



# MATERIAL SAFETY DATA SHEET

Issue Date: 22-October-2018

Version 02

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

### 1.1 Product Identifier

Product Name Sodium Calibration Solution

Product Code NaSC020-23

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

Recommended Use Use as laboratory reagent.

Uses advised against No information available.

### 1.3 Manufacture/Supplier

Aliksir Ltd.  
PD202 Science Centre  
Wolverhampton Science Park  
Glaisher Drive  
Wolverhampton  
WV10 9RU

Telephone 01902 287057

Email [info@aliksir.co.uk](mailto:info@aliksir.co.uk)

### 1.4 Emergency Telephone

+44 (0)7943 544340

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

#### Classification – Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not hazardous substance or mixture according to regulation (EC) 1272/2008 [GHS].

#### Classification according to EU Directives 67/548/EEC or 1999/45/EC

This substance is not classified as dangerous according to Directive 67/548/EEC.

### 2.2 Label elements

Hazard symbol	None
Signal word	None
Hazard statement	The mixture does not meet the criteria for classification.
Precautionary statement	Observe good laboratory hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste in accordance with local authority requirements.

### 2.3 Other Hazards

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

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Water	7732-18-5	>95 %
Sodium Sulphate (Na <sub>2</sub> SO <sub>4</sub> )	7757-82-6	<5%
Sodium Chloride (NaCl)	7647-14-5	<0.2%

## 4. FIRST AID MEASURES

### 4.1 First Aid Measures

General Advice	Use first aid treatment according to the nature of the injury. For further assistance, contact your local Poison Control Center. Show this safety data sheet to the doctor in attendance.
Eye Contact	Remove contact lens and rinse immediately with plenty of water for 15 minutes. Seek medical attention.
Skin Contact	Wash off immediately with soap and water for 15 minutes. Seek medical attention if irritation persists.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, seek medical attention.
Ingestion	Clean mouth with water and drink plenty of water. Seek medical attention if symptoms occur.
Production of First-Aiders	Use personal protective equipment. See Section 8 for more detail. Do not use mouth to mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical devices.

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

Most important symptoms/effects	No information available.
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**4.3 Indication of any immediate medical attention and special treatment needed**

Notes to Physician	Treat symptomatically.
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**5. FIRE-FIGHTING MEASURES**5.1 Suitable Extinguishing Media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Specific Hazards Arising from the substance or mixture

No information available.

5.3 Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

5.4 General fire hazards

No information available.

**6. ACCIDENTAL RELEASE MEASURES**6.1 Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions	Use personal protective equipment. Ensure adequate ventilation. Avoid breathing vapours, mists or gas.
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6.2 Environmental Precautions

Environmental Precautions	Avoid discharge in ground and water courses.
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6.3 Method and Material for Containment and Cleaning Up

Methods for Containment	Prevent further leakage or spillage if safe to do so.
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## Methods for Cleaning Up

Soak up with inert absorbent material. Clean surface with water thoroughly to remove residual contamination. Never return spills to original containers for re-use.  
Large spill: Stop flow of material. Dike the spilled material. Absorb in vermiculite, dry sand or each and place into containers. Following product recovery flush area with water.

**7. HANDLING AND STORAGE**7.1 Precautions for Safe Handling

Handling	To avoid risks to human health and the environment, comply with the instructions for use. Wear personal protective equipment. Avoid breathing dust/fume/gas/mist/vapours/spray. Ensure adequate ventilation, especially in confined areas.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for Safe Storage, Including any Incompatibilities

Storage	Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container.
Incompatible Products	Slightly reactive with oxidizing agents, metals

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

### 8.2 Exposure controls

#### Appropriate Engineering Controls

**Engineering Measures** Provide exhaust ventilation or other engineering controls to keep the airborne concentration of vapours below respective threshold limit value.  
Have approved eyewash facility safety shower and fire extinguishers available.  
General industrial hygiene practice.

#### **Individual protection measures, such as personal protective equipment:**

**Eye/face Protection** Wear chemical splash goggles approved under government standards such as NIOSH (US) or EN 16 (EU). If splashes are likely to occur, wear face-shield.

**Skin and Body Protection** Wear protection gloves/clothing. Gloves must be inspected prior to use. Use proper glove removal technique to avoid skin contact. Dispose of contaminated gloves in accordance with applicable laws and good laboratory practices. Wash and dry hands.  
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

**Respiratory Protection** No protective equipment is needed under normal use conditions. In case of inadequate ventilation wear respiratory protection approved under government standards such as NIOSH (US) and CEN (EU).

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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

a) Physical State	Liquid
b) Appearance	Clear
c) Odour	None
d) Odour Threshold	No information available
e) pH Range	6 – 8 at 25°C
f) Melting point/freezing point	No information available
g) Boiling Point/Range	~100 °C / 212 °F
h) Flash Point (High in °C)	N/A
i) Evaporation Rate	No information available
j) Flammability (solid, gas)	No information available
k) Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit:	No information available

l) Vapor pressure	2.3kPa (@20°C) (Water)
m) Vapor Density	0.62 (Air=1) (Water)
n) Specific Gravity	Weighted average: 1.01 (Water=1)
o) Water Solubility	Soluble.
p) Solubility in other solvents	No information available
q) Partition coefficient	No information available
r) Autoignition Temperature	No information available
s) Decomposition Temperature	No information available
t) Kinematic Viscosity	No information available
u) Dynamic Viscosity	No information available
v) Explosive Properties	No information available
w) Oxidizing Properties	No information available
x) Softening Point	No information available
y) VOC Content (%)	No information available

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

Hygroscopic. Sodium sulphate reacts violently with magnesium. Also incompatible with aluminium, potassium, mercury, lead, calcium, silver, barium, ammonium ions, and strontium. Sulphates give precipitates with salts of lead, barium, strontium, and calcium. Silver and mercury form slightly soluble salts. Alcohol precipitates most sulphates out of solution.

### 10.2 Chemical Stability

Stable under normal conditions.

### 10.3 Explosion Data

Sensitivity to Mechanical Impact	None
Sensitivity to Static Discharge	None

### 10.4 Possibility of Hazardous Reactions

None under normal processing.

### 10.5 Conditions to Avoid

No information available.

### 10.6 Incompatible Materials

Slightly reactive with oxidizing agents, metals. Strong acids.

### 10.7 Hazardous Decomposition Products

Sulphur oxides, sodium oxides.

At 800°C, sodium sulphate will explode (sodium sulphate anhydrous)

Electrolysis of sodium chloride in presence of nitrogenous compounds may lead to formation of explosive nitrogen trichloride.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

<b>Inhalation</b>	May cause respiratory tract irritation if inhaled.
<b>Eye Contact</b>	Direct contact with eyes may cause irritation.
<b>Skin Contact</b>	No adverse effects due to skin contact are expected.
<b>Ingestion</b>	May be harmful if swallowed.

**11.2 Acute Toxicity****Production Information**

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water 7732-18-5	LD50 > 90 ml/kg (Rat)	-	-
Sodium Sulphate (Na <sub>2</sub> SO <sub>4</sub> ) 7757-82-6	LD50> 26.977ml/kg (Mouse)	-	
Sodium Chloride (NaCl) 7947-14-5	LD50> 3ml/kg (Rat) LD50>4ml/kg (Mouse)	LD50>10ml/kg (Rabbit)	LD50>4.2ml/kg (Rat)

**11.3 Information on Toxicological Effects**

**Symptoms** Redness. Irritation to the eyes, mouth, and mucous membranes.

**11.4 Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Sensitization** No information available.

**Mutagenic Effects** No data available to indicate product components are mutagenic or genotoxic.

**Carcinogenicity** This product is not considered to a carcinogen by IARC, AOGIH, NTP, or OSHA

**Reproductive Effects** This product is not expected to cause reproductive or developmental effects.

**STOT – single exposure** No information available.

**STOT – repeated exposure** No information available.

**Aspiration hazard** No information available.

**11.5 Numerical measures of toxicity – Product Information**

**Unknown Acute Toxicity** No information available.

**12. ECOLOGICAL INFORMATION****12.1 Ecotoxicity**

No information available.

**12.2 Persistence and Degradability**

No information available.

**12.3 Bioaccumulation/Accumulation**

No information available.

**12.4 Results of PBT and vPvB assessment**

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

**12.5 Other adverse effects**

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

**12.6 Endocrine Disruptor Information**

No information available.

### 13. DISPOSAL CONSIDERATIONS

- 13.1 Disposal Instructions** Can be disposed into drains using excess water.
- 13.2 Waste Disposal Methods** Disposal should be in accordance with applicable regional, national and local laws and regulations.
- 13.3 Contaminated Packaging** Empty containers should be taken to approved waste handling site for disposal.

### 14. TRANSPORT INFORMATION

DOT	Not regulated
ICAO	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated
RID	Not regulated
ADR	Not regulated

### 15. REGULATORY INFORMATION

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

No information available.

**15.2 Chemical Safety Assessment**

For this product a chemical safety assessment was not carried out.

### 16. OTHER INFORMATION

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**Disclaimer:**

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