



Preparing for the New Era of Laboratories

SAFETY DATA SHEET (SDS)

According to regulation (EU) no.1907/2006

NESSLER'S REAGENT (KING'S) for Testing Serum Urea Nitrogen

PRODUCT CODE : L-1274

CAS No : 7783-33-7

FORMULA : Not available

UN No : 2922

website : www.labotiq.net

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NESSLER'S REAGENT (KING'S)

for Testing Serum Urea Nitrogen



SDS Number : 0576

Date : April 29, 2026

Version : 1.0

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

- 1.1 Product Name** : NESSLER'S REAGENT (KING'S) for Testing Serum Urea Nitrogen
Synonyms : Dipotassium tetraiodomercurate(II) in dilute sodium hydroxide
CAS No. : 7783-33-7
HS Code : 3822 9090
Chemical Formula : Not available
Molecular Weight : Not available
Product Code : L-1274
Brand : Labotiq
1.2 Manufacturer : Labotiq
Address : Jl.Terapi Raya AD2-Bumi Menteng Asri Bogor, Jawa Barat Indonesia – 16111
Website : www.labotiq.net
Email : labotiq.id@gmail.com
For information : Phone : (+62-251) 839110, 8311662, Fax : (+62-251) 83135710
Emergency number : +6281316894650
1.3 Application : Laboratory chemicals, Manufacture of substances

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Corrosive to Metals, (Category 1)	H290: May be corrosive to metals.
Acute toxicity, (Category 3)	H301: Toxic if swallowed.
Acute toxicity, (Category 3)	H331: Toxic if inhaled.
Acute toxicity, (Category 2)	H310: Fatal in contact with skin.
Skin corrosion, (Sub-category 1A)	H314: Causes severe skin burns and eye damage.
Serious eye damage, (Category 1)	H318: Causes serious eye damage.
Specific target organ toxicity – repeated exposure, (Category 2), Kidney, Central nervous system	H373: May cause damage to organs through prolonged or repeated exposure.
Short-term (acute) aquatic hazard, (Category 1)	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, (Category 1)	H410: Very toxic to aquatic life with long lasting effects.

For the full text of the H-Statements mentioned in this Section, see Section 16

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Danger

Hazard statement(s)

May be corrosive to metals.

H290

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H301 + H331	Toxic if swallowed or if inhaled.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H373	May cause damage to organs (Kidney, Central nervous system) through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.
Precautionary statement(s)	
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314	Get medical advice/ attention if you feel unwell.

Reduced labelling (≤125 ml)

Hazard pictograms



Signal word

Danger

Hazard statements

H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H301 + H331	Toxic if swallowed or if inhaled.

Precautionary statements

P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard Statements none

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 (vPvB) at levels of 0.1% or higher.

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Ecological information:

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

Toxicological information:

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

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : Dipotassium tetraiodomercurate(II) in dilute sodium hydroxide

3.2 Mixture

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
caustic potash CAS-No. 1310-58-3 EC-No. 215-181-3 Index-No. 019-002-00-8 Registration number 01-2119487136-33- XXXX	Met. Corr. 1; Acute Tox. 4; Skin Corr. 1A; Eye Dam. 1; H290, H302, H314, H318 Concentration limits: $\geq 5\%$: Skin Corr. 1A, H314; $2 - < 5\%$: Skin Corr. 1B, H314; $0,5 - < 2\%$: Skin Irrit. 2, H315; $0,5 - < 2\%$: Eye Irrit. 2, H319; $\geq 0,5\%$: Met. Corr. 1, H290;	$\geq 10 - < 20\%$
Nessler's reagent CAS-No. 7783-33-7 EC-No. 231-990-4 Index-No. 080-002-00-6	Acute Tox. 2; Acute Tox. 1; STOT RE 2; Aquatic Acute 1; Aquatic Chronic 1; H300, H330, H310, H373, H400, H410 Concentration limits: $\geq 0,1\%$: STOT RE 2, H373; M-Factor - Aquatic Acute: 10	$\geq 2,5 - < 10\%$

*A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, or the annual tonnage does not require a registration. For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

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If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible. Do not attempt to neutralise.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media**Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Hydrogen iodide Potassium oxides Mercury/mercury oxides. Not combustible. Fire may cause evolution of: mercury vapours Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

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6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2 Environmental precautions

Do not empty into drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemisorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

No aluminium, tin, or zinc containers. No metal containers. Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Recommended storage temperature see product label.

Storage class

Storage class (TRGS 510): 6.1B: Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure control

Appropriate engineering controls

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

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Skin protection

Handle with gloves. 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. Dispose of contaminated gloves after use 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.

Full contact

Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: Dermatrill® (KCL 740, Size M)

Splash contact

Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: Dermatrill® (KCL 740, Size M)

Body Protection

protective clothing

Respiratory protection

Recommended Filter type: combination filter Hg-P3 The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented. required when vapours/aerosols are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system. Recommended Filter type: Filter type ABEK

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Control of environmental exposure

Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Form: liquid
	Colour: light yellow
Odour	odorless
Odour Threshold	No data available
pH	at 20 °C strongly alkaline
Melting point/freezingpoint	No data available
Initial boiling point and boiling range	No data available
Flash point	No data available

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Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	No data available
Density	1,16 g/cm ³ at 20 °C
Water solubility	at 20 °C soluble
Partition coefficient: noctanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	Not classified as explosive.
Oxidizing properties	none

9.2 Other safety information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

Risk of explosion with:

Violent reactions possible with:

azides

Strong acids

anhydrides

Hydrocarbons

nonmetallic oxides

phosphorus

organic nitro compounds

halogen oxides

nonmetallic oxyhalides

Halogenated hydrocarbon

halogen-halogen compounds

Halogens

Alkaline earth metals

ammonium compounds

Light metals

Metals

Gives off hydrogen by reaction with metals.

Violent reactions possible with:

The generally known reaction partners of water.

10.4 Conditions to avoid

no information available

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10.5 Incompatible materials

animal/vegetable tissues, glass, various plasticsMetals

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects**Mixture****Acute toxicity**

Acute toxicity estimate Oral - 77,06 mg/kg

(Calculation method)

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Acute toxicity estimate Inhalation - 4 h - 0,7907 mg/l - dust/mist(Calculation method)

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Acute toxicity estimate Dermal - 79,07 mg/kg

(Calculation method)

Skin corrosion/irritation

Remarks: Mixture causes severe burns.

Remarks: Mixture causes severe burns.

Serious eye damage/eye irritation

Remarks: Mixture causes serious eye damage.

Risk of blindness!

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

Mixture may cause damage to organs through prolonged or repeated exposure.

- Kidney, Central nervous system

Mixture may cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

No data available

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11.2 Additional Information

Endocrine disrupting properties

Product:

Assessment :

The substance/mixture does not contain components considered to have endocrinedisrupting properties according to REACH Article57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

Handle in accordance with good industrial hygiene and safety practice.

Components

caustic potash

Acute toxicity

LD50 Oral - Rat - male - 333 mg/kg

(OECD Test Guideline 425)

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Acute toxicity estimate Oral - 333 mg/kg

(Calculation method)

Symptoms: burns of mucous membranes, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Dermal: No data available

Skin corrosion/irritation

Skin - Rabbit

Result: Causes burns.

Remarks: (IUCLID)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Causes serious eye damage.

(OECD Test Guideline 405)

Remarks: Causes serious eye damage.

Respiratory or skin sensitization

Sensitisation test: - Guinea pig

Result: negative

Remarks: (IUCLID)

Germ cell mutagenicity

Test Type: Ames test

Test system: S. typhimurium

Result: negative

Remarks: (ECHA)

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Result: negative

Carcinogenicity

No data available

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Reproductive toxicity
 No data available

Specific target organ toxicity - single exposure
 Acute oral toxicity - If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Acute inhalation toxicity - burns of mucous membranes, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Specific target organ toxicity - repeated exposure
 No data available

Aspiration hazard
 No data available

Nessler's reagent

Acute toxicity

Acute toxicity estimate Oral - 5,1 mg/kg
 (Expert judgment)
 Oral: No data available

Acute toxicity estimate Inhalation - 4 h - 0,051 mg/l - dust/mist
 (Expert judgment)

Acute toxicity estimate Dermal - 5,1 mg/kg
 (Expert judgment)

Skin corrosion/irritation
 No data available

Serious eye damage/eye irritation
 No data available

Respiratory or skin sensitization
 No data available

Germ cell mutagenicity
 No data available

Carcinogenicity
 No data available

Reproductive toxicity
 No data available

Specific target organ toxicity - single exposure
 No data available

Specific target organ toxicity - repeated exposure
 May cause damage to organs through prolonged or repeated exposure.
 - Kidney, Central nervous system
 Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

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Aspiration hazard
No data available

SECTION 12: Ecological information

12.1 Toxicity

Mixture
No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

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

12.6 Other adverse effects

Biological effects: Harmful effect due to pH shift. Discharge into the environment must be avoided.

Components

caustic potash

Toxicity to fish
static test LC50 - Gambusia affinis (Mosquito fish) - 80 mg/l -
96 h
Remarks: (ECOTOX Database)

Nessler's reagent

No data available

Endocrine disrupting properties

Product:

Assessment :

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

No data available

SECTION 14: Transport information

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14.1 UN number

ADR/RID: 2922

IMDG: 2922

IATA: 2922

14.2 UN proper shipping name

ADR/RID: CORROSIVE LIQUID, TOXIC, N.O.S. (Potassium hydroxide, Nessler's reagent)

IMDG: CORROSIVE LIQUID, TOXIC, N.O.S. (Potassium hydroxide, Nessler's reagent)

IATA: Corrosive liquid, toxic, n.o.s. (Potassium hydroxide, Nessler's reagent)

14.3 Transport hazard class(es)

ADR/RID: 8 (6.1)

IMDG: 8 (6.1)

IATA: 8 (6.1)

14.4 Packaging group

ADR/RID: II

IMDG: II

IATA: II

14.5 Environmental hazards

ADR/RID: yes

IMDG Marine pollutant: yes

IATA: no

14.6 Special precautions for user

No data available

SECTION 15: Regulatory information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Authorisations and/or restrictions on use

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Nessler's reagent

National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances

H2 ACUTE TOXIC

E1 ENVIRONMENTAL HAZARDS

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable. Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H290 May be corrosive to metals.

H300 Fatal if swallowed.

H302 Harmful if swallowed.

H310 Fatal in contact with skin.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H330 Fatal if inhaled.

H373 May cause damage to organs through prolonged or repeated exposure.

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National Fire Protection Association (U.S.A.):

Health: 4

Flammability: 1

Reactivity: 0

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Labotiq shall not be held liable for any damage resulting from handling or from contact with the above product.

History

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