



Page 1 of 15

Trading name:		LITHIUM CARBONATE, SOLUTION			
Product code:	LK-OT-X**	Date of compilation:	03 July 2019	Version: 3	

1.1.	Product identifier				
	Trading name:	LITHIUM CA	LITHIUM CARBONATE, SOLUTION		
	Chemical name:	-	-		
	Catalogue number:	LK-OT-X**			
1.2.	Relevant identified use	es of the subs	tance or mixtu	re and uses advised against	
	Uses:		For use with	Von-Kossa staining kit.	
	Uses advised against:		Only the ide	ntified 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: Bi		ioGnost Ltd.		
	Address:	M	ledjugorska 59	, Zagreb	
	Telephone number:	+	385 1 2409997		
	Fax no.:	+	385 1 2404039		
	e-mail of competent p	erson: <u>m</u>	msds@biognost.hr		
	National contact:	-			
1.4.	Emergency telephone number				
	National Protection ar	nd Rescue Dir	ectorate:	112	
	Medical information:			+385 1 2348 342	
	Other information:			-	

SECTIO	ON 2 HAZARDS INFORMATION	N			
2.1.	Classification of the substance or mixture				
2.1.1.	Classification (REGULATION (EC) No. 1272/2008 (CLP)				
	Hazard class and category code: Hazard statements*:				
	Not identified as hazardous su	ubstance.	-		
2.1.2.	. Additional information				
	-				
*For fu	II text of Hazard- and EU Hazard	d-statements: see Sec	tion 16		
2.2.	Classification according to EC	Directive Nr. 1272/20	008 CLP)		
	Product identification:	LITHIUM CARBO	onate, solution		
	Identification number:	-			
	Authorization no.:				
	Hazard pictograms: -				
	Signal word:	-			



Page 2 of 15

				9	
Trading name:	LITHIUM CARBONATE, SOLUTION				
Product code:	LK-OT-X**	Date of compilation:	03 July 2019	Version:	3

	Hazard statements:	-
	Precautionary statements:	-
	Further information:	-
2.3.	Other hazards	
	-	

SECTION 3 CO	ECTION 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)				
554-13-2/ 209-062-5/ -	-	< 2 %	lithium carbonate	Acute Tox. 4; H302 Eye Irr. 2; H319				

4.1.	Description of first aid me	asures		
	General notes:		-	
	Following inhalation:		Carry the afflicted person out of the contaminated area into a well-ventilated area or out for fresh air. If breathing becomes erratic or it stops, immediately apply artificial respiration (other than mouth-to-mouth) and contact a physician.	
	Following skin contact:		Remove contaminated clothing. Immediately wash with plenty of water and soap. Seek medical assistance if the symptoms of irritation remain.	
	Following eye contact:		Rinse out with plenty of water with the eyelid held wide open using clean fingers. If the symptoms remain, immediately call a physician.	
	Following ingestion:		Do not induce vomiting. Make the afflicted person drink a glass of water. If spontaneous vomiting occurs, wash the mouth with water, then make the person drink 100-200 ml of water and seek medical attention.	
	Self-protection of the first	aider:	Treat symptomatically.	
4.2.	Most important symptoms and effects, both acute and delayed			
	Following inhalation:	No	information available	
	Following skin contact:	No	information available	
	Following eye contact: No		information available	
	Following ingestion: No i		information available	
4.3.	Indication of any immedia	te medi	cal attention and special treatment needed	

SECTION 5 FIREFIGHTING MEASURES

5.1. Extinguishing media



Page 3 of 15

Trading name:	LITHIUM CARBONATE, SOLUTION				
Product code:	LK-OT-X**	Date of compilation:	03 July 2019	Version:	3

	Suitable extinguishing media:	Water spray, dry powder, CO₂ or alcohol-resistant foam
	Unsuitable extinguishing media:	No information available
5.2.	Special hazards arising from the su	ubstance or mixture
	Hazardous combustion products:	No information available
5.3.	Advice for firefighters	
	Use a self-contained open-circuit of Cool closed containers exposed to	compressed air breathing apparatus and fireproof clothing. fire with water spray or vapor.
5.4.	Additional information	
	Remove sources of heat and ignition Do not contaminate the environment	

SECTIO	ON 6 ACCIDENTAL RELEASE M	EASURES			
6.1.	Personal precautions, protective equipment and emergency procedures				
6.1.1.	For non-emergency personne	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 (s	see Section 8).			
6.2.	Environmental precautions:				
	Do not dispose of in sewage, Protection and Rescue Directo	drainage system and waterways. In case of large spillage contact National orate (NPRD) on 112.			
6.3.	Methods and material for cor	ntainment and cleaning up			
6.3.1.	Bunding, covering of drains; capping procedures:	Sand or clay barriers.			
6.3.2.	Cleaning up:	Sawdust, sand, mineral adsorbents.			
6.3.3.	Other information:	-			
6.4.	Reference to other sections				
	See Section 7 for information See Section 8 for information See Section 13 for disposal in	on personal protection equipment.			

SECTION 7 HANDLING AN STORAGE		
7.1.	Precautions for safe handling	
7.1.1.	Protection measures	



SAFETY DATA SHEET SAFETY DATA SHEET According to Regulation (EC) No. 1907/2006

Page 4 of 15

Trading name:	LITHIUM CARBONATE, SOLUTION			
Product code:	LK-OT-X**	Date of compilation:	03 July 2019	Version: 3

	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 incomp	atibilities				
	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:	-				

SECTIO	SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION						
8.1.	Control pa	rameters					
Substance		CAS No		Occupational exposure limit values/short term values		Biological limit values	
				ppm	mg/m³		
-		-		-	-	No information available	
Substa name:	Substance _ name:						
EC No:	-		CAS No:	-			
DNEL	DNEL						
Industrial							



8.2.2.2.

Skin protection

SAFETY DATA SHEET BIOGNOST® According to Regulation (EC) No. 1907/2006

Page 5 of 15

Tradi	ng name:	LITHIUM CARBONATE, SOLUTION				
Produ	uct code:	LK-OT-X**	Date of compilation:	03 July 2019	Version:	3

Product	code: I	LK-OT-X**	Date o	of compilation	n: 03 July 2019	Version: 3		
Route of exposure		Acute effect local	Acu effect sy		Chronic effect local	Chronic effect systemic		
Oral		_	-		-	-		
Inhalation	า	-	-		-	-		
Dermal		-	-		-	-		
Critical ph	nysical parar	meters: solubility, flam	nmability, cor	rosivity:	-			
			C	onsumer	,			
Route of	Route of Acute				Chronic	Chronic		
exposure):	effect local	effect sy	/stemic	effect local	effect systemic		
Oral		_	-		-	-		
Inhalation	า	_	-		-	-		
Dermal		_	-		-	-		
PNEC								
Environm	ental proted	ction target		PNEC				
Fresh wat	er			No information available				
Freshwate	Freshwater sediments				No information available			
Marine water				No information available				
Marine se	ediments			No information available				
Food chai	in			No information available				
Microorga	anisms in se	wage treatment		No information available				
Soil (agric	cultural)			No informa	tion available			
Air				No informa	tion available			
8.2.	Exposure	e controls						
8.2.1.	Enginee	ring measures						
	measure	ce/mixture related is to prevent exposure dentified uses:	2	Use the product in well ventilated rooms. Use personal protective equipment. Do not eat, drink or smoke in the workspace.				
	Structura exposure	al measures to preven e:	No information available					
		ational measures to exposure:	Organization of work in order to reduce other worker's influence during work process.					
	Technica exposure	al measures to prevente:		Secure proper workspace ventilation in order to keep concentration levels in air below permitted levels.				
8.2.2.	Personal	protection equipmer	nt					
8.2.2.1.	Eye and	face protection:	Safety o	glasses that st	tick to face (preventing	splashing) (EN 166) or		



Page 6 of 15

Trading name:	LITHIUM CARBONATE, SOLUTION			
Product code:	LK-OT-X**	Date of compilation:	03 July 2019	Version: 3

			tive gloves must be according to the EU Directive 2016/425/EEC and ard EN 374.				
	Hand protection:		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) acording to EN 14387) used when concentration levels exceed GVI.					
8.2.2.4.	Thermal hazards:	No inf	ormation available				
8.2.3.	Environmental exposure	controls					
	Substance/mixture relate measures to prevent exp		See Section 6				
	Structural measures to prevent exposure:		Use modern equipment.				
	Organisational measures prevent exposure:	to	Adapt the work process to the required working conditions of the workplace.				
	Technical measures to prevent exposure:		See Section 6				

9.1.	Information on basic physical and chen	nical properties	
		Value	Method
	Physical state:	liquid	No information available
	Color:	colourless	No information available
	Odor:	No information available	No information available
	Odor threshold:	No information available	No information available
	рН:	No information available	No information available
	Melting point / freezing point;	No information available	No information available
	Initial boiling point and boiling range:	No information available	No information available
	Flash point:	No information available	No information available
	Evaporation rate:	No information available	No information available
	Flammability (solid, gas):	No information available	No information available
	Upper/lower flammability or explosive limits:	No information available	No information available
	Vapor pressure:	No information available	No information available
	Vapor density:	No information available	No information available
	Relative density:	No information available	No information available



Oral exposure:

Dermal exposure:

SAFETY DATA SHEET BIOGNOST® According to Regulation (EC) No. 1907/2006

Page 7 of 15

Trading name:	LITHIUM CARBONATE, SOLUTION			
Product code:	LK-OT-X**	Date of compilation:	03 July 2019	Version: 3

	Bulk density:	No information available	No information available
	Solubility(ies):	Soluble in water (20 °C)	No information available
	Partition coefficient: n-octanol/water (log Kow):	No information available	No information available
	Auto-ignition temperature:	No information available	No information available
	Decomposition temperature:	No information available	No information available
	Viscosity:	No information available	No information available
	Explosive properties:	No information available	No information available
	Oxidising properties:	No information available	No information available
9.2.	Other information		
	-		

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

	SECTION 11 TOXICOLOGICAL INFORMATION								
11.1. Information	Information on toxicological effects								
Acute toxi	city:								
Route of exposure:	Method	Species	Effective dose LD ₅₀ /LC ₅₀ or ATE _{mixture}	Exposure time	Results				
Oral exposure:	No information available	rat	LD ₅₀	-	525 mg/kg (lithium carbonate)				
Dermal exposure:	No information available	rat	LD ₅₀	-	2.000 mg/kg (lithium carbonate)				
Inhalation exposure:	No information available	rat	LC ₅₀	4h	>2.17 mg/l (lithium carbonate)				
Specific ta	rget organ toxicity – sii	ngle exposure (S	TOT SE):						
	Speci	fic effects	Target	organ	Note				

No information available

No information available

No information available

No information available



Page 8 of 15

Trading name:		LITHIUM CARBONATE, SOLUTION				
Product code:	LK-OT-X**	Date of compilation:	03 July 2019	Version: 3		

Inhalation exposi	ure:	No informa	tion available		No informat	ion availab	le -		
Respirat	tory ir	ritation:	N	No information	available				
Irritation	n and	corrosion							
	1	Exposure	time	Species	Evaluation	Method		Note	
Skin irritation:		-	-		-	-	-		
Eye irritation:		-	-		-	-	-		
Sensitiza	ation								
Dermal exposure):	No inforn	nation availab	le					
Inhalation exposi	ure:	No inforn	nation availab	le					
Sympto	ms ra	lated to the ni	vsical chemia	cal and toxicolo	gical charact	erictics			
Oral exposure:	1113 161	No informati		car and toxicold	gicar criaraci	.cristics			
Dermal exposure	·····	No informati							
Inhalation exposi		No informati							
Eye exposure:		No informati							
		<u> </u>							
Repeate	ed dos	se toxicity (sub	acute, subchr	onic, chronic)					
		Dose	Exposure time	Species	Metho	d E	valuation	Note	
Subacute oral	No avai	information lable	No information available	No informa	ion No inform availab	ation ir	lo nformation vailable	-	
Subacute dermal		information lable	No information available	No information	ion No inform availab	ation ir	lo nformation vailable	-	
Subacute inhalation			No information available	No informa	ion No inform availab	ation ir	lo nformation vailable	-	
Subchronic oral		information lable	No information available	No information	ion No inform availab	ation ir	lo nformation vailable	-	
Subchronic dermal		information lable	No information available	No informa	ion No inform availak	ation ir	lo nformation vailable	-	



Other remarks:

SAFETY DATA SHEET BIOGNOST ® According to Regulation (EC) No. 1907/2006

Page 9 of 15

Trading name:		LITHIUM CARBONAT	E, SOLUTION	. ages	<u></u>
Product code:	LK-OT-X**	Date of compilation:	03 July 2019	Version:	3

				· ·			i i	1
Subchronic inhalation	No i availa	nformation ble	No information available	No informa available	tion	No information available	No informatic available	on -
Chronic oral	No i availa	nformation ble	No information available	i availahla		No information available	No informatic available	on -
Chronic dermal	ronic dermal No information available		No information available	No information available		No information available	No informatic available	n -
Chronic inhalation				No informa available	tion	No information available	No informatic available	on -
6 .6				(57.03	- D.F.\			
Specific	target		y – repeated e	•	RE):			
<u> </u>			Specific effects	S	N	Target orga		Note
Subacute oral			ition available			nformation avai		-
Subacute derma						No information available		_
Subacute inhalat	tion		ition available				_	
Subchronic oral		<u> </u>	ition available					-
Subchronic derm			ition available				-	
Subchronic inhal	lation		ition available				-	
Chronic oral		**************************************	tion available		No information available		-	
Chronic dermal						No information available		-
Chronic inhalation	on	No informa	ition available		No ir	nformation avai	lable	-
CMR ef	fects (ca	arcinogenicit	y, mutagenicity	v reproductive	toxi	city)		
Carcino				nation availab		ercy)		
Mutage				nation availab				
Genoto				nation availab				
Mutage		n-vivo:		nation availab				
		genicity:		nation availab				
	uctive to			mation availab				
*								
Summa	ry of ev	aluation of t	ne CMR prope	rties: -				
11.2. Practica	ıl experi	ences:						
	•	nt for classif	ication:	No information	n 21/	ailahle		

No information available



Page 10 of 15

Trading name:		LITHIUM CARBONAT	TE, SOLUTION			
Product code:	LK-OT-X**	Date of compilation:	03 July 2019	Version:	3	

11.3.	General notes:
	-

12.1. Toxicity										
Acute toxicity	Dose	Exposure time	Species	Method	Evaluation	Note				
Fish	LC ₅₀	96 hours	No information available	No information available	No information available	-				
Crustacea:	EC ₅₀	48 hours	No information available	No information available	No information available	-				
Algae/aquatic plants	IC ₅₀	8 days	No information available	No information available	No information available	-				
Microorganisms	LC ₅₀	72 hours	-	-	-	-				
Chronic toxicity	Dose	Exposure time	Species	Method	Evaluation	Note				
Fish	LC ₅₀	96 hours	No information available	No information available	No information available	-				
Crustacea:	EC ₅₀	48 hours	No information available	No information available	No information available	-				
Algae/aquatic plants	IC ₅₀	72 hours	No information available	No information available	No information available	-				
Other organisms	-	-	-	-	-	-				

Persistence and degradability 12.2.

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	-



Page 11 of 15

Trading name:		LITHIUM CARBONATE, SOLUTION	<u> </u>
Product code:	LK-OT-X**	Date of compilation: 03 July 2019	Version: 3

	Biodeg	gradat	ion								
% Deg	gradation	l	Time (day	s)		Method		Evaluatio	n		Note
No information No available ava		o infori ailable	mation	No information available			No information available		No information available		
12.3.	Bioacc	umula	ative potentia	nl							
			efficient: n-oc		iter (log K	ow):					
Valu	ıe	Conc	entration	рН	°C	Method	2 2 3 4 4 5 6 6 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	Evalua	ation		Note
-		lo i vailab	nformation le	-	-	No information available		No inform available	nation	-	
	Riocon	contr	ation factor (RCE)						!	
	Value	icentra	Specie			Method		Evaluation	n		Note
No info	ormation		No in			ormation		information		No information available	
availab	ole	а	available		availal	ole	ava	available			
	Chroni	c ecot	toxicity								
	Value	è	Dos	se E	xposure time	Species	N	/lethod	Eva	luation	Note
Chroni	c toxicity	on fis	sh LC ₅₀	1	ormation ailable	No information available	1	ormation ilable	No info	ormation ble	-
	c toxicity cea (<i>Dapl</i>		EC ₅₀		ormation ailable	No information available		ormation ilable	No info	ormation ble	_
									i		i
12.4.	Mobili										
		······································		ibution ir	ı environr	mental compartn	nents:				
	Surface		ion available								
	Val		°C		Concen	tration	N A A	ethod		N1.	ote
	val	uc			Concern	i ation	IVIE	Linuu		110	J.E



Page 12 of 15

Trading name:		LITHIUM CARBONAT	TE, SOLUTION		
Product code:	LK-OT-X**	Date of compilation:	03 July 2019	Version:	3

	No information available		No information available	No information available			-	
	Adso	orption /	desorption					
Transpo		A/D	coefficient y's constant	log Kow	Evaporation rate	Metho	od	Note
Soil-wa	iter	No available	information	No information available	No information available	No inform available	ation	-
Water-a	air	No available	information	No information available	No information available	No inform available	ation	-
Soil-air		No available	information	No information available	No information available	No inform available	ation	-
12.5.	Resi	ults of PRI	Γ and vPvB asses	ssment				
12.3.			on available	Silicit				
12.6.	Othe	er adverse	e effects					
12.6.			e effects on available					
12.6.								
	No i	informatio		TIONS				
SECTIO	No i	nformatic	on available	TIONS				
SECTIO 13.1.	No i	DISPOSA aste treat	on available AL CONSIDERA ment methods					
SECTIO 13.1.	No i	DISPOSA aste treat	on available AL CONSIDERA ment methods ckaging disposa	l:	ad by the Ministry o	f Environme	ontal and	Natura
SECTIO 13.1.	No i	DISPOSA aste treat	on available AL CONSIDERA ment methods ckaging disposa		ed by the Ministry o	f Environme	ental and	Nature
SECTIO 13.1.	No i	DISPOSA aste treat oduct/Pac	on available AL CONSIDERA ment methods ckaging disposa	l:	ed by the Ministry o	f Environme	ental and	Nature
12.6. SECTIO 13.1. 13.1.1.	No i	DISPOSA aste treat oduct/Pad abmit for do	on available AL CONSIDERA ment methods ckaging disposa disposal to the l	l:	· · · · · ·	f Environme	ental and	Nature
SECTIO 13.1. 13.1.1.	No i No i No i No i W Pro Su Pro W	DISPOSA aste treat oduct/Pacubmit for cotection.	on available AL CONSIDERA ment methods ckaging disposa disposal to the l	l: egal person authorizo	· · · · · ·	f Environme	ental and	Nature
SECTIO 13.1. 13.1.1.	Pro Su Pro W	DISPOSA aste treat oduct/Pacubmit for cotection.	an available AL CONSIDERA ment methods ckaging disposa disposal to the l	l: egal person authorize ations according to La	· · · · · ·	f Environme	ental and	Nature
SECTIO 13.1. 13.1.1.	Pro Su Pro W	DISPOSA aste treat oduct/Pacubmit for cotection. aste code o information information aste treat	ckaging disposadisposal to the les/waste designation available	l: egal person authorize ations according to La	· · · · · ·	f Environme	ental and	Nature
SECTIO 13.1. 13.1.1.	Pro Su Pro W	DISPOSA aste treat oduct/Pacubmit for cotection. aste code o information information aste treat	an available AL CONSIDERA ment methods ckaging disposa disposal to the l	l: egal person authorize ations according to La	· · · · · ·	f Environme	ental and	Nature
SECTIO 13.1. 13.1.1. 13.1.2.	Pro W No	DISPOSA aste treat oduct/Pacubmit for cotection. aste code o information info	ckaging disposadisposal to the les/waste designation available	l: egal person authorize ations according to La information:	· · · · · ·	f Environme	ental and	Nature
SECTIO 13.1. 13.1.1.	Pro Su Pro W No Se	DISPOSA aste treat oduct/Pacubmit for cotection. aste code o informa aste treat o informa	ment methods ckaging disposa disposal to the l es/waste designation available ment – relevant tion available	l: egal person authorize ations according to La information:	aw:	f Environme	ental and	Nature



Page 13 of 15

Trading name:		LITHIUM CARBONAT	E, SOLUTION	
Product code:	LK-OT-X**	Date of compilation:	03 July 2019	Version: 3

13.1.5.	Other disposal recomme	endations:			
	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.	6. Relevant Community provisions:				
	-				
SECTIO	N 14 TRANSPORT INFOR	MATION			
	Transporting/shipment by	road (ADR)			
UN num	ber:	Not subject to transport regulations.			
UN prop	oer shipping name:	-			
Transpo	rt hazard class(es):	-			
Packing	group:	-			
Environr	mentally hazardous:	-			
Special precautions for user:		-			
	Transporting/shipment by	rail (RID)			
UN num	ıber:	Not subject to transport regulations.			
UN proper shipping name:		-			
Transport hazard class(es):		-			
Packing	group:	-			
Environr	mentally hazardous:	-			
Special _I	orecautions for user:	-			
	Inland waterway transport	(ADN)			
UN num	ıber:	Not subject to transport regulations.			
UN prop	per shipping name:	-			
Transpo	rt hazard class(es):	-			
Packing	group:	-			
Environr	mentally hazardous:	-			
Special _I	orecautions for user:	-			
_	Transporting/shipment by	sea (IMDG)			
UN number:		Not subject to transport regulations.			
UN prop	per shipping name:	-			
Transpo	rt hazard class(es):	-			
Packing	group:	-			
Environr	mentally hazardous:	-			
Special i	orecautions for user:	-			



Page 14 of 15

Trading name:		LITHIUM CARBONATE, SOLUTION	<u> </u>
Product code:	LK-OT-X**	Date of compilation: 03 July 2019	Version: 3

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

L5.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture						
	EU regulations						
	Authorization and/or restrictions of use						
	Authorizations:	Authorizations: -					
	Restrictions:	-					
		EC Regulation No. 1906/2007 and EC Regulation No. 1272/2008 of the European Parliament and the European Council;					
	Other EU regulations:	The European Commission Regulation No. 453/2006 of 2010 on changes and amendments to the Regulation (EC) No. 1907/2006 of the European Parliament and Council on registration, evaluation, authorization and restriction of chemical substances (REACH);					
		EC Regulation No. 2037/200 of the European Parliament and Council from 29 June 2000 on substances that damage the ozone layer;					
		EC Regulation No. 689/2008 of the European Parliament and Council from 17 June 2008 concerning the export and import of dangerous chemicals;					
		EC Regulation No. 850/2004 of the European Parliament and Council from 29 April 2004 about persistent organic pollutants;					
		Directive 2008/98/EC of the European Parliament and Council of 19 November 2008 on waste and repealing certain Directives					
	Information according 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-quideline)						
	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 o waste with a waste catalog and list of hazardous waste, Ordinance on writing Material safety data sheet, Transport of Hazardous Substances Act					
.5.2.	Chemical safety assessme	·					
	None						



Page 15 of 15

Trading name:		LITHIUM CARBONAT	E, SOLUTION	
Product code:	LK-OT-X**	Date of compilation:	03 July 2019	Version: 3

SECTIO	ON 16 Other information			
16.1.	Indication of changes:	-		
		PBT Stable, bioaccumulative and toxic		
		vPvB Strongly stable and strongly bioaccumulative.		
16.2.	Abbreviations and acronyms:	LD ₅₀ Lethal dose, 50%		
		LC ₅₀ Lethal concentration, 50%		
		STOT-SE Specific target organ toxicity - single exposure		
16.3.	Key literature references and source of data:	-		
16.4.	Classification and procedure u 1272/2008 (CLP)	sed to derive the classification for mixture according to Regulation (EC)		
Classifi	cation	Classification procedure		
-				
16.5.	Relevant H statements (number	er and full text)		
	H: H302	Harmful if swallowed.		
	H319	Causes serious eye irritation		
16.6.	Training advice:	-		
		** "X" in the product code marks different volumes (different packagings of the product)		
16.7.		Ve 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 afety data sheet.		

ANNEX:

EXPOSURE SCENARIO RESULTING TO CHEMICAL SAFETY ASSESSMENT



Page 1 of 16

Trading name:	SILVER AMMONIA REAGE			SILVER AMMONIA REAGENT	
Product code:	SAR-OT-X**	Date of compilation:	09 July 2019	Version:	5

SECTI	ON 1: Identification of t	the substance	e/mixture	and of the company/undertaking		
1.1	Product identifier					
	Trading name:	SILVER AMI	MONIA RE	AGENT		
	Chemical name:	-				
	Catalogue number:	SAR-OT-X*	*			
1.2	Relevant identified use	es of the subs	tance or m	nixture and uses advised against		
	Uses:		For use	with Von Kossa ana Masson Fontana staining kits.		
	Uses advised against:		Only the	identified uses are advised.		
	Reason why uses advis	sed against:	The product is intended for use only as an <i>in vitro</i> diagnost: medical device, registered at the Agency for Medicinal P Medical Devices and there is no reason to use it for other			
1.3	Details of the supplier	of the safety	data shee	t		
	Supplier:		BioGnost Ltd.			
	Address:		Medjugorska 59, Zagreb			
	Telephone number:		+385 1 2409997			
	Telefax.:		+385 1 2404039			
	e-mail of competent p	erson:	msds@biognost.hr			
	National contact:		-			
1.4	Emergency telephone	number				
	National Protection ar	nd Rescue Dire	ectorate:	112		
	Medical information:			+385 1 2348 342		
	Other information:			-		

SECTIO	SECTION 2. Hazards identification							
2.1	Classification of the substance or mixture							
2.1.1	Classification according to Re	gulation (EC) No 1	272/2008 (CLP)					
	Hazard class and cate	gory code:	Hazard statements*:					
	Aquatic Chronic 3		H412					
2.1.2.	Additional information							
	-							
*For fu	ll text of Hazard- and EU Hazard	d-statements: see S	SECTION 16					
2.2	Label elements							
	Product identification:	SILVER AMMO	NIA SOLUTION					
	Identification number:	-						
	Authorization number: -							
	Hazard pictograms: -							
	Signal word:	-						



Page 2 of 16

Trading name:	SILVER AMMONIA REAGEN				
Product code:	SAR-OT-X**	Date of compilation:	09 July 2019	Version:	5

	Hazard statements:	H412 Harmful to aquatic life with long lasting effects.
	Precautionary statements:	P273 Avoid release to the environment P501 Dispose of contents/container in accordance with local regulations.
	Supplemetal hazard information (EU):	-
2.3	Other hazards	
	-	

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

SECTI	ION 4. First aid measures	
4.1	Description of first aid measures	
	General notes:	If the suggested first aid measures do not prove sufficient, seek medical attention.
	Following inhalation:	Carry the afflicted person out of the contaminated area into a well-ventilated area or out for fresh air. In case of difficult breathing, provide the afflicted person with oxygen.
	Following skin contact:	Remove contaminated clothing. Immediately wash with plenty of water for at least 20 minutes. Seek medical assistance if the symptoms of irritation remain.
	Following eye contact:	Rinse out with plenty of water with the eyelid held wide open for at least 20 minutes. If the symptoms remain, immediately call in ophthalmologist.
	Following ingestion:	Rinse the 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:	-
4.2	Most important symptoms and ef	fects, both acute and delayed
	Following inhalation:	Depending on concentration and exposure time, it may lead to mucosa irritation, cough, and dyspnea.



Page 3 of 16

Trading name:		SILVER AMMONIA	REAGENT		
Product code:	SAR-OT-X**	Date of compilation:	09 July 2019	Version:	5

	Following skin contact:	Depending on concentration and exposure time, it may lead to irritation, rash, skin drying and skin cracking.	
	Following eye contact:	Depending on concentration and exposure time, it may lead to irritation, tearing, redness and pain.	
	Following ingestion:	Danger of gastric perforattion.	
4.3	Indication of any immediate medical attention and special treatment needed		
	-		

SECTI	SECTION 5. Firefighting measures				
5.1	Extinguishing media				
	Suitable extinguishing media:	Water spray, foam, dry powder, CO ₂ or alcohol resistant foam.			
	Unsuitable extinguishing media:	Water with full jet.			
5.2	Special hazards arising from the substance or mixture				
	Hazardous combustion products:	Nitrogen oxides (NOx). During heating or in case of fire poisonous gases are produced.			
5.3	Advice for firefighters				
	Use a self-contained open-circuit compressed air breathing apparatus and fireproof clothing.				
5.4	Additional information	Additional information			
	Do not contaminate the environm	ent with extinguishing media.			

SECTIO	CTION 6. Accidental release measures				
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				
	Emergency procedures: Mark the area using proper signs.				
6.1.2.	For emergency responders:				
	Use protective equipment; in c (see Section 8).	ase of inadequate ventilation use adequate airways protective equipment			
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:	Sand or clay barriers.			



Page 4 of 16

Trading name:		SILVER AMMONIA	REAGENT	<u> </u>	
Product code:	SAR-OT-X**	Date of compilation:	09 July 2019	Version:	5

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 and involved materials with water.			
6.3.3.	Other information:	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 in	nformation.			

SECTION	ON 7. Handling and storage					
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.			
	Measures to prevent aerosol and dust generation	n:	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 incon	npatibilities				
	Technical measures and storage conditions:	Keep in tightly closed and upright set containers at temperatures ranging from +2 to +8 °C.				
	Packaging materials:	Manufacti containers	cturer's original packaging. Avoid metal ers.			
	Requirements for storage rooms and vessels:	Keep away	y from food and drink. Keep the containers osed.			
	Advices for storage equipment:	must be re	ge must be made of hard material; floors esistant to chemicals. There must be no drain tly leads into sewage system. Secure proper n.			
	Eurther information on storage conditions:		ace the unused material in the storage room of use empty containers for storing other. Do not store with incompatible materials on 10).			
7.3	Specific end use(s)					
	Recommendations:	_				



Soil (agricultural)

Air

SAFETY DATA SHEET BIOGNOST® According to Regulation (EC) No. 1907/2006

Page 5 of 16

Trading name:		SILVER AMMONIA	REAGENT		
Product code:	SAR-OT-X**	Date of compilation:	09 July 2019	Version:	5

Industrial sector specific solutions: -									
						•			
SECTIO	N 8. Expos	ure contr	ols/perso	nal pro	tection				
8.1	Control pa	rameters							
	Substance		CA	S No			exposure limit t term values	Biological	limit values
					ı	opm	mg/m³		
Silver (a	s Ag)			-		-	0.01		-
Ammon	ia		1330	6-21-6	2	0/50	14/36		
Substance name: -									
EC No:		_	CAS No	•	_				
DNEL				i					
					Ind	lustrial			
Route of		Acı	Acute A		cute		Chronic		Chronic
exposu	re:	effect	local	effect	systemic		effect local	effec	t systemic
Oral		-		-		-		-	
Inhalatio	on	-		-		-		-	
Dermal		-		-		-		-	
Critical p	ohysical par	ameters: s	olubility,	flammal	bility, cor	rosivity:	-		
					Cor	nsumer			
Route o		Acı effect			Acute : systemic				Chronic et systemic
Oral		-		-		-		-	
Inhalatio	on	-		-		-		-	
Dermal		-		-		-		-	
PNEC									
Environmental protection target					PNEC				
Fresh water					no inforr	nation 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				

no information available no information available



Page 6 of 16

Trading name:		REAGENT			
Product code:	SAR-OT-X**	Date of compilation:	09 July 2019	Version:	5

8.2	Exposure controls				
8.2.1.	Appropriate engineering controls				
	Substance/mixture related measures to prevent exposure during identified uses:		Use the product in well ventilated rooms. Use personal protective equipment. Do not eat, drink or smoke in the workspace.		
	Structural measures to prevent exposure:		In accordance with Section 7.		
	Organisational measures to preve exposure:	ent	Organization of work in order to reduce other worker's influence during work process.		
	Technical measures to prevent ex	posure:	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:	levels o	glasses that stick to face (EN 166) or visor in case of lower of concentration in air; protective gas mask that covers the face in case of higher levels of concentration in air.		
8.2.2.2.	Skin protection	L			
	Hand protection:	Protect	tive nitrile gloves, >0.11 mm thick (EN 374).		
	Other skin protection:		antistatic clothing made of natural fibers (such as cotton) ang sleeves (EN 340) and shoes that cover the entire foot.		
8.2.2.3.	Respiratory protection:		quired under normal conditions of use. Use suitable tory protective device when high concentrations are t.		
8.2.2.4.	Thermal hazards:	No info	ormation available		
8.2.3.	Environmental exposure controls				
	Substance/mixture related measures to prevent exposure:	See Se	ction 6		
	Structural measures to prevent exposure:	nt Use modern equipment.			
	Organisational measures to prevent exposure:	Adapt workpl	the work process to the required working conditions of the ace.		
	Technical measures to prevent exposure:	See Se	ction 6		

SECTION	SECTION 9. Physical and chemical properties					
9.1	Information on basic physical and chemical properties					
		Value	Method			
	Physical state:	liquid	No information available			



Page 7 of 16

Trading name:	SILVER AMMONIA REAGENT				
Product code:	SAR-OT-X**	Date of compilation:	09 July 2019	Version:	5

	Colour:	colourless	No information available
	Odour:	mild ammonia like	No information available
	Odor threshold:	No information available	No information available
	pH:	No information available	No information available
	Melting point / freezing point;	No information available	No information available
	Initial boiling point and boiling range:	No information available	No information available
	Flash point:	No information available	No information available
	Evaporation rate:	No information available	No information available
	Flammability (solid, gas):	No information available	No information available
	Upper/lower flammability or explosive limits:	No information available	No information available
	Vapour pressure:	No information available	No information available
	Vapour density:	No information available	No information available
	Relative density:	No information available	No information available
	Bulk density:	No information available	No information available
	Solubility(ies):	No information available	No information available
	Partition coefficient: n-octanol/water (log Kow):	No information available	No information available
	Auto-ignition temperature:	No information available	No information available
	Decomposition temperature:	No information available	No information available
	Viscosity:	No information available	No information available
	Explosive properties:	No information available	No information available
	Oxidising properties:	No information available	No information available
.2	Other information		

SECTIO	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:	No dangerous reactions known.		
10.4	Conditions to avoid:	No information available		
10.5	Incompatible materials:	No information available		
10.6	Hazardous decomposition products:	No information available		

SECTION 11. Toxicological information



							Pag	e 8 ot 16)
Trading name: SILVER AMMONIA REAGENT									
Product code:	SAR-OT-X** Dat		Date of c	e of compilation:		09 July 2019		Version:	
					·		·		
11.1 Information	n on toxicologic	cal effects							
Acute toxic	ity:								
Route of exposure:	Method	Species	Do	ose LD ₅₀ /LC ₅₀ o	or Ex	xposure time	e	Result	ts
Oral:	-	-		-		-		-	
Dermal:	-	-		-		-		_	
Inhalation:	-	_		_		-		-	

Specific tar	get organ toxic	city – single	exposure (S	STOT SE):		i			
	Spe	ecific effects		Tar	get organ			Note	
Oral:	No information	n available		No informat	ion availal	ble -			
Dermal:	No information	n available		No informat	ion availal	ble -			
Inhalation:	No information	n available		No information available -					
Aspiration	hazard:		No infor	mation availal	ole.				
:									
Irritation ar	nd corrosion								
	Exposi	ure time	Spec	cies Eva	luation	Method		Note	
Skin corrosion/irritation:	–		-	-		-	_		
Serious eye									
damage/irritation	-		-	-		-	-		
Sensitizatio	un.								
Skin sensitization:	/11 -								
Respiratory sensitiza									
Respiratory sensitize	1011.								
Symptoms	related to the p	ohysical, che	emical and t	toxicological c	haracteris	tics			
Oral exposure:	No informa	ntion availab	le.						
Dermal exposure:	No informa	ntion availab	le.						
Inhalation exposure		ition availab							
Eye exposure:		ition availab	le.						
<u> </u>	<u> </u>								
Repeated o	lose toxicity (su	ıbacute, sub	chronic, ch	ronic)					
<u> </u>		Exposure			.1. 1				

Species

Dose

time

Method

Evaluation

Note



Page 9 of 16

Trading name:	SILVER AMMONIA REAGENT					
Product code:	SAR-OT-X**	Date of compilation:	09 July 2019	Version:	5	

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 or	rgan tovicity –	reneated evan	SUITA (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)



Page 10 of 16

Trading name:		SILVER AMMONIA REAGENT			
Product code:	SAR-OT-X**	Date of compilation:	09 July 2019	Version:	5

	Carcinogenicity:	No information available.
	Mutagenicity in vitro:	No information available.
	Genotoxicity:	No information available.
	Mutagenicity in vivo:	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	Practical experiences:	
	Classification observations:	-
	Other observations:	-
11.3	General notes:	
	-	

SECTION 12. Ecologi	SECTION 12. Ecological information						
12.1 Toxicity							
Acute (short-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note	
Fish	LC ₅₀	96 hours	Leuciscus idus (Golden orfe)	-	-	0.011 mg/l (silver nitrate)	
Crustacea:	EC ₅₀	48 hours	Daphnia magna (Water flea)	-	-	0.0082 mg/l (silver nitrate)	
Algae/aquatic plants	IC ₅₀	4 days	Pseudokirchner iella subcapitata (green algae)	-	-	0.19 mg/l (silver nitrate)	
Other organisms	-	-	-	-	-	-	
Chronic (long-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note	
Fish	LC ₅₀	96 hours	No information available	No information available	No information available	-	
Crustacea:	EC ₅₀	48 hours	No information available	No information available	No information available	-	



Page 11 of 16

Trading name	ng name:				SILVER AMMONIA REAGENT					
Product code:	S	AR-OT-X**		Г	Date of compilation: 09 July		[,] 2019	Version:	5	
Algae/aquatic p	olants	IC ₅₀	72 hours		No information available		No No information intavailable av		-	
Other organism	ıs	-	_		_	-		_	-	
		<u> </u>	<u> </u>				i		_ !	
12.2 Persist	ence a	nd degradab	lity							
Abiotic	degra	dation								
	De	gradation ha	lf-lives		Method	E	Evaluation	1	Note	
Marine water	No ir	nformation av	ailable		information ailable	No in	formation ble	-		
Fresh water	No ir	nformation av	ailable		information ailable	No in	formation ble	-		
Air	No ir	ntormation available		No information available		No in availa	formation ble	-		
Soil	No ir	nformation available		No information available		No information available				
Biodeg	radatio	on						,		
% Degradation	on	Time (d	ays)		Method	E	Evaluation	1	Note	
No information available		No information available		No information available		No inta	formation ble	No ir avail	nformation able	
12.3 Bioacc	umulat	ive potential								
Octano	ol-wate	er partition co	efficient (log k	Kow)					
Value	Conce	ntration	рН	°C	Method		Evalua	ntion	Note	
			-	-	-	-		-		
:		:	1		:	:		:		
	centra	tion factor (B								
Value		Specie		_	Method	Evaluation			Note	
No information available		o info vailable	ormation		information ailable	No information available		on -		



13.1

Waste treatment methods

SAFETY DATA SHEET BIOGNOST® According to Regulation (EC) No. 1907/2006

Page 12 of 16

Trading name:		SILVER AMMONIA REAGENT					
Product code:	SAR-OT-X**	Date of compilation:	09 July 2019	Version:	5		

	Value	Dose	Exposure time	Species	Metho	od E	valuation	Note
Chronic	c toxicity on fi	sh LC ₅₀	information	No information available	No informa		ormation ailable	-
	c toxicity on ea (<i>Daphnia</i>)	EC ₅₀	information	No information available	No informa available		ormation ailable	-
12.4	Mobility in s	oil						
	Known or p	edicted distribut	on in environme	ntal compart	ments:			
	No informat	ion available						
	Surface tens	ion:					1	
	Value	°C	Concentrati	on	Method	l		Note
	No information available	No information available	No information	on No inf availal	ormation ole		-	
	Adsorption							
Transpo	ort :	O coefficient ary's constant	log Kow	Evaporati	on rate	Met	hod	Note
Soil-wa	nter No availab	information le	No information available	n No inform available	nation	No infori available		-
Water-	air No availab	information le	No information available	No inform available	nation	No infori available		-
	No availab	information le	No informatior available	No inform available	nation	No infori available		-
Soil-air								
Soil-air	Results of P	BT and vPvB asse	ssment					
		BT and vPvB asse	ssment					
			ssment					
		ion available	ssment					



Page 13 of 16

Trading name:	SILVER AMMONIA REAGENT					
Product code:	SAR-OT-X**	Date of compilation:	09 July 2019	Version:	5	

13.1.1.	Product/Packaging dispo	osal:
	Submit for disposal to the Protection.	ne legal person authorized by the Ministry of Environmental and Nature
13.1.2.	Waste codes/waste design	gnations according to Law:
		residual hazardous substances or is contaminated with hazardous substances
13.1.3.	Waste treatment – releva	ant information:
	No information available	
13.1.4.	Sewage disposal – releva	ant information:
	Waste must not be dispo	osed of into the sewage system.
13.1.5.	Other disposal recomme	endations:
	Do not dispose of the prauthorized by the minist	roduct's remains into the sewage system. Submit the remains to the collectors ry in charge. Do not dispose of the packaging into the sewage system. Submit lectors authorized by the ministry in charge.
13.1.6.	Relevant Community pro	ovisions:
13.1.6.	Relevant Community pro	ovisions:
	-	
SECTION	- N 14 TRANSPORT INFORM	MATION
SECTION	- N 14 TRANSPORT INFORM	MATION road (ADR)
SECTION UN num	- N 14 TRANSPORT INFORM Transporting/shipment by lber:	MATION road (ADR) 3082
UN num	- N 14 TRANSPORT INFORM	MATION road (ADR)
UN num	Transporting/shipment by ber: Der shipping name: rt hazard class(es):	road (ADR) 3082 Environmentally hazardous substance, liquid, n.o.s. (silver ammonium)
UN num UN prop Transpor	Transporting/shipment by ber: Der shipping name: rt hazard class(es):	road (ADR) 3082 Environmentally hazardous substance, liquid, n.o.s. (silver ammonium) 9
UN num UN prop Transpor Packing Environn	Transporting/shipment by ber: Der shipping name: rt hazard class(es): group:	road (ADR) 3082 Environmentally hazardous substance, liquid, n.o.s. (silver ammonium) 9 III
UN num UN prop Transpor Packing Environn Special p	Transporting/shipment by ber: Der shipping name: rt hazard class(es): group: mentally hazardous:	road (ADR) 3082 Environmentally hazardous substance, liquid, n.o.s. (silver ammonium) 9 III
UN num UN prop Transpor Packing Environn Special p	Transporting/shipment by ber: oer shipping name: rt hazard class(es): group: mentally hazardous: orecautions for user: Transporting/shipment by	road (ADR) 3082 Environmentally hazardous substance, liquid, n.o.s. (silver ammonium) 9 III
UN num UN prop Transpor Packing Environn Special p	Transporting/shipment by ber: oer shipping name: rt hazard class(es): group: mentally hazardous: orecautions for user: Transporting/shipment by	road (ADR) 3082 Environmentally hazardous substance, liquid, n.o.s. (silver ammonium) 9 III - rail (RID)
UN num UN prop Transpor Packing Environn Special p UN num UN prop	Transporting/shipment by ber: ber shipping name: rt hazard class(es): group: mentally hazardous: brecautions for user: Transporting/shipment by ber:	road (ADR) 3082 Environmentally hazardous substance, liquid, n.o.s. (silver ammonium) 9 III - rail (RID) 3082
UN num UN prop Transpor Packing Environn Special p UN num UN prop	Transporting/shipment by ber: per shipping name: rt hazard class(es): group: mentally hazardous: precautions for user: Transporting/shipment by ber: per shipping name: rt hazard class(es):	road (ADR) 3082 Environmentally hazardous substance, liquid, n.o.s. (silver ammonium) 9 III rail (RID) 3082 Environmentally hazardous substance, liquid, n.o.s. (silver ammonium)
UN num UN prop Transpor Packing Environn Special p UN num UN prop Transpor Packing	Transporting/shipment by ber: per shipping name: rt hazard class(es): group: mentally hazardous: precautions for user: Transporting/shipment by ber: per shipping name: rt hazard class(es):	road (ADR) 3082 Environmentally hazardous substance, liquid, n.o.s. (silver ammonium) 9 III rail (RID) 3082 Environmentally hazardous substance, liquid, n.o.s. (silver ammonium) 9



Page 14 of 16

Trading name:					
Product code:	SAR-OT-X**	Date of compilation:	09 July 2019	Version:	5

UN number:	3082
UN proper shipping name:	Environmentally hazardous substance, liquid, n.o.s. (silver ammonium)
Transport hazard class(es):	9
Packing group:	
Environmentally hazardous:	-
Special precautions for user:	-
Transporting/shipment by sea (IN	MDG)
UN number:	3082
UN proper shipping name:	Environmentally hazardous substance, liquid, n.o.s. (silver ammonium)
Transport hazard class(es):	9
Packing group:	III
Environmentally hazardous:	-
Special precautions for user:	-
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:	-
Transporting/shipment by air (IC	AO-TI/IATA-DGR)
UN number:	3082
UN proper shipping name:	Environmentally hazardous substance, liquid, n.o.s. (silver ammonium)
Transport hazard class(es):	9
Packing group:	ш
Environmentally hazardous:	-
Special precautions for user:	_

SECTI	ON 15. Regulatory infor	mation					
15.1	Safety, health and envi	Safety, health and environmental regulations/legislation specific for the substance or mixture					
	EU regulations						
	Authorization and/or r	estrictions of use					
	Authorizations:	-					
	Restrictions:	-					



Page 15 of 16

Trading name:		SILVER AMMONIA REAGENT				
Product code:	SAR-OT-X**	Date of compilation:	09 July 2019	Version:	5	

	Other EU regulations:	EC Regulation No. 1906/2007 and EC Regulation No. 1272/2008 of the European Parliament and the European Council; The European Commission Regulation No. 453/2006 of 2010 on changes and amendments to the Regulation (EC) No. 1907/2006 of the European Parliament and Council on registration, evaluation, authorization and restriction of chemical substances (REACH); EC Regulation No. 2037/200 of the European Parliament and Council from 29 June 2000 on substances that damage the ozone layer; EC Regulation No. 689/2008 of the European Parliament and Council from 17 June 2008 concerning the export and import of dangerous chemicals; EC Regulation No. 850/2004 of the European Parliament and Council from 29 April 2004 about persistent organic pollutants;
	Information according 199 guideline)	Directive 2008/98/EC of the European Parliament and Council of 19 November 2008 on waste and repealing certain Directives 9/13/EC about limitation of emissions of volatile organic compounds (VOC-
	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 assessmen	t
	None	

SECTIO	N 16. Other information				
16.1	Indication of changes:	-			
		PBT	Stable, bioaccumulative and toxic		
		vPvB	Strongly stable and strongly bioaccumulative.		
16.2	Abbreviations and acronyms:	LD ₅₀	Lethal dose, 50%		
		LC ₅₀	Lethal concentration, 50%		
		TCOJ	Specific target organ toxicity - single exposure		
16.3.	Key literature references and source of data:	-			
16.4.	Classification and procedure u 1272/2008 (CLP)	sed to derive the	classification for mixture according to Regulation (EC)		
Classification		Classification procedure			
_		_			
16.5.	Relevant H statements (number	er and full text)			



Page 16 of 16

Trading name:		SILVER AMMONIA REAGENT				
Product code:	SAR-OT-X**	Date of compilation:	09 July 2019	Version:	5	

	H272	May intensify fire; oxidiser.
	H314	Causes severe skin burns and eye damage.
	H: H400	Very toxic to aquatic life.
	H410	Very toxic to aquatic life with long lasting effects.
	H412	Harmful to aquatic life with long lasting effects
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.

ANNEX: Exposure scenario resulting to chemical safety assessment



Page 1 of 17

Trade name:		REDUCING BU	IFFER, SOLUTION		
Product code:	RP-OT-X**	Date of compilation:	05 July 2019	Version:	3

SECTI	ON 1: Identification of	the substan	ce/mixture a	nd of the company/undertaking	
1.1.	Product identifier				
	Trade name:	REDUCING	G BUFFER, SO	LUTION	
	Chemical name:	-			
	Catalogue number:	RP-OT-X*	*		
1.2.	Relevant identified use	es of the sub	stance or mix	ture and uses advised against	
	Uses:		For use with	Von Kossa kit.	
	Uses advised against:		Only the ide	entified uses are advised	
	Reason why uses advi against:	sed		is intended for use only as an <i>in vitro</i> diagnostic medical there is no reason to use it for other purposes	
1.3.	Details of the supplier	of the safet	y data sheet		
	Supplier:		BioGnost Ltd.		
	Address:		Medjugorska 59, Zagreb		
	Telephone number:		+385 1 2409997		
	Telefax:		+385 1 2404039		
	e-mail of competent p	erson:	msds@biognost.hr		
	National contact:		-		
1.4.	Emergency telephone	numbers			
	National Protection ar	nd Rescue Di	irectorate:	112	
	Medical information:	Medical information:		+385 1 2348 342	
	Other information:			-	

SECTIO	SECTION 2. HAZARDS IDENTIFICATION				
2.1.	Classification of the substance or mixture				
2.1.1.	Classification according to Regulation (EC) No 1272/2008 (CLP)				
	Hazard class and catego	ry code:	Hazard statement*:		
	Skin Sens. 1		H317		
	Resp. Sens. 1		H334		
2.1.2.	Additional information				
	-				
* For fu	ll text of Hazard- and EU Hazard-s	tatements: see S	ECTION 16		
2.2.	Label elements				
	Product identification:	REDUCING BUF	FFER, SOLUTION		
	Identification number:	-			
	Authorisation number:	-			



Page 2 of 17

Trade name:		REDUCING BI	DUCING BUFFER, SOLUTION		
Product code:	RP-OT-X**	Date of compilation:	05 July 2019	Version:	3

	Hazard pictograms:	GHS07 GHS08
	Signal word:	Danger
	Hazard statement:	H317 May cause an allergic skin reaction.H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
	Precautionary statements:	P280 Wear protective gloves/protective clothing/eye/protection/face protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 IF exposed or concerned: Call a POISON CENTER or doctor.
	Supplemetal hazard information (EU):	-
2.3.	Other hazards	
	-	

SECTION 3. Co	SECTION 3. Composition/information on ingredients					
CAS/ EC/ Index number	REACH Registration No	Weight % content (or range)	Identification name	Classification according to Regulation (EC) No 1272/2008 (CLP)		
30525-89-4/ 605-494-5/ -	-	≤ 5 %	paraformaldehyde	Acute Tox. 4; H302 Skin Irr. 2; H315 Skin Sens. 1; H317 Eye Dam. 1; H318 Acute Tox. 4; H332 Resp. Sens. 1; H334		

SECTIO	SECTION 4. First aid measures			
4.1.	Description of first aid measu	Description of first aid measures		
	General notes:	Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident. Immediately remove any clothing soiled by the product.		
	Following inhalation:	Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.		



Page 3 of 17

Trade name:	REDUCING BU		JFFER, SOLUTION	<u> </u>	
Product code:	RP-OT-X**	Date of compilation:	05 July 2019	Version:	3

	Following skin contact:	Remove contaminated clothing. Immediately wash with plenty of water and soap and rinse thoroughly. If symptoms persist, consult a doctor.	
	Following eye contact:	Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.	
	Following ingestion:	DO NOT induce vomiting. If symptoms persist, consult a doctor.	
	Self-protection of the first aider	Avoid direct contact with the chemical; use appropriate protective equipment described in Section 8.	
4.2.	Most important symptoms a	nd effects, both acute and delayed	
	Following inhalation:	High concentration vapor inhalation may cause headache, dizziness, difficult breathing and unconsciousness.	
	Following skin contact:	Causes skin irritation, redness, swelling. Prolonged or repeated contact causes defatting and dry skin.	
	Following eye contact:	Vapors irritate eyes. Splashing may cause irritation and redness.	
	Following ingestion:	Nausea, vomiting (danger of aspiration), diarrhoea. Aspiration may cause headache, vertigo, nausea, dazed feeling-unconsciousness/coma, possible hypothermia, reactions to the heart/circulatory system such as vasodilation (flush), hypotension, arrhythmia (possible ventricular fibrillation through cardiac sensitization), danger of central respiratory paralysis or of cardiac arrest; functional disturbance to the liver and kidneys and persistent disturbance to the CNS as sequelae.	
4.3.	Indication of any immediate	medical attention and special treatment needed	
	No further relevant information available.		

SECTIO	SECTION 5. Firefighting measures				
5.1.	Extinguishing media				
	Suitable extinguishing media:	CO ₂ , powder or water spray. Fight larger fires with water spray or alcohol resistant foam.			
	Unsuitable extinguishing media:	water with full jet			
5.2.	Special hazards arising from the substance or mixture				
	Hazardous by products of fire:	Incomplete combustion of the product.			
5.3.	Advice for firefighters				
	Use a self-contained open-circuit compressed air breathing apparatus and fireproof clothing.				
5.4.	Additional information				
	Collect contaminated firefighting water separately.				
	Do not contaminate the environment	with extinguishing media.			

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



Page 4 of 17

Trade name:		REDUCING BU	JFFER, SOLUTION		
Product code:	RP-OT-X**	Date of compilation:	05 July 2019	Version:	3

	Protective equipment: Accident prevention methods:		Use personal protective equipment (see Section 8). Keep unprotected persons away.		
			Evacuate members of all non-essential personnel and those members without protective equipment. Do not breathe in vapor, ensure adequate ventilation and avoid contact with skin and eyes. Remove all sources of sparks and ignition. Do not smoke.		
	Emergency procedures:		Mark the area using proper signs.		
6.1.2.	For emergency responders:				
	Use protective equipment; in case of inadequate ventilation use adequate airways protective equipment (see Section 8).				
6.2.	Environmental precautions:				
	Do not dispose of in sewage, drainage system and waterways. In case of large spillage contact National Protection and Rescue Directorate (NPRD) on 112.				
6.3.	Methods and materials for containment and cleaning up				
6.3.1.	Bunding, covering of drains; capping procedures:	Sand or	Sand or clay barriers.		
6.3.2.	Cleaning up:	cleaner of imperment rooms up the Mini	Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and 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 and involved materials with water.		
6.3.3.	Other information:	Do not ι	use tools that may cause sparks.		
6.4.	Reference to other section	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.				

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



Page 5 of 17

Trade name:	REDUCING BUFFER, SOLUTION				
Product code:	RP-OT-X**	Date of compilation:	05 July 2019	Version:	3

	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 10).			
7.3.	Specific end use(s)				
	Recommendations:	-			
	Industrial sector specific solutions:	-			

SECTION 8. Exposure controls/personal protection									
8.1.	Contro	ol para	meters						
Substance CAS N			CAS N	Occupational ex CAS No values/short te				Biological limit values	
						ppm	mg/m ³		
-				-		-	1	-	
Substanc	e:	-							
EC No:		-	- CAS		-				
DNEL									
						Industrial			
Doute of	0,40,00		Acu	te effect	А	cute effect	Chronic 6	effect	Chronic effect
Route of	expos	sure.	l	ocal		systemic	local		systemic
Oral			-		-		-		-
Inhalation -		-		-		-		-	
Dermal	Dermal				-		-		-
Critical pl	hysica	l parar	neters: s	olubility, fla	mmabili	ty, corrosivity:	-		
						Consumer	·		



Page 6 of 17

Trade name:		REDUCING BI	UFFER, SOLUTION	l	
Product code:	RP-OT-X**	Date of compilation:	05 July 2019	Version:	3

Route of exposure:		Acute effect		effect	Chronic effect	Chronic effect		
	•	local systemi		emic	local	systemic		
Oral					-	-		
Inhalation	on				-	-		
Dermal		-	-		-	-		
PNEC								
Environme	ntal protec	tion target		PNEC				
Fresh wate	er			No infor	mation available			
Freshwater	r sediments	5		No infor	mation available			
Marine wa	ter			No infor	mation available			
Marine sec	diments			No infor	mation available			
Food chair	า			No infor	mation available			
Microorga	nisms in se	wage treatment		No information available				
Soil (agricultural) No information available								
Air				No infor	mation available			
				<u>.</u>				
8.2.	Exposure	e controls						
8.2.1.	Appropr	iate engineering cor	ntrols					
	measure	ce/mixture related s to prevent exposu dentified uses:	re :	personal prot orkspace.	tective equipment. Do no	ot eat, drink or smoke in		
	Structura exposure	al measures to preve	ent No ir	formation a	vailable			
		ational measures to exposure:		nization of w g work proc	ork in order to reduce o	ther worker's influence		
	Technica exposure	I measures to preve e:		Secure proper workspace ventilation in order to keep concentration levels in air below permitted levels.				
8.2.2.	Personal	protection equipme	ent:	_				
8.2.2.1.	Eye and	face protection:	test	Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as EN 166(EU)				
8.2.2.2.	Skin prot	tection						



Page 7 of 17

Trade name:		REDUCING BU	JFFER, SOLUTION			
Product code:	RP-OT-X**	Date of compilation:	05 July 2019	Version:	3	

	Hand protection:	Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Full contact: Glove material: Viton Glove thickness: 0.7 mm Break through time: 480 min Splash contact: Glove material: Nitrile rubber Glove thickness: 0.4 mm Break through time: 35 min
	Other skin protection:	Complete suit protecting against chemicals, flame retardant antistatic protective clothing (EN 13688). The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
8.2.2.3.	Respiratory protection:	Where risk assessment shows air-purifying respirators are appropriate use type ABEK (EN 14387) respirator cartridges as a backup to engine protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as CEN (EU).
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

SECTI	SECTION 9. Physical and chemical properties						
9.1.	Information on basic physical and chemical properties						
	Value Method						
	Physical state:	liquid	No information available				
	Colour:	colourless	No information available				
	Odour:	formaldehyde odor	No information available				
	Odour threshold:	No information available	No information available				
	pH:	10.0 – 11.0	No information available				



Page 8 of 17

Trade name:	REDUCING BUFFER, SOLUTION				
Product code:	RP-OT-X**	Date of compilation:	05 July 2019	Version:	3

Melting point / freezing point;	No information available	No information available
Initial boiling point and boiling range:	No information available	No information available
Flash point:	No information available	No information available
Evaporation rate:	No information available	No information available
Flammability (solid, gas):	No information available	No information available
Upper/lower flammability or explosive limits:	No information available	No information available
Vapour pressure:	No information available	No information available
Vapour density:	No information available	No information available
Relative density	No information available	No information available
Bulk density:	No information available	No information available
Solubility(ies):	No information available	No information available
Partition coefficient: n-octanol/water (log Pow):	No information available	No information available
Auto-ignition temperature:	No information available	No information available
Decomposition temperature:	No information available	No information available
Viscosity:	No information available	No information available
Explosive properties:	No information available	No information available
 Oxidising properties:	No information available	No information available
Other information		

SECTIO	SECTION 10.: Stability and reactivity				
10.1.	Reactivity:	No relevant information available.			
10.2.	Chemical stability:	The product is chemically stable under recommended storage conditions.			
10.3.	Possibility of hazardous reactions:	No dangerous reactions known.			
10.4.	Conditions to avoid:	No information available			
10.5.	Incompatible materials:	No information available			
10.6.	Hazardous decomposition products:	No information available			

SECTIO	SECTION 11. Toxicological information							
11.1.	Information	Information on toxicological effects						
	Acute toxicity:							
Route o		Method	Species	Effective Dose LD ₅₀ /LC ₅₀ or ATE _{mixture}	Exposure time	Results		



Trade name:			REDUC	ING BU	JFFER, S	OLUTION			
Product code:	RP-OT-X**	Date	e of compile	ation:	05 July	2019	Vers	sion:	3
Oral:	No information	on rat		LD ₅₀		No informati available	ion	800 mg	g/kg rmaldehyde)
Dermal:	No information	on -		_		No informati available	ion	No info	ormation le
Inhalation:	No informati available	on rat		LD ₅₀		4h		1.07 mg	g/kg rmaldehyde)
Specific t	target organ toxi	city - sinale	evnosure (S	TOT-SF	١٠				
Specific (pecific effec	•	101 32,		et organ		N	Note
Oral:	No informati	•		No		ion available	_	<u> </u>	1010
Dermal:	No informati					ion available	_		
Inhalation:	No information	on available		No	informat	ion available		o inform ailable	ation
Irritation	and corrosion	xposure	Species	Ev	aluation	Method		N	ote
Skin corrosion/irri	itation -	time	•			-	NI - :		ion available
Serious eye damage/irritation	_		_			_			ion available
Sensitiza	tion								
Skin sensitization:	No infor	mation avail	lable						
Respiratory sensitization:	No infor	mation avail	lable						
Sympton	ns related to phy	sical chemi	cal and toxic	cologica	al propert	iec			
Oral exposure:	Nausea, vom nausea, daze heart/circulat ventricular fik	iting (dange d feeling-ur ory system orillation thr est; functior	er of aspiration nconsciousne such as vaso ough cardiac	on), diaress/com dilation sensiti	rhoea. As a, possibl (flush), h (zation), d	spiration may le hypotherm ypotension, a	ia, read arrhyth tral res	ctions to imia (po piratory	o the essible paralysis o
Dermal exposure:	Causes skin in dry skin.	Causes skin irritation, redness, swelling. Prolonged or repeated contact causes defatting and							
Inhalation exposure:	_	d suffocatin	g. High conc	entratio	n vapor i	followed by s nhalation ma ination and C	y caus	e heada	-



Page 10 of 17

Trade name:		REDUCING BU	JFFER, SOLUTION		
Product code:	RP-OT-X**	Date of compilation:	05 July 2019	Version:	3

Eye exposure:	· ·	e eyes. Splashing , photophobia.	ı may cause irı	ritation and redne	ss, lacrimatio	on, pain, swelling,
Repeate	ed dose toxicity (su	ıbacute, subchro	onic, chronic)			
- 	Dose	Exposure time	Species	Method	Evaluation	n Note
Subacute oral	No information available	No information available	No information available	No information available	No information	on -
Subacute dermal	No information available	No information available	No information available	No information available	No information available	on -
Subacute inhalation	No information available	No information available	No information available	No information available	No information available	on -
Subchronic oral	No information available	No information available	No information available	No information available	No information available	on -
Subchronic dermal	No information available	No information available	No information available	No information available	No informatio available	on -
Subchronic inhalation	No information available	No information available	No information available	No information available	No information available	on -
Chronic oral	No information available	No information available	No information available	No information available	No informatio available	on -
Chronic dermal	No information available	No information available	No information available	No information available	No information available	on -
Chronic inhalation	No information available	No information available	No information available	No information available	No information available	on -
			(67.07			
Specific	target organ toxic	city - repeated ex Specific e		Target or	raan	Note
Subacute oral		No information		No information a		- INOIE
		No information		No information available		_
Subacute inhalat	ion	No information	available	No information available		-
Subchronic oral		No information	available	No information available -		-
Subchronic derm	nal	No information	available	No information a	available	-



Page 11 of 17

Trade name:		IFFER, SOLUTION			
Product code:	RP-OT-X**	Date of compilation:	05 July 2019	Version:	3

Subchi	chronic inhalation No information		a available	No information available	_		
Chroni		No information		No information available	-		
Chroni	c dermal	No information	n available	No information available	-		
Chroni	c inhalation	No information	n available	No information available	-		
	CMR effects (carcinoge	nicity, mutagenici	ty, reprodu	ctive toxicity)			
	Carcinogenicity:		Suspecte	d of causing cancer.			
	Mutagenicity in-vitro:		No inforn	nation available			
	Genotoxicity:		No information available				
	Mutagenicity in-vivo:		No information available				
	Germ cell mutagenicity	:	Suspected of causing genetic defects.				
	Reproductive toxicity:		No information available				
			<u>.</u>				
	Summary of evaluation properties:	on of the CMR	No information available				
11.2.	Practical experiences:						
	Classification observation	ons:	No	information available			
	Other observations:		No information available				
11.3.	3. General notes:						
	-						

CECTION	12. Ecological	
	I / ECOLOGICAL	INTORMSTIAN

12.1. Toxicity

Acute (short-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note
Fish	LC ₅₀	96 hours	fish	No information available	60 mg/l (paraformaldehyde)	-
Crustacea:	EC ₅₀	48 hours	-	No information available	-	-
Algae/aquatic plants:	IC ₅₀	72 hours	-	No information available	-	-
Other organisms:	-	-	-	-	-	-
Chronic (long-term) toxicity	Doza	Exposure time	Species	Method	Evaluation	Note



Page 12 of 17

Trade name:	REDUCING BUFFER, SOLUTION					
Product code:	RP-OT-X**	Date of compilation:	05 July 2019	Version:	3	

Fish	LC ₅₀	96 hours	No informatio n available	No information available	No information available	-
Crustacea:	EC ₅₀	48 hours	No informatio n available	No information available	No information available	-
Algae/aquatic plants:	IC ₅₀	72 hours	No informatio n 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	-

ъ.		1
RIOC	IDATA	dation
DIOU	ıcuıaı	uation

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

12.3. Bioaccumulative potential

Octanol-water partition coefficient (log Pow)

Value	Concentration	рН	°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	-



Page 13 of 17

								ŀ	Page 13	OT 1/
Trade na	ame:			RED	DUCING BU	FFER, SC	LUTION			
Product	code:	RP-OT-X	* *	Date of cor	mpilation:	05 July 2	2019	Versi	on:	3
(Chronic e	cotoxicity								
	Value		Dose	Exposure time	Species	. N	1ethod	Evalu	uation	Note
Chronic toxicity on fish LC ₅₀		C ₅₀	No information available	No No information available available		rmation lable	No informa availab		-	
Chronic toxicity on crustacea (Daphnia)		C ₅₀	No information available	No informatic available		rmation lable	No informa availab		-	
	Mobility i									
		•		ution in environme	ental compa	tments:				
		nation availa	abie							
	Surface te	ension:								
	V	Value °C Concentration Metho		Method		Note				
	No available	information		information ailable	No information available		No information available		available	-
P	Adsorptic	n / desorpt	ion							
Transport	t i i	/D coefficier		log Kow	Evapora	tion rate	Meth	od	N	Note
Soil-Wate	er No avail	informa able		No informatio available	n No infor available			mation _		
Water-Air	r No avail	informa able		No informatio available	n No infor available		No inform available	nation	-	
Soil-Air	No avail	informa able		No informatio available	n No infor available		No inform available	_		
		PBT and vP		sessment						
<u> </u>	No intorn	nation availa	able							
12.6. (Other adv	verse effects								
		nation availa								
ľ	intorn	nation availa	abie							



Page 14 of 17

Trade name:	REDUCING BUFFER, SOLUTION					
Product code:	RP-OT-X**	Date of compilation:	05 July 2019	Version:	3	

	Waste processing metho	ds			
13.1.	waste processing metric				
13.1.1.	Product/Packaging dispo	osal:			
	Submit for disposal to th Protection.	e legal person authorized by the Ministry of Environmental and Nature			
13.1.2.	Waste codes/waste design	gnations according to Low:			
	Disposal must be made a	Disposal must be made according to official regulations.			
13.1.3.	Waste tretment – relevar	nt information			
	No information available				
13.1.4.	Sewage disposal – relevant information:				
	Waste must not be disposed of into the sewage system.				
13.1.5.	.1.5. Other disposal recommendations:				
	authorized by the ministr	oduct's remains into the sewage system. Submit the remains to the collectors by in charge. Do not dispose of the packaging into the sewage system. Submit ectors authorized by the ministry in charge. Do not dispose of in places where			
13.1.6.	Relevant Community pro	visions:			
	-				
	-				
SECTIO	- N 14. Transport information	on			
SECTIO	- N 14. Transport information Transporting/shipment by				
	Transporting/shipment by				
UN num	Transporting/shipment by	road (ADR)			
UN num UN prop	Transporting/shipment by hber:	road (ADR)			
UN num UN prop Transpo	Transporting/shipment by hber: per shipping name: ort hazard class(es):	road (ADR) Not subject to transport regulations			
UN num UN prop Transpo Packing	Transporting/shipment by hber: per shipping name: ort hazard class(es):	road (ADR) Not subject to transport regulations.			
UN num UN prop Transpo Packing Environi	Transporting/shipment by hber: per shipping name: ort hazard class(es): group:	road (ADR) Not subject to transport regulations.			
UN num UN prop Transpo Packing Environi	Transporting/shipment by nber: per shipping name: ort hazard class(es): group: mental hazards:	road (ADR) Not subject to transport regulations.			
UN num UN prop Transpo Packing Environ Special	Transporting/shipment by hber: per shipping name: ort hazard class(es): group: mental hazards: precautions for user: Transporting/shipment by	road (ADR) Not subject to transport regulations.			
UN num UN prop Transpo Packing Environo Special UN num	Transporting/shipment by hber: per shipping name: ort hazard class(es): group: mental hazards: precautions for user: Transporting/shipment by	road (ADR) Not subject to transport regulations. rail (RID)			



Page 15 of 17

Trade name:		REDUCING BUFFER, SOLUTION					
Product code:	RP-OT-X**	Date of compilation:	05 July 2019	Version:	3		
Packing group:		-					
Environmental ha	zards:	-					

Packing group:	-
Environmental hazards:	-
Special precautions for user:	-
Transporting/shipment by inland	waterways (ADN)
UN number:	Not subject to transport regulations.
UN proper shipping name:	-
Transport hazard class(es):	-
Packing group:	-
Environmental hazards:	-
Special precautions for user:	-
Transporting/shipment by sea (IN	MDG)
UN number:	Not subject to transport regulations.
UN proper shipping name:	-
Transport hazard class(es):	-
Packing group:	-
Environmental hazards:	-
Special precautions for user:	-
Transport in bulk condition in accordance with Annex II. of MARPOL 73/78 and IBC Codex:	-
Transporting/shipment by air (IC.	AO-TI/IATA-DGR)
UN number:	Not subject to transport regulations.
UN proper shipping name:	-
Transport hazard class(es):	-
Packing group:	-
Environmental hazards:	-
Special precautions for user:	-
Further information:	

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



Page 16 of 17

Trade name:	REDUCING BUFFER, SOLUTION				
Product code:	RP-OT-X**	Date of compilation:	05 July 2019	Version:	3

	Other EU regulations:	EC Regulation No. 1906/2007 and EC Regulation No. 1272/2008 of the European Parliament and the European Council; The European Commission Regulation No. 453/2010 on changes and amendments to the Regulation (EC) No. 1907/2006 of the European Parliament and Council on registration, evaluation, authorization and restriction of chemical substances (REACH); EC Regulation No. 2037/200 of the European Parliament and Council of 29 June 2000 on ozone-depleting substances; EC Regulation No. 689/2008 of the European Parliament and Council of 17 June 2008 concerning the export and import of dangerous chemicals; EC Regulation No. 850/2004 of the European Parliament and Council of 29 April 2004 on persistent organic pollutants; Directive 2008/98/EC of the European Parliament and Council of 19 November 2008 on waste and repealing certain Directives	
	Information according 1999 guideline)	9/13/EC about limitation of emissions of volatile organic compounds (VOC-	
	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		

SECTIO	N 16. Other information			
16.1.	Indication of changes:	-		
16.2.	Abbreviations and acronyms:	PBT Stable, bioaccumulative and toxic vPvB Strongly stable and strongly bioaccumulative LD ₅₀ Lethal dose, 50% LC ₅₀ Lethal concentration, 50% STOT – SE Specific target organ toxicity - single exposure		
16.3.	Key literature references and source of data:	-		
16.4.	Classification and procedure 1272/2008 (CLP)	used to derive the classification for mixture according to Regulation (EC)		
Classification		Classification procedure		
-		-		
16.5.	Relevant H statements (numl	oer and full text)		



Page 17 of 17

Trade name:		REDUCING BUFFER, SOLUTION				
Product code:	RP-OT-X**	Date of compilation:	05 July 2019	Version:	3	

		H302	Harmful if swallowed
		H315	Causes skin irritation
	H:	H317	May cause an allergic skin reaction.
		H318	Causes serious eye damage
		H332	Harmful if inhaled
		H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
16.6.	Trai	ning advice:	-
16.7. Further information:			** "X" in the product code marks different volumes (different packaging of the product)
		her information:	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.

ANNEX: Exposure scenario resulting to Chemical safety assessment



Page 1 of 16

Trading name:		SODIUM THIOSULFATE,	SODIUM THIOSULFATE, 5% SOLUTION		
Product code:	NT5-OT-X**	Date of compilation:	05 July 2019	Version:	3

SECTION	ON 1: Identification of	the substance	e/mixture	and of the company/undertaking	
1.1	Product identifier				
	Trading name:	SODIUM TH	HIOSULFA [*]	OSULFATE, 5% SOLUTION	
	Chemical name:	-			
	Catalogue number:	NT5-OT-X*	*		
1.2	Relevant identified use	es of the subs	tance or m	nixture and uses advised against	
	Uses:		For use	with special staining kits.	
	Uses advised against:			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 shee	t	
	Supplier:		BioGnost Ltd.		
	Address:		Medjugorska 59, Zagreb		
	Telephone number:		+385 1 2409997		
	Telefax.:		+385 1 2404039		
	e-mail of competent p	erson:	msds@biognost.hr		
	National contact:		-		
1.4	Emergency telephone number				
	National Protection ar	nd Rescue Dire	ectorate:	112	
	Medical information:			+385 1 2348 342	
	Medical information:			T303 1 2340 342	

SECTIO	SECTION 2. Hazards identification						
2.1	Classification of the substance	or mixture					
2.1.1	Classification according to Regu	ulation (EC) No 12	272/2008 (CLP)				
	Hazard class and catego	ory code:	Hazard statements*:				
	Not identified as hazardous sub	ostance.	-				
2.1.2.	Additional information						
	-						
*For fu	ll text of Hazard- and EU Hazard-	statements: see S	ECTION 16				
2.2	Label elements						
	Product identification:	SODIUM THIOS	ulfate, 5% solution				
	Identification number:	-					
	Authorization number:	-					
	Hazard pictograms:	-					



Page 2 of 16

Trading name:	S	SODIUM THIOSULFATE,			
Product code:	NT5-OT-X**	Date of compilation:	05 July 2019	Version:	3

	Signal word:	-
	Hazard statements:	-
	Precautionary statements:	-
	Supplemetal hazard information (EU):	-
2.3	Other hazards	
	-	

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

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



Page 3 of 16

Trading name:	S	SODIUM THIOSULFATE,	<u> </u>		
Product code:	NT5-OT-X**	Date of compilation:	05 July 2019	Version:	3

	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		
	-		

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

SECTIO	ON 6. Accidental release measu	ires
6.1	Personal precautions, protective equipment and emergency procedures	
6.1.1.	For non-emergency personnel	
	Protective equipment:	Use personal protective equipment (see Section 8).
	Accident prevention methods:	Evacuate members of all non-essential personnel and those members without protective equipment. Avoid breathing vapors and avoid contact with skin and eyes. Do not smoke. Keep away from ignition sources.
	Emergency procedures:	Mark the area using proper signs.
6.1.2.	For emergency responders:	
	Use protective equipment; in ca (see Section 8).	ase of inadequate ventilation use adequate airways protective equipment
6.2	Environmental precautions:	
	Do not dispose of in sewage, d Protection and Rescue Director	rainage system and waterways. In case of large spillage contact National rate (NPRD) on 112.
6.3	Methods and material for conta	ainment and cleaning up
6.3.1.	Bunding, covering of drains; capping procedures:	Sand protective barrier or barriers made of similar materials.



Page 4 of 16

Trading name:		SODIUM THIOSULFATE	5% SOLUTION	<u> </u>	
Product code:	NT5-OT-X**	Date of compilation:	05 July 2019	Version:	3

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 and involved materials with water.
6.3.3.	Other information:	Secure proper ventilation. Do not use incompatible materials (see Section 10).
6.4	Reference to other sections	
	See Section 7 for information See Section 8 for information See Section 13 for disposal in	on personal protection equipment.

SECTIO	ON 7. Handling and storage				
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	on:	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:	n general occupational hygiene:			
	Do not eat, drink or smoke in the workspace. The	noroughly was	sh hands after work and before eating.		
7.2 Conditions for safe storage, including any incompatibilities					
	Technical measures and storage conditions:	well ventil	ghtly closed and upright set containers in a ated storage rooms at temperatures ranging 25 °C. Protect from heat and direct sunlight.		
	Packaging materials:	Manufactu	ırer's original packaging.		
	Requirements for storage rooms and vessels:	Keep away tightly clo	r from food and drink. Keep the containers sed.		
	Advices for storage equipment:	must be re	ge must be made of hard material; floors esistant to chemicals. There must be no drain ly leads into sewage system. Secure proper n.		
	Further information on storage conditions:	and do no	ace the unused material in the storage room t use empty containers for storing other Do not store with incompatible materials on 10).		



Soil (agricultural)

Air

SAFETY DATA SHEET BIOGNOST® According to Regulation (EC) No. 1907/2006

Page 5 of 16

Trading name:		SODIUM THIOSULFATE	, 5% SOLUTION		
Product code:	NT5-OT-X**	Date of compilation:	05 July 2019	Version:	3

7.3	Specific end use(s)	
	Recommendations:	-
	Industrial sector specific solutions:	-

Industrial sector specific solutions:					-			
SECTION 8. Expos	ure contr	ols/perso	nal protec	tion				
8.1 Control pa	arameters							
Substance					Occupational exposure limit values/short term values			Biological limit values
					ppm	mg/m³		
-			-		-	-	1	
Substance name:	-							
EC No:		CAS No	: -					
DNEL	·							
				Inc	dustrial			
Route of	Acı	ıte	Acut	te		Chronic		Chronic
exposure:	effect	local	ocal effect systemi		с	effect local		effect systemic
Oral	-		-		-			-
Inhalation	-		-		-	-		-
Dermal	-		-		-			-
Critical physical par	rameters: s	olubility,	flammabilit	ty, coı	rrosivity:	-		
				Co	nsumer			
Route of	Ad	cute	Acute			Chronic		Chronic
exposure:	effec	t local	effect sys	stemi	mic effect local			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 inform	nation available		
Microorganisms in	sewage tr	eatment			no information available			

no information available

no information available



Page 6 of 16

Trading name:		SODIUM THIOSULFATE,	5% SOLUTION	<u> </u>	
Product code:	NT5-OT-X**	Date of compilation:	05 July 2019	Version:	3

8.2	Exposure controls				
8.2.1.	Appropriate engineering controls	5			
	Substance/mixture related measurevent exposure during identified		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 preve exposure:	ent	Organization of work in order to reduce other worker's influence during work process.		
	Technical measures to prevent ex	cposure:	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	ıt			
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:	The protective gloves have to satisfy the specification of Regulation (EU) 2016/425 and the related standard EN 3 Glove material: nitrile rubber Glove thickness: 0.40 mm Time until perforation: > 480 min			
	Other skin protection:	footwe entire imperr	everyday work use cotton clothing (EN 340) and suitable ear, such as rubber boots (EN 20345) or shoes that cover the foot. In case of spilling hazard, use clothing made of meable material suitable for protection from liquid chemicals PVC, himex) and footwear made from the same material.		
8.2.2.3.	Respiratory protection:	with a	tive full face mask (EN 136) or half mask (EN 140) equipped filter for organic vapors, type "A" (boiling point >65°C) ng to EN 14387) used when concentration levels exceed GVI.		
8.2.2.4.	Thermal hazards:	No info	ormation available		
8.2.3.	Environmental exposure controls				
	Substance/mixture related measures to prevent exposure:	See Se	ction 6		
	Structural measures to prevent exposure:	Use mo	odern equipment.		
	Organisational measures to prevent exposure:	Adapt the work process to the required working conditions of the workplace.			



Page 7 of 16

Trading name:	S	ODIUM THIOSULFATE,	5% SOLUTION	<u> </u>	
Product code:	NT5-OT-X**	Date of compilation:	05 July 2019	Version:	3

Technical measures to prevent	See Section 6
exposure:	See Seemon o

Information on basic physical and	chemical properties	
	Value	Method
Physical state:	liquid	No information available
Colour:	colourless	No information available
Odour:	No information available	No information available
Odor threshold:	No information available	No information available
pH:	No information available	No information available
Melting point / freezing point;	No information available	No information available
Initial boiling point and boiling range:	No information available	No information available
Flash point:	No information available	No information available
Evaporation rate:	No information available	No information available
Flammability (solid, gas):	No information available	No information available
Upper/lower flammability or explosive limits:	No information available	No information available
Vapour pressure:	No information available	No information available
Vapour density:	No information available	No information available
Relative density:	No information available	No information available
Bulk density:	No information available	No information available
Solubility(ies):	No information available	No information available
Partition coefficient: n- octanol/water (log Kow):	No information available	No information available
Auto-ignition temperature:	No information available	No information available
Decomposition temperature:	No information available	No information available
Viscosity:	No information available	No information available
Explosive properties:	No information available	No information available
Oxidising properties:	No information available	No information available

SECTION 10. Stability and reactivity	
10.1 Reactivity:	See subsections 10.3 through 10.5.



Page 8 of 16

Trading name:	ame: SODIUM THIOSULFATE, 5% SOLUTION				
Product code:	NT5-OT-X**	Date of compilation:	05 July 2019	Version:	3

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

SECTION 11. T		xicological e							
	toxicity:								
Route of exposure:		1ethod	Species	Do	ose LD ₅₀ /LC ₅₀ or ATE _{mix}	Exp	osure ti	me	Results
Oral:	No in availa	formation ble	_		information lable		-		_
Dermal:	No in availa	formation ble	_		information lable		_		_
Inhalation:	No in availa	formation ble	_		information lable		_		-
Specif	ic target or	gan toxicity -	single exp	osure (S	TOT SE):				
		Specific	effects		Target o	organ			Note
Oral:	No in	formation av	ailable		No information	availabl	e	-	
Dermal:	No in	formation av	ailable	No information available		-			
Inhalation:	No in	formation av	ailable	No information available -					
1									
Aspira	tion hazard	:	١	No infor	mation available.				
Irritati	on and corr								
		Exposure t	ime	Spec	ies Evaluati	ion	Method		Note
Skin corrosion/irrita	tion:		-		-	_		-	
Serious eye damage/irritati	on -		-		-	-		-	
Sensit	ization								
Skin sensitization	on:	No infor	mation avai	ilable.					
Respiratory sensitization: No information a				ilabla					



Page 9 of 16

Trading name:	S	ODIUM THIOSULFATE,	5% SOLUTION		
Product code:	NT5-OT-X**	Date of compilation:	05 July 2019	Version:	3

Sympto	ms rela	ated to the ph	ysical, chemic	al and toxicolog	gical characterist	ics	
Oral exposure:							
Dermal exposure	: :	Allergic perso	ons may displa	y irritation.			
Inhalation exposure: Allergic persons may display irritation after prolonged or repeated exposure.							re.
Eye exposure:		May cause ey	e irritation.				
Repeate	ed dose	e toxicity (sub	acute, subchro	onic, chronic)			
, -		Dose	Exposure time	Species	Method	Evaluation	Note
Subacute oral	No availa	information able	No information available	No information available	No information available	No information available	-
Subacute dermal	No availa	information able	No information available	No information available	No information available	No information available	-
Subacute inhalation	No availa	information able	No information available	No information available	No information available	No information available	-
Subchronic oral	No availa	information able	No information available	No information available	No information available	No information available	-
Subchronic dermal	No availa	information able	No information available	No information available	No information available	No information available	-
Subchronic inhalation	No availa	information able	No information available	No information available	No information available	No information available	-
Chronic oral	No availa	information able	No information available	No information available	No information available	No information available	-
Chronic dermal	No availa	information able	No information available	No information available	No information available	No information available	-
Chronic inhalation	No availa	information able	No information available	No information available	No information available	No information available	-
Specific	target	organ toxicit	y – repeated e	xposure (STOT	RE):		
			Specific effec	ets	Target o	rgan	Note
Subacute oral		No informa	tion available		No information	n available -	
Subacute derma		No informa	tion available		No informatio	n available -	



Page 10 of 16

Trading name:		SODIUM THIOSULFATE,	5% SOLUTION		
Product code:	NT5-OT-X**	Date of compilation:	05 July 2019	Version:	3

11.3	General notes:						
	Other observa	uons.	No information availa	bie			
	Classification of		No information availa				
11.2	Practical exper						
	Summary of properties:	evaluation of the CM	R Based on available d met.	ata, the classifica	ation criteria are no		
	Reproductive t	oxicity.	oased on available data, ti	ie classification c	interia are not met.		
	Reproductive t		Based on available data, the classification criteria are not met.				
	Mutagenicity <i>i</i> Germ cell muta		Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met.				
	Genotoxicity:		Based on available data, the classification criteria are not met.				
	Mutagenicity in vitro:		Based on available data, the classification criteria are not met.				
	Carcinogenicit	,	Based on available data, the classification criteria are not met.				
	CMR effects (c	arcinogenicity; mutagenicity	reproductive toxicity)				
Chronic	inhalation	No information available	No inforn	nation available	-		
	dermal	No information available		nation available	-		
Chronic		No information available		nation available	-		
Subchro	onic inhalation	No information available	No inforn	nation available	-		
Subchro	onic dermal	No information available	No inforn	nation available	-		
Subchro	onic oral	No information available	No inforn	nation available	-		
Subacu	acute inhalation No information available		No inforn	nation available	-		

SECTION 12. Ecological information									
12.1 Toxicity	12.1 Toxicity								
Acute (short-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note			
Fish	LC ₅₀	96 hours	No information available	No information available	No information available	-			
Crustacea:	EC ₅₀	48 hours	No information available	No information available	No information available	-			



Page 11 of 16

				9	
Trading name:	e: SODIUM THIOSULFATE, 5% SOLUTION				
Product code:	NT5-OT-X**	Date of compilation:	05 July 2019	Version:	3

Algae/aquatic plants	IC ₅₀	4 days	No information available	No information available	No information available	-
Other organisms	-	-	-	_	-	-
Chronic (long-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note
Fish	LC ₅₀	96 hours	No information available	No information available	No information available	-
Crustacea:	EC ₅₀	48 hours	No information available	No information available	No information available	-
Algae/aquatic plants	IC ₅₀	72 hours	No information available	No information available	No information available	-
Other organisms	-	-	-	-	-	-
12.2 Persistence Abiotic deg	and degrada	oility				
	egradation h	alf-lives	Method	Evaluatio	on	Note

	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				

12.3 Bioaccumulative potential

Octanol-water partition coefficient (log Kow)

Octanor-water partition coefficient (log kow)						
Value	Concentration	рН	°C	Method	Evaluation	Note
-	-	-	-	-	-	-



											Page 12 of	10
Tradin	ng nam	ne:		SC	DIUM	THI	OSULF	ATE, 5	% SOLU	JTION		
Produ	ct cod	e: N	T5-OT-X**		Date of compilation: 0			05 July	2019	Version:	3	
	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8							1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
	Rioco	ncentrat	ion factor (BCF)								
	Value	Jilceilliat	Species	,	Me	thod		F\	/aluatior	<u> </u>	Note	
	ormatic	on No	· · · · · · · · · · · · · · · · · · ·	nation N	o inforn				ormation		11010	
availab			ailable		/ailable	. ia ci o		availab		-		
			• • •									
	Chro	nic ecoto	xicity	Fyrnasi								
	Val	ue	Dose	Exposu time		Spe	ecies	Meth	nod	Evaluation	n N	ote
				No	١	No		No		No		
Chroni	c toxici	ty on fish	LC ₅₀	informat available	1	nforn availa	nation	inform availab	1	informatior available	า -	
				No		No	DIE	No		No		
	ic toxici cea (<i>Da</i>	-	EC ₅₀	informa			nation	inform	1	information	า -	
Crustac	Lea (Du	рина		available	e a	availa	ble	availab	le	available		
12.4	N4 1		.1									
12.4	1	ility in so		::	·	.4.1.						
		······································	dicted distribut n available	ion in envi	ironmer	itai c	ompart	ments:				
		ace tensio										
		alue	°C	Conc	entratio	nn -		Metho	nd.		Note	
	No	dide	No								14010	
	infor	mation	information	No inf availat	ormatio ole	n	No inf availal	ormationale	n	-		
	avail	able	available	arana.	J.C		u v u ii u i					
	Δdsc	rntion / a	desorption									
			coefficient									
Transp	ort		's constant	log k	Kow	Ev	aporati	on rate	M	lethod	No	te
Soil-wa	ater	No	information	No infor			inform	nation		ormation	_	
JU11-W	u (C)	available		available			ailable		availak			
Water-	-air	No available	information	No infor			o inform ailable	nation	No inf availab	ormation	_	



Page 13 of 16

Trading	g name:		SODIUM	THIOSULFATE,	5% SOLUTION		
Produc	t code:	NT5-OT-X**	Date of	compilation:	05 July 2019	Version:	3
Soil-air	No availa	information able	No information available	No information available	No information available	-	
12.5	Results of	PBT and vPvB asses	ssment				
	Not applic						
12.6		erse effects					
	No further	relevant information	on available.				
SECTIO	N 13. Disp	osal consideration	S				
13.1	Waste tr	reatment methods					
13.1.1.		/Packaging disposa					
	Submit f Protection	•	egal person autho	rized by the Minis	try of Environmental	l and Nature	
	:						
13.1.2.	Waste co	odes/waste designa	ations according to	c Law:			
	15 01 10 substand		ontains residual h	azardous substanc	es or is contaminate	ed with hazardo	ous
13.1.3.	Wasta tr	reatment – relevant	information:				
13.1.3.		mation available	information.				
13.1.4.	Sewage	disposal – relevant	information:				
	Waste m	nust not be dispose	d of into the sewa	ge system.			
12.15	0.1						
13.1.5.		sposal recommend		46	e. Culturait the automain	+- +	
	authoriz		n charge. Do not	dispose of the pac	n. Submit the remair kaging into the sewa arge.		
13.1.6.	Relevant Community provisions:						
	Disposa	must be made acc	ording to official r	egulations.			
SECTIO	N 14 TDAN	ISPORT INFORMA	TION				
JECTIO		ng/shipment by roa					
UN num		g, 5pслс by 100	······	o transport regula	tions		
	per shipping	g name:		₁			



Page 14 of 16

Trading name:		SODIUM THIOSULFATE	, 5% SOLUTION		
Product code:	NT5-OT-X**	Date of compilation:	05 July 2019	Version:	3

Transport hazard class(es):	-
Packing group:	-
Environmentally hazardous:	-
Special precautions for user:	-
Transporting/shipment by rail (R	ID)
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:	-
T	ADC)
Transporting/shipment by sea (II	NIDG)
UN number:	Not subject to transport regulations
UN number:	Not subject to transport regulations
UN number: UN proper shipping name:	Not subject to transport regulations -
UN number: UN proper shipping name: Transport hazard class(es):	Not subject to transport regulations
UN number: UN proper shipping name: Transport hazard class(es): Packing group:	Not subject to transport regulations
UN number: UN proper shipping name: Transport hazard class(es): Packing group: Environmentally hazardous:	Not subject to transport regulations
UN number: UN proper shipping name: Transport hazard class(es): Packing group: Environmentally hazardous: Special precautions for user: Transport in bulk according to Annex II	Not subject to transport regulations - - - - - - -
UN number: 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:	Not subject to transport regulations - - - - - - -
UN number: 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 (IC	Not subject to transport regulations AO-TI/IATA-DGR)
UN number: 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 (IC UN number:	Not subject to transport regulations Not subject to transport regulations
UN number: 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 (IC UN number: UN proper shipping name:	Not subject to transport regulations Not subject to transport regulations Not subject to transport regulations -
UN number: 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 (IC UN number: UN proper shipping name: Transport hazard class(es):	Not subject to transport regulations Not subject to transport regulations Not subject to transport regulations
UN number: 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 (IC UN number: UN proper shipping name: Transport hazard class(es): Packing group:	Not subject to transport regulations Not subject to transport regulations Not subject to transport regulations



Page 15 of 16

Trading name:		SODIUM THIOSULFATE,	5% SOLUTION		
Product code:	NT5-OT-X**	Date of compilation:	05 July 2019	Version:	3

15.1	Safety, health and environmental regulations/legislation specific for the substance or mixture					
	EU regulations					
	Authorization and/or rest	rictions of use				
	Authorizations:	-				
	Restrictions:	-				
	Other EU regulations:	EC Regulation No. 1906/2007 and EC Regulation No. 1272/2008 of the European Parliament and the European Council; Regulation (EC) No. 1907/2006 of the European Parliament and Council on registration, evaluation, authorization and restriction of chemical substances (REACH); EC Regulation No. 2037/200 of the European Parliament and Council from 29 June 2000 on substances that damage the ozone layer; EC Regulation No. 689/2008 of the European Parliament and Council from 17 June 2008 concerning the export and import of dangerous chemicals; EC Regulation No. 850/2004 of the European Parliament and Council from 29 April 2004 about persistent organic pollutants; Directive 2008/98/EC of the European Parliament and Council of 19				
	I. (): 10	November 2008 on waste and repealing certain Directives				
	Information according 19 guideline)	99/13/EC about limitation of emissions of volatile organic compounds (VOC-				
	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 assessme	ent				
	None					

SECTIO	ECTION 16. Other information				
16.1	Indication of changes:	-			
		PBT	Stable, bioaccumulative and toxic		
		vPvB	Strongly stable and strongly bioaccumulative.		
16.2	Abbreviations and acronyms:	LD ₅₀	Lethal dose, 50%		
		LC ₅₀	Lethal concentration, 50%		
		TCOJ	Specific target organ toxicity - single exposure		
16.3.	Key literature references and source of data:	-			



Page 16 of 16

				9	
Trading name:	SODIUM THIOSULFATE, 5% SOLUTION				
Product code:	NT5-OT-X**	Date of compilation:	05 July 2019	Version:	3

16.4.	Classification and procedure used to derive the classification for mixture according to Regulation (EC) 1272/2008 (CLP)				
Classifi	cation	Classification procedure			
_		-			
16.5.	Relevant H statements (numl	ber and full text)			
	H: -	-			
16.6.	Training advice:	-			
		** "X" in the product code marks different volumes (different packagings of the product)			
16.7.	Further information:	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.			

ANNEX: Exposure scenario resulting to chemical safety assessment
-



Page 1 of 16

Trading name:	NUCLEAR FAST RED (KERNECHTROT) REAGENT				
Product code:	KR-OT-X**	Date of compilation:	03 July 2019	Version:	3

SECTI	ON 1: Identification of	the substance	e/mixture	and of the company/undertaking	
1.1	Product identifier				
	Trading name:	NUCLEAR F	AST RED (KERNECHTROT) REAGENT	
	Chemical name:	-	-		
	Catalogue number:	KR-OT-X**			
1.2	Relevant identified uses of the substance or mixture and uses advised against			nixture and uses advised against	
	Uses:		Counter	stain in many special staining kits.	
	Uses advised against:		Only the	identified uses are advised.	
	Reason why uses advis	sed against:	The product is intended for use only as an <i>in vitro</i> gainst: medical device, registered at the Agency for Medicinal Product Medical Devices and there is no reason to use it for other parts.		
1.3	Details of the supplier	of the safety	data shee	t	
	Supplier:		BioGnos	t Ltd.	
	Address:		Medjugo	orska 59, Zagreb	
	Telephone number:		+385 1 2	+385 1 2409997	
	Telefax.:		+385 1 2	2404039	
	e-mail of competent p	erson:	msds@b	oiognost.hr	
	National contact:		-		
1.4	Emergency telephone	number			
	National Protection ar	nd Rescue Dire	ectorate:	112	
	Medical information:			+385 1 2348 342	
	Other information:			-	

SECTIO	SECTION 2. Hazards identification					
2.1	Classification of the substance or mixture					
2.1.1	Classification according to Regu	ulation (EC) No 12	272/2008 (CLP)			
	Hazard class and catego	ory code:	Hazard statements*:			
	Not identified as hazardous sub	ostance.	-			
2.1.2.	Additional information					
	-					
*For fu	ll text of Hazard- and EU Hazard-	statements: see S	ECTION 16			
2.2	Label elements					
	Product identification:	NUCLEAR FAST	RED (KERNECHTROT) REAGENT			
	Identification number:	-				
	Authorization number: -					
	Hazard pictograms:	-				



Page 2 of 16

Trading name:	NUCL	NUCLEAR FAST RED (KERNECHTROT) REAGENT					
Product code:	KR-OT-X**	Date of compilation:	03 July 2019	Version:	3		

	Signal word:	-
	Hazard statements:	-
	Precautionary statements:	-
	Supplemetal hazard information (EU):	-
2.3	Other hazards	
	-	

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

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



Page 3 of 16

Trading name:	NUCL	NUCLEAR FAST RED (KERNECHTROT) REAGENT					
Product code:	KR-OT-X**	Date of compilation:	03 July 2019	Version:	3		

	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 me	Indication of any immediate medical attention and special treatment needed		
	-			

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

SECTIO	ON 6. Accidental release measu	ires	
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 mem without protective equipment. Avoid breathing vapors and a contact with skin and eyes. Do not smoke. Keep away from ign sources.		
	Emergency procedures:	Mark the area using proper signs.	
6.1.2.	For emergency responders:		
	Use protective equipment; in ca (see Section 8).	ase of inadequate ventilation use adequate airways protective equipment	
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:	Sand protective barrier or barriers made of similar materials.	



Page 4 of 16

Trading name:	NUCLEAR FAST RED (KERNECHTROT) REAGENT				
Product code:	KR-OT-X**	Date of compilation:	03 July 2019	Version:	3

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 and involved materials with water.	
6.3.3.	Other information:	Secure proper ventilation. Do not use incompatible materials (see Section 10).	
6.4	Reference to other sections		
	See Section 7 for information on safe handling.		
	See Section 8 for information on personal protection equipment.		
	See Section 13 for disposal ir	nformation.	

SECTIO	ON 7. Handling and storage				
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	on:	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:	dvice 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 incon	npatibilities			
	Technical measures and storage conditions:	well ventila	htly closed and upright set containers in a ated storage rooms at temperatures ranging 25 °C. Protect from heat and direct sunlight.		
	Packaging materials:	Manufactu	urer's original packaging.		
	Requirements for storage rooms and vessels:	Keep away tightly clos	r from food and drink. Keep the containers sed.		
	Advices for storage equipment:	must be re	e must be made of hard material; floors esistant to chemicals. There must be no drain ly leads into sewage system. Secure proper .		
	Further information on storage conditions:	and do no	ice the unused material in the storage room t use empty containers for storing other Do not store with incompatible materials on 10).		



								Page 5 of 16	<u>;</u>
Trading name:			NUCLEA	R FAST	RED (KE	RNECHTR	OT) REAGE	NT	
Product code:	ode: KR-OT-X**		D	Date of compilation: 03		on: 03 J	uly 2019	Version:	3
7.3 Specific e									
Recomme					-				
Industrial	dustrial sector specific solutions:				-				
SECTION 8. Expos		ols/perso	onal protec	tion					
8.1 Control p	arameters	T		ı			T		
				Occupational exposure limit					
Substance	e	CAS No		values/short term values		Biolo	Biological limit values		
				рр	om mg/m³				
-			-			-			
Substance name:	-								
EC No:	-	CAS No) : -						
DNEL									
				Indus	strial				
Route of	Acı	ıte	Acut	te		Chronic		Chronic	
exposure:	effect	local	effect sys	stemic	e	ffect local		effect systemic	
Oral	-		-		-		-		
Inhalation	-		-		-		-		
Dermal	-		-		-		-		
Critical physical pa	rameters:	olubility	flammahilit	COTTO	sivity:	_			

 p, 5ca	parameters	55.6.5,	,	
				ī

C	on	su	m	er

Route of	Acute	Acute	Chronic	Chronic
exposure:	effect local	effect systemic	effect local	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	



Page 6 of 16

Trading name:	NUCI	EAR FAST RED (KERNEC	CHTROT) REAGE	NT	
Product code:	KR-OT-X**	Date of compilation:	03 July 2019	Version:	3

8.2	Exposure controls				
8.2.1.	Appropriate engineering controls				
	Substance/mixture related measurevent exposure during identifie		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 preve exposure:	ent	Organization of work in order to reduce other worker's influence during work process.		
	Technical measures to prevent ex	rposure:	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:		otective gloves have to satisfy the specification of action (EU) 2016/425 and the related standard EN 374. Glove material: nitrile rubber Glove thickness: 0.40 mm Time until perforation: > 480 min		
	Other skin protection:	footwe entire impern	everyday work use cotton clothing (EN 340) and suitable ear, such as rubber boots (EN 20345) or shoes that cover the foot. In case of spilling hazard, use clothing made of meable material suitable for protection from liquid chemicals PVC, himex) and footwear made from the same material.		
8.2.2.3.	Respiratory protection:	with a	tive full face mask (EN 136) or half mask (EN 140) equipped filter for organic vapors, type "A" (boiling point >65°C) ng to EN 14387) used when concentration levels exceed GVI.		
8.2.2.4.	Thermal hazards:	No info	ormation available		
8.2.3.	Environmental exposure controls				
	Substance/mixture related measures to prevent exposure:	See Se	ction 6		
	Structural measures to prevent exposure:	Use mo	odern equipment.		
	Organisational measures to prevent exposure:	Adapt the work process to the required working conditions of the workplace.			



Page 7 of 16

Trading name:	NUCI	EAR FAST RED (KERNE	CHTROT) REAGE	NT	
Product code:	KR-OT-X**	Date of compilation:	03 July 2019	Version:	3

Technical measures to prevent	See Section 6
exposure:	See Section 6

9.1	Information on basic physical and	chemical properties	
		Value	Method
	Physical state:	liquid	No information available
	Colour:	red	No information available
	Odour:	No information available	No information available
	Odor threshold:	No information available	No information available
	pH:	No information available	No information available
	Melting point / freezing point;	No information available	No information available
	Initial boiling point and boiling range:	No information available	No information available
	Flash point:	No information available	No information available
	Evaporation rate:	No information available	No information available
	Flammability (solid, gas):	No information available	No information available
	Upper/lower flammability or explosive limits:	No information available	No information available
	Vapour pressure:	No information available	No information available
	Vapour density:	No information available	No information available
	Relative density:	No information available	No information available
	Bulk density:	No information available	No information available
	Solubility(ies):	No information available	No information available
	Partition coefficient: n-octanol/water (log Kow):	No information available	No information available
	Auto-ignition temperature:	No information available	No information available
	Decomposition temperature:	No information available	No information available
	Viscosity:	No information available	No information available
	Explosive properties:	No information available	No information available
	Oxidising properties:	No information available	No information available

SECTION 10. Stability and reactivity	
10.1 Reactivity:	See subsections 10.3 through 10.5.



Page 8 of 16

Trading name:		NUCLEAR FAST RED (KERNE	CHTROT) REAGE	NT	
Product code:	KR-OT-X**	Date of compilation:	03 July 2019	Version:	3

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

SECTION 11. T		xicological e							
	toxicity:								
Route of exposure:		1ethod	Species	Do	ose LD ₅₀ /LC ₅₀ or ATE _{mix}	Exp	osure ti	me	Results
Oral:	No in availa	formation ble	_		information lable		-		_
Dermal:	No in availa	formation ble	_		information lable		_		_
Inhalation: No inf		formation ble	_		information lable		_		-
Specif	ic target or	gan toxicity -	single exp	osure (S	TOT SE):				
		Specific	effects		Target o	organ			Note
Oral:	Oral: No information available		ailable		No information available		-		
Dermal:	No in	formation av	on available		No information available		-		
Inhalation:	No in	formation av	available		No information available			-	
1									
Aspira	tion hazard	:	١	No infor	mation available.				
Irritati	on and corr								
		Exposure t	ime	Spec	ies Evaluati	ion	Method		Note
Skin corrosion/irrita	tion:		-		-	_		-	
Serious eye damage/irritati	on -		-		-	-		-	
Sensit	ization								
Skin sensitization	on:	No infor	mation avai	ilable.					
Respiratory sensitization: No information a				ilabla					



Page 9 of 16

Trading name:	NUCL	NUCLEAR FAST RED (KERNECHTROT) REAGENT				
Product code:	KR-OT-X**	Date of compilation:	03 July 2019	Version:	3	

Oral exposure:		Harmful if sw	allowed.					
Dermal exposure	: :	Harmful if ab	if absorbed through skin. May cause skin irritation.					
Inhalation expos	ure:	Harmful if inl	naled. May cau	ıse respiratory t	ract irritation.			
Eye exposure:		May cause ey	e irritation.					
Repeate	ed dos	e toxicity (sub	acute, subchro	onic, chronic)				
		Dose	Exposure time	Species	Method	Evaluation	Note	
Subacute oral	No avail	information able	No information available	No information available	No information available	No information available	ı -	
Subacute dermal	No avail	information able	No information available	No information available	No information available	No informatior available	- -	
Subacute inhalation	No avail	information able	No information available	No information available	No information available	No informatior available	ı -	
Subchronic oral	No avail	information able	No information available	No information available	No information available	No information available	n -	
Subchronic dermal	No avail	information able	No information available	No information available	No information available	No information available	ı -	
Subchronic inhalation	No avail	information able	No information available	No information available	No information available	No information available	ı -	
Chronic oral	No avail	information able	No information available	No information available	No information available	No information available	ı -	
Chronic dermal	No avail	information able	No information available	No information available	No information available	No information available	ı -	
Chronic inhalation	No avail	information able	No information available	No information available	No information available	No information available	ı -	
Specific	targe	t organ toxicit	<u> </u>	xposure (STOT				
<u> </u>		N	Specific effec	ts	Target o		Note	
Subacute oral	I		tion available		No information	n available n available		



Page 10 of 16

Trading name:		NUCLEAR FAST RED (KERNE	CHTROT) REAGE	NT	
Product code:	KR-OT-X**	Date of compilation:	03 July 2019	Version:	3

11.3	General notes:							
	Other observa	tions:	No information available					
	Classification o		No information available					
11.2	Practical exper							
	Summary of properties:	evaluation of the CM	e CMR Based on available data, the classification criteria are no met.					
	Reproductive t	OXICITY:	Based on available data, the classification criteria are not met.					
	Germ cell muta		Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met.					
	Mutagenicity i							
	Genotoxicity:		Based on available data, the classification criteria are not met.					
	Mutagenicity i	n vitro:	Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met.					
	Carcinogenicit	y:						
	CMR effects (c	arcinogenicity; mutagenicity;	reproductive toxicity)					
Chroni	c inhalation	No information available	No information available	-				
	c dermal	No information available	No information available					
Chroni		No information available	No information available					
Subchr	ronic inhalation	No information available	No information available	-				
Subchr	onic dermal	No information available	No information available	-				
Subchr	onic oral	No information available	No information available	· -				
Subacı	ute inhalation	No information available	No information available	-				

SECTION 12. Ecological information										
12.1 Toxicity	12.1 Toxicity									
Acute (short-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note				
Fish	LC ₅₀	96 hours	No information available	No information available	No information available	-				
Crustacea:	EC ₅₀	48 hours	No information available	No information available	No information available	-				



Page 11 of 16

Trading name:	NUCL	NUCLEAR FAST RED (KERNECHTROT) REAGENT				
Product code:	KR-OT-X**	Date of compilation:	03 July 2019	Version:	3	

Product code: K		KR-OT-X**		Date of compila	tion:	03 Jul	y 2019	Vers	Version:	
							T			
Algae/aquatic pl	lants	IC ₅₀	4 days	No information available	No inform availat		No information available	on	-	
Other organisms	S	-	-	-		-	-		_	
Chronic (long-te toxicity	erm)	Dose	Exposure time	e Species	Met	thod	Evaluat	ion	Note	
Fish		LC ₅₀	96 hours	No information available	No inform availab		No information available	on	-	
Crustacea:		EC ₅₀	48 hours	No information available	No inform availat		No information available	on	_	
Algae/aquatic pl	lants	IC ₅₀	72 hours	No information available	No inform availab		No information available	on	_	
Other organisms	S	-	-	-	-		-		_	
12.2 Persiste	ence a	nd degradal	oility							
Abiotic	degra	adation								
	De	egradation h	alf-lives	Method	E	valuatio	n	N	lote	
Marine water	No ir	nformation a	available	No information	No inf	ormatio	n -			

	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	-

Biod		

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

12.3 Bioaccumulative potential

Octanol-water	partition	coefficient	(log	Kow)	١
---------------	-----------	-------------	------	------	---

Value	Concentration	Ριι		Wicthod	Evaluation	Note				
Value	Concentration	На	۰٫	Method	Evaluation	Note				
Octanor-water partition coefficient (log Row)										



											Page 12 of	10
Trading	name:			NUC	LEAR FA	AST R	ED (K	RNECH	ITROT)	REAGEN	Τ	
Product	t code:	KR-C)T-X**		Date	of co	mpilati	on:	03 July	2019	Version:	3
	Bioconce	ntration	factor (BCF)								
Va	alue		Species		М	ethoc	l	Ev	/aluatior	1	Note	
No infor		No	inforn	nation	No infor		n		ormation	1		
available	9	availa	ble		available	9		availab	le			
	Chronic e	ecotoxici	ty									
	Value		Dose		osure me	Spe	ecies	Meth	nod	Evaluatio	n No	ote
Chronic toxicity on fish		LC ₅₀	information inf		No inforr availa	mation ible	No inform availab	ation	No informatior available	۱ -		
	toxicity o a (<i>Daphn</i>		EC ₅₀	No inforn availa	nation	No inforr availa	mation ible	No inform availab	ation	No informatior available	۱ -	
			I	- 1	I_			I.			l .	
12.4	Mobility	in soil										
	Known o	r predict	ed distribut	ion in e	nvironme	ental c	ompart	ments:				
	No infor	mation a	vailable									
	Surface t											
	Value		°C	Co	ncentrat	ion		Metho	od		Note	
	No informat available		o formation vailable		informati ilable	ion	No inf availal	ormation ole	n	-		
		İ					<u> </u>			<u></u>		
	Adsorpti	on / desc	orption									
Transpo	rt I	A/D coe Henry's c	efficient constant	lo	g Kow	Εν	/aporati	on rate	M	ethod	Not	te
Soil-wat	er No ava	i lable	nformation	No in availa	formatio ble		o inform ailable	nation	No info	ormation ole	-	
Water-a	ir No	i lable	nformation	No in availa	formatio		o inform	nation	No info	ormation	-	



Page 13 of 16

Trading	g name:		NUCLEAR FAST RED (KERNECHTROT) REAGENT					
Produc	Product code: KR-OT-X**		Date of	compilation:	03 July 2019	Version:	3	
Soil-air	No avail	information able	No information available	No information available	No information available	-		
12.5	Doculto of	PBT and vPvB asse	ecomont					
12.3	Not applic		essinent					
	1101 аррік	cabic.						
12.6	Other adv	erse effects						
	No furthe	r relevant informat	ion available.					
SECTIO	N 13. Disp	osal consideration	ns					
13.1	Waste to	reatment methods						
12.1.1								
13.1.1.		/Packaging disposi		uin a d la cetta a NAimia	tu. of Faring and out of	Land Nations		
	Protecti	•	iegai person autho	rized by the Minis	try of Environmental	i and Nature		
13.1.2.	Waste c	odes/waste design	ations according to	c Law:				
	15 01 10 substan		contains residual h	azardous substand	es or is contaminate	ed with hazardo	ous	
13.1.3.	Waste t	reatment – relevan	t information:					
13.1.3.		mation available	t imormation.					
13.1.4.	Sewage	disposal – relevan	t information:					
	Waste n	nust not be dispose	ed of into the sewa	ge system.				
	,							
13.1.5.	Other d	isposal recommend	dations:					
	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.	Relevan	t Community provi	sions:					
	Disposa	I must be made ac	cording to official r	egulations.				
SECTIO		ISPORT INFORMA						
	<u>.</u>	ing/shipment by ro						
UN nun	nber: per shippin		Not subject t	o transport regula	tions			



Page 14 of 16

Trading name:		NUCLEAR FAST RED (KERNECHTROT) REAGENT						
Product code:	KR-OT-X**	Date of compilation:	03 July 2019	Version:	3			

Transport hazard class(es):	-
Packing group:	-
Environmentally hazardous:	-
Special precautions for user:	-
Transporting/shipment by rail (R	ID)
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 (II	MDG)
Transporting/shipment by sea (II UN number:	MDG) Not subject to transport regulations
UN number:	Not subject to transport regulations
UN number: UN proper shipping name:	Not subject to transport regulations
UN number: UN proper shipping name: Transport hazard class(es):	Not subject to transport regulations
UN number: UN proper shipping name: Transport hazard class(es): Packing group:	Not subject to transport regulations
UN number: UN proper shipping name: Transport hazard class(es): Packing group: Environmentally hazardous:	Not subject to transport regulations
UN number: UN proper shipping name: Transport hazard class(es): Packing group: Environmentally hazardous: Special precautions for user: Transport in bulk according to Annex II	Not subject to transport regulations
UN number: 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:	Not subject to transport regulations
UN number: 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 (IC	Not subject to transport regulations AO-TI/IATA-DGR)
UN number: 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 (IC UN number:	Not subject to transport regulations Not subject to transport regulations
UN number: 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 (IC UN number: UN proper shipping name:	Not subject to transport regulations Not subject to transport regulations Not subject to transport regulations -
UN number: 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 (IC UN number: UN proper shipping name: Transport hazard class(es):	Not subject to transport regulations Not subject to transport regulations Not subject to transport regulations
UN number: 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 (IC UN number: UN proper shipping name: Transport hazard class(es): Packing group:	Not subject to transport regulations Not subject to transport regulations
UN number: 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 (ICUN number: UN proper shipping name: Transport hazard class(es): Packing group: Environmentally hazardous:	Not subject to transport regulations Not subject to transport regulations



Page 15 of 16

Trading name:	NUCLEAR FAST RED (KERNECHTROT) REAGENT						
Product code:	KR-OT-X**	Date of compilation:	03 July 2019	Version:	3		

15.1	Safety, health and environmental regulations/legislation specific for the substance or mixture					
	EU regulations					
	Authorization and/or rest	rictions of use				
	Authorizations:	-				
	Restrictions:	-				
	Other EU regulations:	EC Regulation No. 1906/2007 and EC Regulation No. 1272/2008 of the European Parliament and the European Council; Regulation (EC) No. 1907/2006 of the European Parliament and Council on registration, evaluation, authorization and restriction of chemical substances (REACH); EC Regulation No. 2037/200 of the European Parliament and Council from 29 June 2000 on substances that damage the ozone layer; EC Regulation No. 689/2008 of the European Parliament and Council from 17 June 2008 concerning the export and import of dangerous chemicals; EC Regulation No. 850/2004 of the European Parliament and Council from 29 April 2004 about persistent organic pollutants; Directive 2008/98/EC of the European Parliament and Council of 19				
		November 2008 on waste and repealing certain Directives				
	Information according 19 guideline)	99/13/EC about limitation of emissions of volatile organic compounds (VOC-				
	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 assessme	ent				
	None					

SECTIO	SECTION 16. Other information					
16.1	Indication of changes:	-				
		PBT	Stable, bioaccumulative and toxic			
		vPvB	Strongly stable and strongly bioaccumulative.			
16.2	Abbreviations and acronyms:	LD ₅₀	Lethal dose, 50%			
		LC ₅₀	Lethal concentration, 50%			
		TCOJ	Specific target organ toxicity - single exposure			
16.3.	Key literature references and source of data:	-				



Page 16 of 16

Trading name:	NUCLEAR FAST RED (KERNECHTROT) REAGENT						
Product code:	KR-OT-X**	Date of compilation:	03 July 2019	Version:	3		

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)			
		H315	Causes skin irritation.	
	H:	H319	Causes serious eye irritation.	
		H335	May cause respiratory irritation.	
16.6.	Training advice:		-	
	Further information:		** "X" in the product code marks different volumes (different packagings of the product)	
16.7.			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.	

ANNEX:	Exposure scenario resulting to chemical safety assessment
_	