

SAFETY DATA SHEET

Updated 01 Jan 2026

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

1.1. Product identifiers

Product name : **Protease Casein Activity Nanosensors – NIR
Fluorescent Nanoassay™ Kit**

Product number : **PRTCAS260001**

Brand : **Nanoassay™ by Zymosense**

CAS-No. : **308068-56-6**

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

Identified uses : Laboratory chemicals, assay reagent

Uses advised against : The product is being supplied for R&D and assaying purposes only. It is the recipient's responsibility to comply with these purposes. Use for other commercial purposes may not be performed unless consent is granted in writing by Zymosense, Inc.

1.3. Details of the supplier of the safety data sheet

Company : Zymosense, Inc
2501 North Loop Drive,
Suite 1010
Ames, IA 50010
United States

Telephone : +1 515-515-7299
support@zymosense.com

Section 2: Hazards Identification

2.1. Classification of the substance or mixture

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

Eye irritation (Category 2A), H319

Carcinogenicity (Category 2), H351

Skin irritation (Category 2), H315

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

2.2. GHS Label elements, including precautionary statements

Pictogram

:



Signal Word

: Warning

Hazard Statements

H315

: Causes skin irritation

H319

: Causes serious eye irritation

H351

: Suspected of causing cancer.

Precautionary Statements

P201

: Obtain special instructions before use.

P202

: Do not handle until all safety precautions have been read and understood.

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: Get medical advice/ attention.

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

Section 3: Composition/information on Ingredients

3.1. Substances

Synonyms : Protease-SWCNT
Protein-SWCNT
Zyмосense Protease Sensors
Carbon nanotube

CAS-No. : 308068-56-6
EC-No. : 608-533-6

Component	CAS-No	Weight %
Powdered Milk	999999-99-4	<=0.25
Detergent Blend	Proprietary	<=0.011
Single-walled carbon nanotube	308068-56-6	<=0.05
Water	7732-18-5	<=98
Sodium phosphate	7601-54-9	<=1.7

Section 4: First aid measures

4.1. Description of first-aid measures

If inhaled

After inhalation: fresh air

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower

In case of eye contact

After eye contact: rinse out with plenty of water. Call an ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

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 limitation of extinguishing agents are given.

5.2. Special hazards arising from the substance or mixture

Carbon oxides

Sulfur oxides

Sodium oxides

Not combustible

Ambient fire may liberate hazardous vapors.

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

6.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breath 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 let product enter 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 with liquid-absorbent material (e.g. Chemizorb®). 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

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Keep containers tightly closed and sealed until ready for use. Store at 4°C

Storage class

Storage class (TRGS 510): 12: Non-Combustible Liquids

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

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2. Exposure controls

Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

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). Safety glasses

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.

Section 8: Exposure controls/personal protection (continued)

Body Protection

Protective clothing

Respiratory protection

Recommended Filter type: Filter type P1

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 dusts and 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.

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

- | | | |
|----|--|--------------------------------|
| a) | Appearance | Form: solution
Color: black |
| b) | Odor | No data available |
| c) | Odor Threshold | No data available |
| d) | pH | 7.1 |
| e) | Melting point/
freezing point | 0 °C |
| f) | Initial boiling point
and boiling range | No data available |
| g) | Flash point | No data available |
| h) | Evaporation rate | No data available |
| i) | Flammability
(solid, gas) | No data available |

Section 9: Physical and Chemical Properties (continued)

j)	Upper/lower flammability or explosive limits	No data available
k)	Vapor pressure	No data available
l)	Vapor density	No data available
m)	Density	1.02 g/cm ³
	Relative density	No data available
n)	Water solubility	soluble
o)	Partition coefficient n-octanol/water	No data available
p)	Autoignition temperature	No data available
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	Not classified as explosive
t)	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

Violent reactions possible with:

The generally known reaction partners of water.

10.4. Conditions to avoid

No information available

Section 10: Stability and reactivity (continued)

10.5. Incompatible materials

Strong oxidizing agents

10.6. Hazardous decomposition products

In the event of fire: see section 5

Section 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Oral: No data available

Inhalation: No data available

Dermal: No data available

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

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Carbon Nanotubes)

NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

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

Section 11: Toxicological information(continued)

11.2. Additional Information

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

Section 12: Ecological information

12.1. Toxicity

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

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

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

No data available

Section 13: Disposal considerations

13.1. Waste treatment methods

Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Section 14: Transport information

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

Further information

Not classified as dangerous in the meaning of transport regulations.

Section 15: Regulatory information

SARA 302 Components

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

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Chronic Health Hazard, Acute Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
Water	7732-18-5	

Section 16: Other information

Further information

The information is believed to be correct but is not exhaustive and is to be used solely as a guideline. This document is based on current knowledge of the chemical substance and describes appropriate safety precautions for the product. It does not guarantee the properties of the product.