

SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name : EzRIPA Lysis kit
; RIPA Lysis buffer
; Protease Inhibitor
; Phosphatase inhibitor

Product Code : WSE-7420

SDS No. : A0031-1

General Use : Research use only

MANUFACTURER

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2. HAZARDS IDENTIFICATION

RIPA Lysis buffer

GHS Classification:

Aquatic environment (Acute hazard): Category 3
Aquatic environment (Chronic hazard): Category 3

GHS Label Elements: -

- **Signal Word:** None
- **Hazard Statements:**
 - H402: Harmful to aquatic life
 - H412: Harmful to aquatic life with long lasting effects
- **Precautionary Statements:**
 - [Prevention]
 - P273 Avoid release to the environment.

[Disposal]

P501 Dispose of contents/container to a specialized waste disposal company approved by the prefectural governor.

Protease Inhibitor

GHS Classification:

Specific target organ toxicity (single exposure)

: Category 2 (Respiratory system)

GHS Label Elements:

- **Signal Word:** Warning
- **Pictogram:**



- **Hazard Statements:**

H371: May cause damage to organs (Respiratory system)

- **Precautionary Statements:**

[Prevention]

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P264 Wash hands and face thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

[Response]

P308+P316 If exposed or concerned: Call a POISON CENTER or doctor.

[Storage]

P405 Store locked up.

[Disposal]

P501 Dispose of contents/container to a specialized waste disposal company approved by the prefectural governor.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

Distinction of Substance or Mixture: Mixture

RIPA Lysis buffer			
Chemical Name	wt(%)	Chemical Formula	CAS Registry No.
Poly(oxy-1,2-ethanediyl), alpha-[[[(1,1,3,3-tetramethylbutyl)phenyl]-omega-hydroxy-	1.0%	(C ₂ H ₄ O) _n C ₁₄ H ₂₂ O	9036-19-5
Sodium chloride	0.9%	ClNa	7647-14-5
Protease Inhibitor			
Chemical Name	wt(%)	Chemical Formula	CAS Registry No.
Dimethyl sulfoxide	70%	C ₂ H ₆ OS	67-68-5
Phosphatase inhibitor			
Chemical Name	wt(%)	Chemical Formula	CAS Registry No.
Sodium orthovanadate	0.19%	Na ₃ O ₄ V	13408-09-8

4. FIRST AID MEASURES

Inhalation: Remove to fresh air. If symptoms persist, call a physician.

Skin Contact: Immediately wash with soap and plenty of water. If symptoms persist, call a physician.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediate medical attention is required.

Ingestion: Rinse mouth. Do not give anything by mouth to an unconscious person. Contact a doctor or poison control center immediately. Do NOT induce vomiting unless instructed by medical personnel.

Protection of First-aiders: Wear personal protective equipment as required.

5. FIRE FIGHTING MEASURES

Extinguishing Media: Water spray (fog), carbon dioxide (CO₂), foam, dry chemical powder, sand.

Specific Hazards: Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Protection of Firefighters: Wear self-contained breathing apparatus (SCBA) and full firefighting turnout gear. Move containers from fire area if safe to do so. Fight fire from upwind.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Ensure adequate ventilation. Keep unnecessary personnel away. Wear appropriate protective equipment to prevent skin contact and inhalation.

Environmental Precautions: Prevent product from entering drains, rivers, or other environments.

Cleanup Methods: Prohibit use of fire. Absorb spill with materials like waste cloth

or vacuum under reduced pressure, then collect into an empty container. Wash the spill site thoroughly with plenty of water.

7. HANDLING AND STORAGE

Handling:

- Prohibit fire, avoid high temperatures, sparks, and contact with strong oxidizing agents.
- Wear appropriate protective equipment (glasses, gloves) to prevent contact.
- Prevent leakage, overflow, and scattering. Do not generate dust or vapors unnecessarily.
- Wash hands and face thoroughly after handling.
- Use with local exhaust ventilation.

Storage:

- Store in a cool, dark, well-ventilated place away from direct sunlight.
- Keep container tightly closed and locked up. Avoid contact with air.
- Safe Packaging Materials: Polypropylene, Polyethylene, Glass.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Seal the source or use a local exhaust system for indoor work. Provide safety showers and eye-wash stations near the handling area and clearly mark their locations.

Personal Protective Equipment:

- **Respiratory:** Protective mask.
- **Hand:** Protective gloves.
- **Eye:** Protective eyeglasses or chemical safety goggles.
- **Skin and Body:** Suitable protective clothing and boots.

Control Parameter

OSHA Final Limits : None established

ACGIH TLV(s) : None established

9. PHYSICAL AND CHEMICAL PROPERTIES

EzRIPA Lysis Buffer

Appearance : liquid (clear)

Odor : Odorless

pH : 7 ~ 8

Boiling Point / Boiling Range

: Not available

Melting Point / Melting Range

: Not available

Decomposition Temperature

: Not available

Flash Point : Not available

Auto Ignition Temperature

: Not available

Flammability : Not flammable

Explosive Properties : Not available

Oxidizing Properties : Not available

Vapor Pressure : Not available

Relative Density : Not available

Solubility : Not available

Partition Coefficient(n-octanol /water)

: Not available

Viscosity : Not available

Vapor Density : Not available

Evaporation Rate : Not available

Protease Inhibitor

Appearance : liquid (clear)

Odor : Odorless

pH : Not available

Boiling Point / Boiling Range

: Not available

Melting Point / Melting Range

: Not available

Decomposition Temperature

: Not available

Flash Point : Not available

Auto Ignition Temperature

: Not available

Flammability : Not flammable

Explosive Properties : Not available

Oxidizing Properties : Not available

Vapor Pressure : Not available
Relative Density : Not available
Solubility : Not available
Partition Coefficient(n-octanol /water)
: Not available
Viscosity : Not available
Vapor Density : Not available
Evaporation Rate : Not available

Phosphatase Inhibitor

Appearance : liquid (clear)
Odor : Odorless
pH : Not available
Boiling Point / Boiling Range
: Not available
Melting Point / Melting Range
: Not available
Decomposition Temperature
: Not available
Flash Point : Not available
Auto Ignition Temperature
: Not available
Flammability : Not flammable
Explosive Properties : Not available
Oxidizing Properties : Not available
Vapor Pressure : Not available
Relative Density : Not available
Solubility : Not available
Partition Coefficient(n-octanol /water)
: Not available
Viscosity : Not available
Vapor Density : Not available
Evaporation Rate : Not available

10. STABILITY AND REACTIVITY

Stability : Stable under recommended storage conditions.

Conditions to Avoid: Direct sunlight, heat, open flames, high temperatures, sparks, static electricity, and strong oxidizing agents.

Hazardous Decomposition Products: Carbon monoxide (CO), nitrogen oxides (NO_x), sulfur oxides (SO_x), halides.

11. TOXICOLOGICAL INFORMATION

EzRIPA Lysis kit: No data available.

Ingredient Data:

• **Poly(oxyethylene) = (1,1,3,3-tetramethylbutyl) phenyl ether (CAS No. 9036-19-5):**

- Acute Oral Toxicity: LD50 (rat) 4,190 mg/kg
(lowest literature value applied: 1,700 mg/kg).
- Serious Eye Damage/Irritation: Causes moderate to severe eye irritation in rabbits.

• **Dimethyl sulfoxide (DMSO) (CAS No. 67-68-5):**

- Acute Oral Toxicity: LD50 (rat) 14,500 mg/kg.
- Acute Dermal Toxicity: LD50 (rat) 40 g/kg.

12. ECOLOGICAL INFORMATION

• **Poly(oxyethylene) = (1,1,3,3-tetramethylbutyl) phenyl ether:**

- Ecotoxicity: Algae (Selenastrum) 96h EC50 = 0.21 mg/L.
- Persistence / Degradability: Not rapidly degradable (BOD degradation: 22%).
- Bioaccumulation: Low potential (BCF < 31).

• **Dimethyl sulfoxide (DMSO):**

- Ecotoxicity: Skeletonema costatum 24h EC50 = 12,350 - 25,500 mg/L;
Daphnia 24h EC50 = 7,000 mg/L; Oncorhynchus mykiss 96h LC50 = 33 - 37 g/L.

13. DISPOSAL CONSIDERATIONS

Residual Waste: Dispose of contents/container to a specialized waste disposal company approved by the prefectural governor in accordance with local/national regulations.

Contaminated Packaging: Completely remove contents before disposal. Dispose of in accordance with container type and regulations.

14. TRANSPORT INFORMATION

UN Classification: Not applicable

UN Number: Not applicable

International Regulations: Not regulated (ADR/RID, IMDG, IATA)

Precautions: Ensure no damage, corrosion, or leakage before transport. Secure cargo to prevent collapse and falling. Fight transit emergencies according to general safety guidelines.

15. REGULATORY INFORMATION (JAPAN)

PRTR Law: Class 1 Designated Chemical Substance (No. 408) - Poly(oxyethylene) = (1,1,3,3-tetramethylbutyl) phenyl ether.

Industrial Safety and Health Act (ISHA):

- Chemical Substances causing Skin/Other Impairments (Article 594-2, Para 1).
- Dangerous and Harmful Substances requiring Labeling (Article 57).
- Dangerous and Harmful Substances requiring SDS Notification (Article 57-2) – Dimethyl sulfoxide.

Poisonous and Deleterious Substances Control Act: Not applicable.

Fire Service Act: Group 4 Hazardous Materials, Class 3 Petroleum (Water-soluble), Hazard Grade III - Dimethyl sulfoxide.

16. OTHER INFORMATIONS

This information is furnished without warranty, express or implied, expect that it is accurate to the best knowledge of ATTO Corporation. It relates only to the specific product designated herein, and does not relate to use in combination with any other material or in any process. ATTO Corporation assumes no legal responsibility for use of or reliance upon this information.