

SAFETY DATA SHEET

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

1.1 Product identifiers

Product name Nessler's Reagent Solution

CAS number N/A

Synonyms N/A

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

Identified uses Laboratory Chemicals

1.3 Details of the supplier of the safety data sheet

Company Lab Alley, LLC
 12501 Pauls Valley Road
 Austin, Texas 78737
 U.S.A.

Telephone 512-668-9918

Fax 512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute Oral Toxicity (Category 3)

Acute Toxicity Dermal (Category 2)

Acute Inhalation Toxicity (Category 4)

Skin Corrosion/Irritation (Category 1)

Eye Damage/Irritation (Category 1)
 Skin Sensitizer (Category 1)
 Germ Cell Mutagenicity (Category 2)
 Reproductive Toxicity (Category 1)
 STOT - single exposure (Category 1)
 STOT - repeated exposure (Category 1)
 Corrosive to Metals (Category 1)
 Hazardous to Aquatic Environment - acute (Category 2)
 Hazardous to Aquatic Environment - chronic (Category 2)

2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal Word	Danger
Hazard statements	May be corrosive to metals. Toxic if swallowed. Fatal in contact with skin. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. Harmful if inhaled. Suspected of causing genetic defects. May damage fertility or the unborn child. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure. Toxic to aquatic life.
Precautionary statements	Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P234 Keep only in original container. P260 Do not breathe dust, fumes or mist. P261 Avoid breathing dust, fumes or mist. P262 Do not get in eyes, on skin, or on clothing. P264 Wash arms, hands and face thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing must not be allowed out of the workplace. P273 Avoid release to the environment. P280 Wear protective gloves and eye protection. P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or physician. P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Wash thoroughly with plenty of soap and water.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P307+P311 IF exposed: Call a POISON CENTER or physician.
P308+P313 IF exposed or concerned: Get medical attention.
P310 Immediately call a POISON CENTER or physician.
P312 Call a POISON CENTER or physician if you feel unwell.
P314 Get medical attention if you feel unwell.
P321 Specific treatment (Wash areas of contact with water immediately).
P330 Rinse mouth.
P332+P313 If skin irritation occurs: Get medical attention.
P352 Wash with plenty of soap and water.
P361 Take off immediately all contaminated clothing and wash it before reuse.
P363 Wash contaminated clothing before reuse.
P390 Absorb spillage to prevent material damage.
P405 Store locked up.
P406 Store in corrosive resistant container with a resistant inner liner.
P501 Dispose of contents in accordance with local, state, federal and international regulations.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None identified.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Water	-	7732-18-5	72.55%
Sodium Hydroxide	-	1310-73-2	12.58%
Potassium Iodide	-	7681-11-0	6.59%
Iodine	-	7553-56-2	4.39%
Mercury	-	7439-97-6	3.89%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled IF INHALED: Remove person to fresh air and keep comfortable for breathing.

In case of skin contact IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. May irritate damaged skin, absorption can occur with effects similar to those via ingestion.

In case of eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Irritant, possibly corrosive to eye tissue. Symptoms include tearing, redness, pain, and impaired vision.

If swallowed IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Dilute with water or milk. Vomiting may occur spontaneously but do not induce. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

DANGER! Corrosive and Toxic! Causes severe burns. May be fatal if swallowed. Do not get in eyes, on skin or clothing. If ingested, do not induce vomiting. Give large quantity of water and call a physician. Wash areas of contact with plenty of water for 15 minutes. For eyes, get medical attention. EYE CONTACT: Irritant, possibly corrosive to eye tissue. Symptoms include tearing, redness, pain, and impaired vision. SKIN CONTACT: May irritate damaged skin, absorption can occur with effects similar to those via ingestion. CHRONIC EFFECTS / CARCINOGENICITY: Chronic exposure can lead to central nervous system damage.

4.3 Indication of any immediate medical attention and special treatment needed

Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately).

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media No information available.

5.2 Specific hazards arising from the substance or mixture

Not combustible. (solid)

5.3 Special protective equipment and precautions for firefighters

Wear special protective clothing and positive pressure self-contained breathing apparatus. Butyl rubber, natural rubber, Neoprene, nitrile rubber, polyethylene, polyvinyl chloride, Teflon, Viton, or Saranex barrier recommended. (solid)

5.4 Further information

Flash Point No information available.

Autoignition Temperature No information available.

Explosion limits

Upper No information available.

Lower No information available.

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge No information available.

NFPA

Health	Flammability	Instability	Physical hazards
3	0	1	N/A

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective gloves and eye protection.

6.2 Environmental precautions

No information available.

6.3 Methods and materials for containment and cleaning up

Keep water away from release. Stop or control the leak, if this can be done without undue risk. Prompt cleanup and removal are necessary. Shovel into suitable dry container. Control runoff and isolate discharged material for proper disposal. (solid)

6.4 Reference to other sections

No information available.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Store in corrosive resistant container with a resistant inner liner. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin.

Hygiene measures

As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin.

7.2 Conditions for safe storage, including any incompatibilities**Storage conditions**

Protect from freezing and physical damage. Store away from direct sunlight.

Incompatibilities

See Section 10.

SECTION 8: Exposure controls/personal protection**8.1 Occupational exposure limits****US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Component	Type	Value
Iodine	PEL-Ceiling	0.1ppm; 1 mg/m3

US. ACGIH Threshold Limit Values

Component	Type	Value
Mercury	TLV-TWA	0.025 mg/m3
	TLV-Ceiling	2 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

No information available.

Biological occupational exposure limits

No information available.

8.2 Exposure controls

Appropriate engineering controls

Use only outdoors or in a well-ventilated area. No specific controls are needed. Normal room ventilation is adequate

Personal protective equipment**Eye/face protection**

Wear protective gloves and eye protection. Safety glasses or goggles

Skin protection

Wear protective gloves and eye protection. Chemical resistant gloves.

Body Protection

Wear protective gloves and eye protection. Normal room ventilation is adequate. Chemical resistant gloves. Safety glasses or goggles.

Respiratory protection

Normal room ventilation is adequate.

Control of environmental exposure

Use only outdoors or in a well-ventilated area

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	light yellow
Odor	Alcohol-like
Odor Threshold	No information available
pH	No information available
Melting Point/Range	No information available

Boiling Point/Range	Approximately 102°C - Approximately 102°C
Evaporation Rate	No information available
Flammability (solid)	No information available
Flammability or explosive limit	No information available
Upper	No information available
Lower	No information available
Vapor Pressure	No information available
Vapor Density	No information available
Density	1.27
Solubility	No information available
Partition coefficient; n-octanol/water	No information available
Autoignition Temp	No information available
Decomposition Temp	No information available
Viscosity	No information available
Molecular Formula	No information available
Molecular Weight	No information available
VOC Content(%)	No information available
Oxidizing properties	No information available

9.2 Other safety information No information available

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under normal conditions of use and storage.

10.2 Chemical stability

Stable under normal conditions of use and storage.

10.3 Possibility of hazardous reactions

Data not available.

10.4 Conditions to avoid

Keep only in original container. Formates, Sulfites, Phosphates, Albumin, Ammonia, Gelatin, Carbonates, Hypophosphites, Sulfides, Alkalis, Alkaloid salts, Lime water, Strong acids, chlorinated Hydrocarbons, Acetone, metals such as aluminum, tin and zinc.

10.5 Incompatible materials

Keep only in original container. Formates, Sulfites, Phosphates, Albumin, Ammonia, Gelatin, Carbonates, Hypophosphites, Sulfides, Alkalis, Alkaloid salts, Lime water, Strong acids, chlorinated Hydrocarbons, Acetone, metals such as aluminum, tin and zinc.

10.6 Hazardous decomposition products

Will not occur.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Toxic if swallowed. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF SWALLOWED:

Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately). Rinse mouth. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Fatal in contact with skin. Do not get in eyes, on skin, or on clothing. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves and eye protection. Wash with plenty of soap and water. Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately). Take off immediately all contaminated clothing and wash it before reuse. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Harmful if inhaled. Avoid breathing dust, fumes or mist. Use only outdoors or in a well-ventilated area. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.

LD50, Oral, Rat: 18 mg/kg (Mercuric Iodide); LD50, Dermal, Rat: 75 mg/kg (Mercuric Iodide), details of toxic effects not reported other than lethal dose value.

Skin corrosion/irritation

Causes severe skin burns and eye damage. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately).

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Store locked up.

Dispose of contents in accordance with local, state, federal and international regulations.

Serious eye damage/eye irritation

Causes serious eye damage. Wear protective gloves and eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Respiratory or skin sensitization

May cause an allergic skin reaction. Avoid breathing dust, fumes or mist. Contaminated work clothing must not be allowed out of the workplace.

Wear protective gloves and eye protection. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical attention.

Specific treatment (Wash areas of contact with water immediately). Wash contaminated clothing before reuse. Dispose of contents in accordance with local, state, federal and international regulations.

Germ cell mutagenicity

Suspected of causing genetic defects. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Carcinogenicity

Not applicable.

Specific target organ toxicity - single exposure

Causes damage to organs. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF exposed: Call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately). Store locked up. Dispose of contents in accordance with local, state, federal and international regulations

Specific target organ toxicity - repeated exposure

Causes damage to organs through prolonged or repeated exposure. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Get medical attention if you feel unwell. Dispose of contents in accordance with local, state, federal and international regulations.

Reproductive toxicity

May damage fertility or the unborn child. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations

Chronic effects

No information available.

11.2 Additional Information

Data not available.

SECTION 12: Ecological information**12.1 Toxicity**

Toxic to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations. Toxic to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations.

12.2 Persistence and degradability

Data not available.

12.3 Bio accumulative potential

Data not available.

12.4 Mobility in soil

Data not available.

12.5 Results of PBT and vPvB assessment

Data not available.

12.6 Endocrine disrupting properties

Data not available.

12.7 Other adverse effects

Data not available.

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods

Data not available.

SECTION 14: Transport information

DOT (US)

UN Number	UN2922
Proper Shipping name	Corrosive Liquid, Toxic, n.o.s., (Sodium Hydroxide and Mercury)
Hazard Class	8 (6.1)
Packaging Group	II

IMDG

UN Number	UN2922
Proper Shipping name	Corrosive Liquid, Toxic, n.o.s., (Sodium Hydroxide and Mercury)
Hazard Class	8 (6.1)
Packaging Group	II

IATA

UN Number	UN2922
Proper Shipping name	Corrosive Liquid, Toxic, n.o.s., (Sodium Hydroxide and Mercury)
Hazard Class	8 (6.1)
Packaging Group	II

SECTION 15: Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not applicable

CERCLA Hazardous Substance List (40 CFR 302.4)

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

SARA 304 Emergency release notification

This material does not contain any components with a section 304 EHS RQ.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**SARA 302 Extremely hazardous substance**

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazardous

Sodium Hydroxide (CAS # 1310-73-2): 1000 lb final RQ; 454 kg final RQ

Mercury (CAS # 7439-97-6): 0.1 curie final RQ; 0.0037 TBq final RQ

Mercury (CAS # 7439-97-6): 1 lb final RQ; 0.454 kg final RQ

Mercury (CAS # 7439-97-6): 10 curie final RQ; 0.37 TBq final RQ

Mercury (CAS # 7439-97-6): 100 curie final RQ; 3.7 TBq final RQ

Mercury (CAS # 7439-97-6): 1000 curie final RQ; 37 TBq final RQ

Iodine (CAS # 7553-56-2): 0.001 curie final RQ; 0.000037 TBq final RQ

Iodine (CAS # 7553-56-2): 0.01 curie final RQ; 0.00037 TBq final RQ

Iodine (CAS # 7553-56-2): 0.1 curie final RQ; 0.0037 TBq final RQ

Iodine (CAS # 7553-56-2): 1 curie final RQ; 0.037 TBq final RQ

Iodine (CAS # 7553-56-2): 10 curie final RQ; 0.37 TBq final RQ

Iodine (CAS # 7553-56-2): 100 curie final RQ; 3.7 TBq final RQ

Iodine (CAS # 7553-56-2): 1000 curie final RQ; 37 TBq final RQ

SARA 313 (TRI reporting)

Mercury (CAS # 7439-97-6): 1.0 % Supplier notification limit

Mercury (CAS # 7439-97-6): 1.0 % Supplier notification limit (listed under Chemical Category N458)

Mercury (CAS # 7439-97-6): 10 lb RT

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not applicable.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not applicable.

Safe Drinking Water Act

Listed, Sodium hydroxide (CAS #1310-73-2), 1000 lb.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed.

US state regulations

US. Massachusetts RTK - Substance List

Sodium Hydroxide (CAS # 1310-73-2): Present

Mercury (CAS # 7439-97-6): Present

Iodine (CAS # 7553-56-2): Present

US. New Jersey Worker and Community Right-to-Know Act

Sodium Hydroxide (CAS # 1310-73-2): corrosive

Sodium Hydroxide (CAS # 1310-73-2): sn 1706

Mercury (CAS # 7439-97-6): corrosive

Mercury (CAS # 7439-97-6): sn 1183

Mercury (CAS # 7439-97-6): SN 1183 500 lb TPQ

Mercury (CAS # 7439-97-6): SN 2414 500 lb TPQ (Category Code N458. Includes any unique chemical substance that contains the named metal as part of that chemical structure)

Iodine (CAS # 7553-56-2): sn 1026

US. Pennsylvania Worker and Community Right-to-Know Law

Sodium Hydroxide (CAS # 1310-73-2): Environmental hazard

Sodium Hydroxide (CAS # 1310-73-2): Present

Mercury (CAS # 7439-97-6): Environmental hazard

Mercury (CAS # 7439-97-6): Present

Iodine (CAS # 7553-56-2): Present

Water (CAS # 7732-18-5): Present

California Proposition 65

Mercury (CAS # 7439-97-6): developmental toxicity, 7/1/1990

Iodine (CAS # 7553-56-2): developmental toxicity, 1/1/1989

SECTION 16: Other information

Date of Issue: 10/25/2019

Revision Date: 9/18/2026

SECTION 17: Disclaimer

The information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.