

SAFETY DATA SHEET

Version: 1.1

Date Updated: April 4, 2022

Date Printed: Time:

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name: Enzmet™- IHC/ISH HRP Detection
Enzmet™- Western blot HRP Detection
Enzmet™ for General Research Applications.

Product Number: 6001-30ML
6002-100ML
6010-45ML

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

Identified uses

Relevant identified uses

Laboratory chemicals

Uses advised against

Not for drug use

1.3 Details of the supplier of the safety data sheet

Company: Nanoprobes
Address: 95 Horseblock Road, Unit 1
Yaphank, NY 11980
United States
Technical Phone: 877-447-6266, +1 (631) 205-9490
Fax: +1 (631) 205-9493
Emergency Phone: +1 (631) 205-9490
Web Site: www.nanoprobes.com

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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

Skin irritation (Category 2), H315 S
Skin sensitization (Category 1), H317
Serious eye damage (Category 1), H318 S
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335
Acute toxicity, Oral (Category 4), H302

Germ cell mutagenicity (Category 2), H341
Carcinogenicity (Category 2), H351
Short-term (acute) aquatic hazard (Category 1), H400
Long-term (chronic) aquatic hazard (Category 1), H410

2.2 GHS Label elements

Signal word Danger

Hazard statement(s)

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264	Wash skin 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/ protective clothing/ eye protection/ face protection.
P301 + P312 + P330	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
P305 + P351 +	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/doctor.
P308 + P313	If exposed or concerned: Get medical advice/ attention.
P338 + P310	
P332 + P333 + P313	If skin irritation or rash occurs: Get medical advice/ attention.
P362	Take off contaminated clothing and wash before reuse. P391 Collect spillage.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

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

None

3. COMPOSITION/INFORMATION ON INGREDIENTS**3.1 Mixture****Hazardous components**

Component	Classification	Concentration and Volume
Hydroquinone		
CAS-No. 123-31-9 EC-No. 204-617-8 Index-No. 604-005-00-4	Acute Tox. 4; Eye Dam. 1; Skin Sens. 1; Muta. 2; Carc. 2; Aquatic Acute 1; Aquatic Chronic 1; H302, H318, H317, H341, H351, H400, H410 M-Factor - Aquatic Acute: 10 - Aquatic Chronic: 1	< 0.5 % (w/v) in 10 mL of EnzMet™ HRP Detect B
Hydrogen Peroxide		
CAS-No. 7722-84-1 EC-No. 231-765-0 Index-No. 008-003-00-9	Ox. Liq. 1; Acute Tox. 4; Skin Corr. 1A; Eye Dam. 1; STOT SE 3; Aquatic Acute 2; Aquatic Chronic 3; H271, H302, H332, H314, H318, H335, H401, H412	< 0.15 % (w/v) in 10 mL of EnzMet™ HRP Detect C
Silver Acetate		
CAS-No. 563-63-3 EC-No. 209-254-9 Index-No.	Skin Irrit. 2; Eye Dam. 1; STOT SE 3; Aquatic Acute 1; H315, H318, H335, H400	< 0.2 % (w/v) in 30 mL of EnzMet™ HRP Detect A

4. FIRST AID MEASURES**4.1 Description of first aid measures****General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

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

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. FIREFIGHTING MEASURES**5.1 Extinguishing media**

Suitable extinguishing media: Water spray. Carbon dioxide, dry chemical powder, or alcohol-resistant foam.

5.2 Special hazards arising from the substance or mixture

Nature of decomposition products not known.

5.3 Advice for firefighters

Wear self contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers

6. ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Storage class (TRGS 510): Flammable liquids

7.3 Specific end use(s)

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Component	Exposure limits
Silver Acetate	TWA 0.01 mg/m ³ USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	TWA 0.01 mg/m ³ USA. ACGIH Threshold Limit Values (TLV)
	TWA 0.01 mg/m ³ USA. NIOSH Recommended Exposure Limits
	PEL 0.01 mg/m ³ California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Hydrogen Peroxide	TWA 1 ppm US. ACGIH Threshold Limit Values (2011)
	REL 1 ppm 1.4 mg/m ³ US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL 1 ppm 1.4 mg/m ³ US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA 1 ppm 1.4 mg/m ³ US. OSHA Table Z-1-A (29 CFR 1910.1000)
Hydroquinone	TWA 1 mg/m ³ USA. ACGIH Threshold Limit Values (TLV)
	Remarks: Dermal Sensitization Eye irritation Eye damage Confirmed animal carcinogen with unknown relevance to humans
	TWA 2 mg/m ³ USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	C 2 mg/m ³ USA. NIOSH Recommended Exposure Limits
	15 minute ceiling value
	PEL 2 mg/m ³ California permissible exposure limits for chemical contaminants (Title 8, Article 107)

Biological occupational exposure limits

Component	Parameters
Hydroquinone	Methemoglobin 1.5% Hb In blood. ACGIH Biological Exposure Indices (BEI) . Remarks : During or at the end of the shift

8.2 Exposure controls**Engineering measures**

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection**Respiratory**

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Recommended: neoprene

Eyes: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
Recommended: splash goggles

Skin: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: lab coat

Control of environmental exposure

Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

- a) Appearance
Form: Liquid

Color: Colorless

- b) Odor: no data available
- c) Odor Threshold: no data available
- d) Melting point/freezing point: no data available
- e) Initial boiling point and boiling range: no data available
- f) Flash point: no data available
- g) Evaporation rate: no data available
- h) Flammability (solid, gas): no data available
- i) Upper/lower flammability or explosive limits: no data available
- j) Vapor pressure: no data available
- k) Vapor density: no data available
- l) Relative density: no data available
- m) Solubility: all aqueous solutions
- n) Partition coefficient: no data available
- o) Auto-ignition temperature: no data available
- p) Decomposition temperature: no data available
- q) Viscosity: no data available
- r) Explosive properties: no data available
- s) Oxidizing properties: no data available

9.2 Other safety information

No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable: Stable under recommended storage condition within specified expiration date

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Avoid excessive agitation.

10.5 Incompatible materials

Strong oxidizing agents, acids, thiols

10.6 Hazardous decomposition products In the event of fire

See section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Chemical Name	LD50 (oral, rat/mouse)	LD50 (dermal, rat/rabbit)
Hydroquinone	367.3mg/kg	>2000 mg/kg
Hydrogen Peroxide	No Data Available	Rat, Male : 1.193 mg/kg Rat, Female: 1.270 mg/kg

Skin Contact: May cause skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: May cause eye irritation.

Inhalation: May be harmful if inhaled.

Ingestion: May be harmful if swallowed.

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: no data available Aspiration hazard: no data available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

No information available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No information available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Offer surplus and non-recyclable solutions to a licensed disposal company. Contaminated packaging dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US) Not dangerous goods

MDG Not dangerous goods

IATA Not dangerous goods

15. REGULATORY INFORMATION

SARA 302 Components

The following components are subject to reporting levels established by SARA Title III, Section 302:

	CAS-No	Revision Date
Hydroquinone	123-31-9	2007-03-01

SARA 313 Components

	CAS-No	Revision Date
Hydroquinone	123-31-9	2007-03-01
Silver Acetate	563-63-3	2015-07-08

SARA 311/312 Hazards

Environmental hazard

Pennsylvania Right To Know Components

	CAS-No	Revision Date
Hydroquinone	123-31-9	1987-01-01
Silver Acetate	563-63-3	2015-07-08

New Jersey Right To Know Components

	CAS-No	Revision Date
Hydroquinone	123-31-9	1987-01-01

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16 Other Information

Kit Components:

6001-30ML	6002-100ML	6010-45ML
EnzMet™ IHC/ISH HRP Detect A	EnzMet™ Western HRP Detect A	EnzMet™ General HRP Detect A
EnzMet™ IHC/ISH HRP Detect B	EnzMet™ Western HRP Detect B	EnzMet™ General HRP Detect B
EnzMet™ IHC/ISH HRP Detect C	EnzMet™ Western HRP Detect C	EnzMet™ General HRP Detect C

DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

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. Nanoprobes Inc., shall not be held liable for any damage resulting from handling or from contact with the above product.