	<p>Abbreviations and acronyms:</p> <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: -

Trading name:	<b>4% NB FORMALDEHYDE</b>				
Product code:	FNB4-X**	Revision date:	21 Dec 2022	Version:	6

16.4.	Classification and procedure used to derive the classification for mixture according to Regulation (EC) 1272/2008 (CLP)	
	Classification according to CLP	Classification procedure
	-	-
16.5.	Relevant H statements (number and full text)	
	H:	
	225	Highly flammable liquid and vapor.
	301	Toxic if swallowed.
	302	Harmful if swallowed.
	311	Toxic in contact with skin.
	312	Harmful in contact with skin.
	314	Causes severe skin burns and eye damage
	317	May cause allergic skin reaction.
	331	Toxic if inhaled.
	332	Harmful if inhaled.
	341	Suspected of causing genetic defects.
	350	May cause cancer.
	370	Causes damage to organs.
16.6.	Training advice:	-
16.7.	Further information:	** "X" in the product code marks different volumes (different packagings of the product) 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.


<b>ANNEX:</b>
<b>EXPOSURE SCENARIO RESULTING TO CHEMICAL SAFETY ASSESSMENT</b>
-

Trading name:	<b>HEMATOXYLIN M</b>				
Product code:	HEMM-OT-X**	Revision date:	29.03.2023.	Version:	9

<b>SECTION 1: Identification of the substance/mixture and of the company/undertaking</b>	
1.1.	Product identifier
	Trading name: HEMATOXYLIN M
	Chemical name: -
	Catalogue number: HEMM-OT-X**
1.2.	Relevant identified uses of the substance or mixture and uses advised against
	Uses: Modified hematoxylin acc. to Mayer for nuclear staining.
	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: -

<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;">Acute Tox. 4</td> <td style="padding: 5px;">H302</td> </tr> </table>	Hazard class and category code:	Hazard statements*:	Acute Tox. 4	H302
Hazard class and category code:	Hazard statements*:				
Acute Tox. 4	H302				
2.1.2.	Additional information				
	-				
*For full text of Hazard- and EU Hazard-statements: see Section 16					
2.2.	Label elements				
	Product identification: HEMATOXYLIN M				
	Identification number: -				
	Authorization number: -				

Trading name:	<b>HEMATOXYLIN M</b>				
Product code:	HEMM-OT-X**	Revision date:	29.03.2023.	Version:	9

Hazard pictograms:	
	GHS07
Signal word:	Warning
Hazard statements:	H302 Harmful if swallowed.
Precautionary statements:	P280 Wear protective gloves/protective clothing/eye/protection/face protection. P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
Further information:	-
2.3.	Other hazards
<b>Endocrine Disrupting Properties:</b> No known endocrine disrupting properties	
<b>Results of PBT and vPvB assessment:</b> According to the results of its assessment, this substance is not a PBT or a vPvB.	

**SECTION 3. Composition/information on ingredients**

CAS/ EC/ Index no.	REACH Registration No	Weight % content (or range)	Identification name	Classification according to Regulation (EC) No 1272/2008 (CLP)
302-17-0/ 206-117-5/ 605-014-00-6	-	5 – 6%	chloral hydrate	Acute Tox. 3; H301 Skin Irrit. 2; H315 Eye Irrit. 2; H319

**SECTION 4. First aid measures**

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.

Trading name:	<b>HEMATOXYLIN M</b>				
Product code:	HEMM-OT-X**	Revision date:	29.03.2023.	Version:	9

	Following ingestion:	Provide the person with water (2 glasses at most). Immediately consult a physician. In extreme case, if medical assistance is not available within 1 hour, induce vomiting (only if the person is fully awake and conscious), apply activated charcoal (20-40 g in a 10% solution) and consult a physician as soon as possible.
	Self-protection of the first aider:	Treat symptomatically.
<b>4.2.</b>	<b>Most important symptoms and effects, both acute and delayed</b>	
	Following inhalation:	Inhalation of large amounts of vapors in inadequately ventilated perimeter may cause coughing, sneezing, headache and nausea.
	Following skin contact:	Slight irritation. After short exposure, resorption effects are not likely. Long-term exposure may cause drying, cracking and tingling sensation of skin.
	Following eye contact:	Direct eye contact may cause slight to moderate irritation, lacrimation and burning sensation.
	Following ingestion:	Swallowing may cause irritation of mucosa, tingling sensation in the mouth, burning sensation; higher levels of concentration may cause nausea, abdominal pain and vomiting. In case of vomiting, aspiration causes coughing, difficult breathing. Higher levels of concentration may cause suffocation.
<b>4.3.</b>	<b>Indication of any immediate medical attention and special treatment needed</b>	
	-	

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

<b>SECTION 6. Accidental release measures</b>	
<b>6.1.</b>	<b>Personal precautions, protective equipment and emergency procedures</b>
<b>6.1.1.</b>	For non-emergency personnel

Trading name:	<b>HEMATOXYLIN M</b>				
Product code:	HEMM-OT-X**	Revision date:	29.03.2023.	Version:	9

	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.	Bunding, covering of drains; capping procedures:	Cap the drains. Collect, nuddle and pump out everything that got spilled.
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	
	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.	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	

Trading name:	<b>HEMATOXYLIN M</b>				
Product code:	HEMM-OT-X**	Revision date:	29.03.2023.	Version:	9

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).
<b>7.3. Specific end use(s)</b>	
Recommendations:	-
Industrial sector specific solutions:	-

<b>SECTION 8. Exposure controls/personal protection</b>				
<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:	-	
<b>DNEL</b>				
<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: -				
<b>Consumer</b>				



Trading name:	<b>HEMATOXYLIN M</b>				
Product code:	HEMM-OT-X**	Revision date:	29.03.2023.	Version:	9

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

<b>PNEC</b>	
Environmental protection target	<b>PNEC</b>
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

8.2.	<b>Exposure controls</b>	
8.2.1.	<b>Appropriate engineering controls</b>	
	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.	<b>Personal protection equipment</b>	
8.2.2.1.	Eye and face protection:	Safety glasses that stick to face (preventing splashing) or visor.
8.2.2.2.	<b>Skin protection</b>	
	Hand protection:	Protective gloves must be according to the EU Directive EU 2016/425/EEC and standard EN 374. Glove material: nitrile rubber Glove thickness: ≥0.40 mm Permeation period: > 480 min
	Other skin protection:	Wear antistatic clothing made of natural fibers (such as cotton) with long sleeves, and shoes that cover the entire foot.

Trading name:	<b>HEMATOXYLIN M</b>				
Product code:	HEMM-OT-X**	Revision date:	29.03.2023.	Version:	9

8.2.2.3.	Respiratory protection:	During long-term exposure wear a protective mask or a half mask equipped with filter A.
8.2.2.4.	Thermal hazards:	No information available
8.2.3.	<b>Environmental exposure controls</b>	
	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

<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
	Color:	red	No information available
	Odour/odour threshold:	No odor/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.	<b>Other information</b>		
	-		

Trading name:	<b>HEMATOXYLIN M</b>				
Product code:	HEMM-OT-X**	Revision date:	29.03.2023.	Version:	9

<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:	With strong oxidants, sodium-hydroxide, sulfuric acid, aluminum.
10.4.	Conditions to avoid:	Sources of heat, sparks, and ignition.
10.5.	Incompatible materials:	Aluminum.
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:					
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	LD <sub>50</sub>	-	479 mg/kg (chloral hydrate)
Dermal:	No information available	rat	LD <sub>50</sub>	-	3.030 mg/kg (chloral hydrate)
Inhalation:	No information available	-	LC <sub>50</sub>	-	-
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	-	-	-	-	-

Trading name:	<b>HEMATOXYLIN M</b>				
Product code:	HEMM-OT-X**	Revision date:	29.03.2023.	Version:	9

Sensitization						
Skin sensitization:	No information available					
Respiratory sensitization:	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)						
	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	-

Trading name:	<b>HEMATOXYLIN M</b>				
Product code:	HEMM-OT-X**	Revision date:	29.03.2023.	Version:	9

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	-
Chronic inhalation	No information available	No information available	-

--	--	--	--	--	--	--

CMR effects (carcinogenicity, mutagenicity, reproductive toxicity)						
--	--	--	--	--	--	--

Carcinogenicity:	Current studies on test animals did not indicate carcinogenic effects.					
Mutagenicity <i>in vitro</i> :	Current <i>in vitro</i> tests did not indicate mutagenic effects.					
Genotoxicity:	No information available					
Mutagenicity <i>in vivo</i> :	Current <i>in vivo</i> tests did not indicate mutagenic effects.					
Germ cell mutagenicity:	No information available					
Reproductive toxicity:	No toxicity on reproductive organs was determined in reproductive organs.					

--	--	--	--	--	--	--

Summary of evaluation of the CMR properties:	-					
--	---	--	--	--	--	--

--	--	--	--	--	--	--

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 informations:					
--------	---------------------	--	--	--	--	--

	-					
--	---	--	--	--	--	--

<b>SECTION 12. Ecological information</b>						
---	--	--	--	--	--	--

12.1.	Toxicity					
-------	----------	--	--	--	--	--

Trading name:	<b>HEMATOXYLIN M</b>				
Product code:	HEMM-OT-X**	Revision date:	29.03.2023.	Version:	9

Acute (short-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note
Fish	LC <sub>50</sub>	96 hours	<i>Leuciscus idus</i>	No information available	1,720 mg/l (chloral hydrate)	-
Crustacea:	EC <sub>50</sub>	48 hours	water flea	No information available	510 mg/l (chloral hydrate)	-
Algae/aquatic plants	IC <sub>50</sub>	8 days	green algae	No information available	2.8 mg/l (chloral hydrate)	-
Other organisms	LC <sub>50</sub>	72 hours	-	-	-	-

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

Trading name:	<b>HEMATOXYLIN M</b>				
Product code:	HEMM-OT-X**	Revision date:	29.03.2023.	Version:	9

<b>12.3. Bioaccumulative potential</b>						
Partition coefficient: n-octanol/water (log Kow):						
Value	Concentration	pH	°C	Method	Evaluation	Note
-	No information available	-	-	No information available	No information available	-
Bioconcentration factor (BCF)						
Value	Species	Method	Evaluation	Note		
No information available	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	-
<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	-		

Trading name:	<b>HEMATOXYLIN M</b>				
Product code:	HEMM-OT-X**	Revision date:	29.03.2023.	Version:	9

Adsorption / desorption						
Transport	A/D coefficient Henry's constant		log Kow	Evaporation rate	Method	Note
Soil-water	No information available	information available	No information available	No information available	No information available	-
Water-air	No information available	information available	No information available	No information available	No information available	-
Soil-air	No information available	information available	No information available	No information available	No information available	-
<b>12.5. Results of PBT and vPvB assessment</b>						
No information available						
<b>12.6. Endocrine disrupting properties</b>						
No known endocrine disrupting properties that affect the environment.						
<b>12.7. Other adverse effects</b>						
No adverse effects are expected.						
<b>SECTION 13. Disposal considerations</b>						
<b>13.1. Waste treatment methods</b>						
<b>13.1.1. Product/Packaging disposal:</b>						
Submit for disposal to the legal person authorized by the Ministry of Environmental and Nature Protection.						
<b>13.1.2. Waste codes/waste designations according to Law:</b>						
No information available						
<b>13.1.3. Waste treatment – relevant information:</b>						
No information available						
<b>13.1.4. Sewage disposal – relevant information:</b>						
Waste must not be disposed of into the sewage system.						



Trading name:	<b>HEMATOXYLIN M</b>				
Product code:	HEMM-OT-X**	Revision date:	29.03.2023.	Version:	9

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:
	-

**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:	-

Trading name:	<b>HEMATOXYLIN M</b>				
Product code:	HEMM-OT-X**	Revision date:	29.03.2023.	Version:	9

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:	-
Special precautions for user:	-
Further information: The product is not subject to classification.	

<b>SECTION 15. Regulatory information</b>	
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>HEMATOXYLIN M</b>				
Product code:	HEMM-OT-X**	Revision date:	29.03.2023.	Version:	9

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: H301	Toxic if swallowed.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	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>

Trading name:	<b>HEMATOXYLIN M</b>				
Product code:	HEMM-OT-X**	Revision date:	29.03.2023.	Version:	9


<b>ANNEX:</b> <b>EXPOSURE SCENARIO RESULTING TO CHEMICAL SAFETY ASSESSMENT</b>
-

Trade name:	<b>RHODANINE REAGENT</b>			
Product code:	RR-OT-X**	Date of compilation:	14 Nov 2022	Version: 6

<b>SECTION 1: Identification of the substance/mixture and of the company/undertaking</b>		
1.1.	Product identifier	
	Trade name:	RHODANINE REAGENT
	Chemical name:	-
	Catalogue number:	RR-OT-X**
1.2.	Relevant identified uses of the substance or mixture and uses advised against	
	Uses:	For use with Rhodanine 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.
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*:
	Flam. Liq. 2	H225
2.1.2.	Additional information	
	-	
*For full text of Hazard- and EU Hazard-statements: see Section 16.		
2.2.	Label elements	
	Product identification:	RHODANINE REAGENT
	Identification number:	-

Trade name:	<b>RHODANINE REAGENT</b>			
Product code:	RR-OT-X**	Date of compilation:	14 Nov 2022	Version: 6

Authorisation number:	-
Hazard pictograms:	 GHS02
Signal word:	Danger
Warning statement:	H225 Highly flammable liquid and vapor.
Precautionary statement:	P210 Keep away from heat/sparks/open flames/hot surfaces. - Do not smoke. P233 Keep container tightly closed. P280 Wear protective gloves/protective clothing/eye/protection/face protection.
Supplemental hazard information (EU):	-

2.3.	<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)
64-17-5/ 200-578-6/ 603-002-00-5	01-2119457610-43-0147	80 - 100 %	ethanol	Flam. Liq. 2; H225

<b>SECTION 4. First aid measures</b>	
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 all contaminated clothes/footwear. Thoroughly wash with water for at least 15 minutes.

Trade name:	<b>RHODANINE REAGENT</b>			
Product code:	RR-OT-X**	Date of compilation:	14 Nov 2022	Version: 6

	Following eye contact:	Rinse the eyes using mild jet of clean water for at least 20 minutes with the eyelids held wide open.
	Following swallowing:	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	-
<b>4.2.</b>	<b>Most important symptoms and effects, both acute and delayed</b>	
	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 swallowing:	Depending on concentration and exposure time, it may lead to stinging and digestive mucus damage, abdominal pain, nausea, vomiting.
<b>4.3.</b>	<b>Indication of any immediate medical attention and special treatment needed</b>	
	No information available	

<b>SECTION 5. Firefighting measures</b>		
<b>5.1.</b>	<b>Extinguishing media</b>	
	Suitable extinguishing media:	Small fire - water spray, dry powder, alcohol-resistant foam, CO2 Large fire - water spray or alcohol-resistant foam
	Unsuitable extinguishing media:	Water with full jet
<b>5.2.</b>	<b>Special hazards arising from the substance or mixture</b>	
	Hazardous byproducts of fire:	Incomplete combustion of the product.
<b>5.3.</b>	<b>Advice for firefighters</b>	
	Stay in danger area only with self-contained open-circuit compressed air breathing apparatus and a set for protecting the body from heat dissipation (fireproof clothing).	
<b>5.4.</b>	<b>Additional information</b>	
	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>		
<b>6.1.</b>	<b>Personal precautions, protective equipment and emergency procedures</b>	
<b>6.1.1.</b>	<b>For non-emergency personnel</b>	
	Protective equipment:	Use personal protective equipment (see Section 8).

Trade name:	<b>RHODANINE REAGENT</b>			
Product code:	RR-OT-X**	Date of compilation:	14 Nov 2022	Version: 6

	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:	
	Self-contained open-circuit compressed air breathing apparatus, a set for protecting the body from heat dissipation (fireproof clothing).	
6.2.	Environmental precautions:	
	Use sand protective barrier to prevent further spillage of chemicals. Prevent environmental pollution by not allowing the chemicals to enter the sewage system, surface water or groundwater.	
6.3.	Methods and materials for containment and cleaning up	
6.3.1.	Bunding, covering of drains; capping procedures:	Sand protective barrier or barriers made of similar materials
6.3.2.	Cleaning up:	Sawdust, sand, mineral adsorbents
6.3.3.	Other information:	Secure proper ventilation. Contact the responsible person; in case of larger spills and possible environmental pollution contact National Protection and Rescue (112). 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	



Trade name:	<b>RHODANINE REAGENT</b>			
Product code:	RR-OT-X**	Date of compilation:	14 Nov 2022	Version: 6

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.
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>	
Ethanol	64-17-5	1000/-	1900/-	No information available
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	-	-	-	-
Inhalation	1900 mg/m <sup>3</sup> (ethanol)	-	-	380 mg/m <sup>3</sup> (ethanol)
Dermal	-	-	-	343 mg/kg (ethanol)
Critical physical parameters: solubility, flammability, corrosivity:		-		
<b>Consumer</b>				
Route of exposure:	Acute effect local	Acute effect systemic	Chronic effect local	Chronic effect systemic
Oral	-	-	-	87 mg/kg bw/day (ethanol)

Trade name:	<b>RHODANINE REAGENT</b>			
Product code:	RR-OT-X**	Date of compilation:	14 Nov 2022	Version: 6

Inhalation	950 mg/m <sup>3</sup> (ethanol)	-	-	114 mg/m <sup>3</sup> (ethanol)
Dermal	-	-	-	206 mg/kg (ethanol)

PNEC	
Environmental protection target	PNEC
Fresh water	0.96 mg/l (ethanol)
Freshwater sediments	3.6 mg/kg (ethanol)
Marine water	0.79 mg/l (ethanol)
Marine sediments	2.9 mg/kg (ethanol)
Food chain	380-720 mg/kg (ethanol)
Microorganisms in sewage treatment	580 mg/l (ethanol)
Soil (agricultural)	0.63 mg/kg (ethanol)
Air	no information available

8.2.	Exposure controls	
8.2.1.	Appropriate engineering controls	
	Substance/mixture related measures to prevent exposure during identified uses:	Do not eat, drink or smoke in the workspace. Use personal protective equipment.
	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:	See Section 7.2
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	
	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

Trade name:	<b>RHODANINE REAGENT</b>			
Product code:	RR-OT-X**	Date of compilation:	14 Nov 2022	Version: 6

	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.
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
	Physical state:	liquid	no information available
	Colour:	orange	no information available
	Odour/odour threshold:	ethanol 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:	13 °C	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

Trade name:	<b>RHODANINE REAGENT</b>				
Product code:	RR-OT-X**	Date of compilation:	14 Nov 2022	Version:	6

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:	The product is stable under normal working and storage conditions.	
10.2. Chemical stability:	The product is chemically stable under standard ambient conditions of storing and using.	
10.3. Possibility of hazardous reactions:	Risk of explosion after contact with strong acids, alkali metals, alkali metal oxides, nitric acid, oxidizing substances.	
10.4. Conditions to avoid:	Avoid heat, sparks, open flames and other ignition sources.	
10.5. Incompatible materials:	Oxidants, acids, alkali metals.	
10.6. Hazardous decomposition products:	Non-degradable if used in the described manner.	

<b>SECTION 11. Toxicological information</b>					
11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008					
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:	-	rat	LD <sub>50</sub>	-	7.060 mg/kg (ethanol)
Dermal:	-	rabbit	LD <sub>50</sub>	-	>20.000 mg/kg (ethanol)
Inhalation:	-	rat	LC <sub>50</sub>	4 h (ethanol)	>8.000 mg/l (ethanol)
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				

Trade name:	<b>RHODANINE REAGENT</b>				
Product code:	RR-OT-X**	Date of compilation:	14 Nov 2022	Version:	6

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

Sensitization	
Skin sensitization:	No information available
Respiratory sensitization:	No information available

Symptoms related to the physical, chemical and toxicological characteristics	
Oral exposure:	Swallowing may cause irritation of mucosa, tingling sensation in the mouth, burning sensation; higher levels of concentration may cause nausea, abdominal pain and vomiting. In case of vomiting, aspiration causes coughing, difficult breathing. Higher levels of concentration may cause suffocation.
Dermal exposure:	Slight irritation. After short exposure, resorption effects are not likely. Long-term exposure may cause drying, cracking and tingling sensation of skin.
Inhalation exposure:	Inhalation of large amounts of vapors in inadequately ventilated perimeter may cause coughing, sneezing, headache and nausea.
Eye exposure:	Direct eye contact may cause slight to moderate irritation, lacrimation and burning sensation.

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	-

Trade name:	<b>RHODANINE REAGENT</b>				
Product code:	RR-OT-X**	Date of compilation:	14 Nov 2022	Version:	6

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	-
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

Trade name:	<b>RHODANINE REAGENT</b>			
Product code:	RR-OT-X**	Date of compilation:	14 Nov 2022	Version: 6

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
<b>11.2. Information on other hazards:</b>	
<b>11.2.1. Endocrine disrupting properties:</b>	
No known endocrine disrupting properties that affect human health.	
<b>11.2.2. Other informations:</b>	
-	

**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	Fish	No information available	8.140 mg/l (ethanol)	-
Crustacea:	EC <sub>50</sub>	48 hours	Daphnia magna	No information available	7.800 mg/l (ethanol)	-
Algae/aquatic plants:	IC <sub>50</sub>	72 hours	algae	No information available	5.000 mg/l (ethanol)	-
Other organisms	-	-	-	-	-	-
Chronic (long-term) toxicity	Doza	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	-

Trade name:	<b>RHODANINE REAGENT</b>			
Product code:	RR-OT-X**	Date of compilation:	14 Nov 2022	Version: 6

Other organisms	-	-	-	-	-	-
-----------------	---	---	---	---	---	---

<b>12.2.</b>	<b>Persistence and degradability</b>
--------------	--------------------------------------

	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
-	-	-	-	-

<b>12.3.</b>	<b>Bioaccumulative potential</b>
--------------	----------------------------------

	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	LC <sub>50</sub>	No information	No	No	No	-



Trade name:	<b>RHODANINE REAGENT</b>				
Product code:	RR-OT-X**	Date of compilation:	14 Nov 2022	Version:	6

on fish		available	information available	information available	information available	
Chronic toxicity on crustacea (Daphnia)	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**

Based on available data, the product does not contain any PBT or vPvB substances.

**12.6. Endocrine disrupting properties**

Based on available data, does not contain endocrine disruptors.

**12.7. Other adverse effects**

No adverse effects are expected.

**SECTION 13. Disposal considerations**

**13.1. Waste treatment methods**

Trade name:	<b>RHODANINE REAGENT</b>			
Product code:	RR-OT-X**	Date of compilation:	14 Nov 2022	Version: 6

13.1.1.	<b>Product/Packaging disposal:</b>
	Submit for disposal to the legal person authorized by the Ministry of Environmental and Nature Protection.
13.1.2.	<b>Waste codes/waste designations according to Low:</b>
	Packaging that contains residual hazardous substances or is contaminated with hazardous substances
13.1.3.	<b>Waste treatment – relevant information:</b>
	No information available
13.1.4.	<b>Sewage disposal – relevant information:</b>
	Waste must not be disposed of into the sewage system.
13.1.5.	<b>Other disposal recommendations:</b>
	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.	<b>Relevant Community provisions:</b>
	Disposal must be made according to official regulations.
<b>SECTION 14. Transport information</b>	
Transporting/shipment by road (ADR)	
UN number	1170
UN proper shipping name:	Ethanol solution
Transport hazard class(es):	3
Packing group:	II
Environmental hazards:	No information available
Special precautions for user:	-
Transporting/shipment by rail (RID)	
UN number:	1170
UN proper shipping name:	Ethanol solution
Transport hazard class(es):	3
Packing group:	II
Environmental hazards:	No information available
Special precautions for user:	-

Trade name:	<b>RHODANINE REAGENT</b>			
Product code:	RR-OT-X**	Date of compilation:	14 Nov 2022	Version: 6

Transporting/shipment by inland waterways (ADN)	
UN number:	1170
UN proper shipping name:	Ethanol solution
Transport hazard class(es):	3
Packing group:	II
Environmental hazards:	No information available
Special precautions for user:	-
Transporting/shipment by sea (IMDG)	
UN number:	1170
UN proper shipping name:	Ethanol solution
Transport hazard class(es):	3
Packing group:	II
Environmental hazards:	No information available
Special precautions for user:	-
Transport in bulk according to Annex II of MARPOL73/78 and the IBC code:	-
Transporting/shipment by air (ICAO-TI/IATA-DGR)	
UN number:	1170
UN proper shipping name:	Ethanol solution
Transport hazard class(es):	3
Packing group:	II
Environmental hazards:	No information available
Special precautions for user:	-
Further information:	-

<b>SECTION 15. Regulatory information</b>	
15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture
	EU regulations
	Authorisation and/or restrictions on use
Authorisations:	-
Restrictions:	-

Trade name:	<b>RHODANINE REAGENT</b>			
Product code:	RR-OT-X**	Date of compilation:	14 Nov 2022	Version: 6

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

<b>SECTION 16. Other information</b>	
16.1.	Indication of changes: -

Trade name:	<b>RHODANINE REAGENT</b>			
Product code:	RR-OT-X**	Date of compilation:	14 Nov 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)	
	H: 225	Highly flammable liquid and vapor.
16.6.	Training advice:	-
16.7.	Further information:	<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>SODIUM ACETATE, SOLUTION</b>		
Product code:	NA-OT-X**	Date of compilation:	21 Dec 2022
		Version:	5

<b>SECTION 1. Identification of the substance/mixture and of the company/undertaking</b>	
1.1.	Product identifier
	Trading name: SODIUM ACETATE, SOLUTION
	Chemical name: -
	Catalogue number: NA-OT-X**
1.2.	Relevant identified uses of the substance or mixture and uses advised against
	Uses: For use with Rhodanine 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
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: -

<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 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 ACETATE, SOLUTION
	Identification number: -
	Authorization no.: -
	Hazard pictograms: -

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

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

2.3.	<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 no.	REACH Registration No	Weight % content (or range)	Identification name	Classification according to Regulation (EC) No 1272/2008 (CLP)
-	-	-	Contains no hazardous substances	-

<b>SECTION 4. First aid measures</b>	
--------------------------------------	--

4.1.	<b>Description of first aid measures</b>	
	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.	<b>Most important symptoms and effects, both acute and delayed</b>	
	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 ACETATE, SOLUTION</b>		
Product code:	NA-OT-X**	Date of compilation:	21 Dec 2022
		Version:	5

	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 ACETATE, SOLUTION</b>				
Product code:	NA-OT-X**	Date of compilation:	21 Dec 2022	Version:	5

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 ACETATE, SOLUTION</b>				
Product code:	NA-OT-X**	Date of compilation:	21 Dec 2022	Version:	5

**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 ACETATE, SOLUTION</b>				
Product code:	NA-OT-X**	Date of compilation:	21 Dec 2022	Version:	5

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

<b>SECTION 9. Physical and chemical properties</b>		
9.1.	Information on basic physical and chemical properties	
	Value	Method

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

	Physical state:	liquid	No information available
	Colour:	colourless	No information available
	Odour/odour threshold:	no odor/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.
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 ACETATE, SOLUTION</b>				
Product code:	NA-OT-X**	Date of compilation:	21 Dec 2022	Version:	5

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 ACETATE, SOLUTION</b>			
Product code:	NA-OT-X**	Date of compilation:	21 Dec 2022	Version: 5

	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 ACETATE, SOLUTION</b>				
Product code:	NA-OT-X**	Date of compilation:	21 Dec 2022	Version:	5

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: -			
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 informations:		
	-		

SECTION 12. Ecological information						
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 ACETATE, SOLUTION</b>				
Product code:	NA-OT-X**	Date of compilation:	21 Dec 2022	Version:	5

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 Kow):

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

Bioconcentration factor (BCF)



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

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 ACETATE, SOLUTION</b>		
Product code:	NA-OT-X**	Date of compilation:	21 Dec 2022
		Version:	5

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 ACETATE, SOLUTION</b>		
Product code:	NA-OT-X**	Date of compilation:	21 Dec 2022
		Version:	5

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 ACETATE, SOLUTION</b>		
Product code:	NA-OT-X**	Date of compilation:	21 Dec 2022
		Version:	5

Special precautions for user:	-
Further information:	-

<b>SECTION 15. Regulatory information</b>	
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

<b>SECTION 16. Other information</b>	
16.1.	Indication of changes: -

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

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>
-