

# SAFETY DATA SHEET

According to JIS Z 7253:2019  
 Revision Date 1-Jul-2023  
 Version 1

## Section 1: PRODUCT AND COMPANY IDENTIFICATION

|                     |                                       |
|---------------------|---------------------------------------|
| <b>Product name</b> | LBIS Rat Insulin ELISA Kit (U-E type) |
| <b>Product code</b> | 636-05581                             |

**Manufacturer** FUJIFILM Wako Pure Chemical Corporation  
 1-2 Doshomachi 3-Chome, Chuo-ku, Osaka 540-8605, Japan  
 Phone: +81-6-6203-3741  
 Facsimile: +81-6-6203-2029

**Supplier** FUJIFILM Wako Pure Chemical Corporation  
 1-2 Doshomachi 3-Chome, Chuo-ku, Osaka 540-8605, Japan  
 Phone: +81-6-6203-3741  
 Facsimile: +81-6-6203-2029

**Emergency telephone number** +81-6-6203-3741 / +81-3-3270-8571

**Recommended uses and restrictions on use** For research use only

## Section 2: HAZARDS IDENTIFICATION

**GHS classification**

**Classification of the substance or mixture**

|   |            |
|---|------------|
| <b>Acute toxicity - Inhalation (Vapors)</b>               | Category 4 |
| <b>Skin corrosion/irritation</b>                          | Category 1 |
| <b>Serious eye damage/eye irritation</b>                  | Category 1 |
| <b>Skin sensitization</b>                                 | Category 1 |
| <b>Specific target organ toxicity (single exposure)</b>   | Category 1 |
| <b>Category 1</b> respiratory system                      |            |
| <b>Specific target organ toxicity (repeated exposure)</b> | Category 1 |
| <b>Category 1</b> respiratory system                      |            |

**Pictograms**



**Signal word**

**Danger**

**Hazard statements**

- H314 - Causes severe skin burns and eye damage
- H318 - Causes serious eye damage
- H332 - Harmful if inhaled
- H317 - May cause an allergic skin reaction
- H370 - Causes damage to the following organs: respiratory system
- H372 - Causes damage to the following organs through prolonged or repeated exposure: respiratory system

**Precautionary statements-(Prevention)**

- Use only outdoors or in a well-ventilated area
- Do not breathe dust/ fume/ gas/ mist/ vapors/ spray
- Wash face, hands and any exposed skin thoroughly after handling
- Wear protective gloves/ protective clothing/ eye protection/ face protection
- Contaminated work clothing should not be allowed out of the workplace
- Do not eat, drink or smoke when using this product

**Precautionary statements-(Response)**

- 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 doctor/ physician
- IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
- Wash contaminated clothing before reuse.
- If skin irritation or rash occurs: Get medical advice/ attention
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- Call a POISON CENTER or doctor/ physician if you feel unwell.
- IF SWALLOWED: Rinse mouth. DO NOT induce vomiting.

**Precautionary statements-(Storage)**

- Store locked up.

**Precautionary statements-(Disposal)**

- Dispose of contents/ container to an approved waste disposal plant

**Others**

**Other hazards** Not available

**Section 3: COMPOSITION/ INFORMATION ON INGREDIENTS**

**Single Substance or Mixture** Kit (Set of mixtures)

| Chemical Name                                      | Weight-% | Molecular weight | ENCS | ISHL No. | CAS RN |
|--|----------|------------------|------|----------|--------|
| Anti-Insulin coated plate                          | -        | N/A              | N/A  | N/A      | N/A    |
| Standard Insulin solution                          | -        | N/A              | N/A  | N/A      | N/A    |
| Buffer solution                                    | -        | N/A              | N/A  | N/A      | N/A    |
| Biotinylated anti-insulin antibody                 | -        | N/A              | N/A  | N/A      | N/A    |
| HRP-conjugated streptavidin                        | -        | N/A              | N/A  | N/A      | N/A    |
| Chromogen (TMB): 3,3',5,5' - Tetramethyl-benzidine | -        | N/A              | N/A  | N/A      | N/A    |
| Stop solution                                      | -        | N/A              | N/A  | N/A      | N/A    |
| Wash stock solution (10X)                          | -        | N/A              | N/A  | N/A      | N/A    |

**Impurities and/or Additives :** Not applicable

**Substances Remarks:** Sulfuric Acid 6.9 %, Poly (oxyethylene) sorbitan monolaurate <1 %, 2-Methyl-2H-isothiazol-3-one <0.2 %

**Section 4: FIRST AID MEASURES****Inhalation**

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

**Skin contact**

Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.

**Eye contact**

IF IN EYES: 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. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. Do not induce vomiting without medical advice.

#### **Protection of first-aiders**

Use personal protective equipment as required.

### **Section 5: FIRE FIGHTING MEASURES**

#### **Suitable extinguishing media**

Water spray (fog), Carbon dioxide (CO<sub>2</sub>), Foam, Extinguishing powder, Sand

#### **Unsuitable extinguishing media**

No information available

#### **Specific hazards arising from the chemical product**

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

#### **Special extinguishing method**

No information available

#### **Special protective actions for fire-fighters**

Use personal protective equipment as required. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

### **Section 6: ACCIDENTAL RELEASE MEASURES**

#### **Personal precautions, protective equipment and emergency procedures**

For indoor, provide adequate ventilation process until the end of working. Deny unnecessary entry other than the people involved by, for example, using a rope. While working, wear appropriate protective equipments to avoid adhering it on skin, or inhaling the gas. Work from windward, and retract the people downwind.

#### **Environmental precautions**

To be careful not discharged to the environment without being properly handled waste water contaminated.

#### **Methods and materials for contaminant and methods and materials for cleaning up**

Absorb dry sand, earth, sawdust and the waste. Collect empty container that can be sealed.

#### **Recovery, neutralization**

No information available

#### **Secondary disaster prevention measures**

Clean contaminated objects and areas thoroughly observing environmental regulations.

### **Section 7: HANDLING AND STORAGE**

#### **Handling**

##### **Technical measures**

Avoid contact with oxidizing and reducing agents. Avoid contact with alkaline substances. Use with local exhaust ventilation.

##### **Precautions**

Do not rough handling containers, such as upsetting, falling, giving a shock, and dragging. Prevent leakage, overflow, and scattering. Not to generate steam and dust in vain. Seal the container after use. After handling, wash hands and face, and then gargle. In places other than those specified, should not be smoking or eating and drinking. Should not be brought contaminated protective equipment and gloves to rest stops. Deny unnecessary entry of non-emergency personnel to the handling area.

##### **Safety handling precautions**

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

#### **Storage**

##### **Safe storage conditions**

###### **Storage conditions**

Store away from sunlight in a cool (2 °C - 8 °C) well-ventilated dry place.

###### **Safe packaging material**

No information available

##### **Incompatible substances**

Strong oxidizing agents, Reducing agent, Alkali

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Engineering controls

In case of indoor workplace, seal the source or use a local exhaust system. Provide the safety shower facility, and hand- and eye-wash facility. And display their position clearly.

### Exposure limits

| Chemical Name              | JSOH (Japan)        | ISHL (Japan) | ACGIH                     |
|----------------------------|---------------------|--------------|---------------------------|
| Sulfuric Acid<br>7664-93-9 | 1 mg/m <sup>3</sup> | N/A          | TWA 0.2 mg/m <sup>3</sup> |

### Personal protective equipment

|                                 |  |
|---------------------------------|--|
| <b>Respiratory protection</b>   | Gas mask for acidic gas                          |
| <b>Hand protection</b>          | Impermeable protective gloves                    |
| <b>Eye protection</b>           | protective eyeglasses or chemical safety goggles |
| <b>Skin and body protection</b> | Long-sleeved work clothes                        |

### General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

### Form

|   |                       |
|---|-----------------------|
| <b>Appearance</b>   | Kit (Set of mixtures) |
| <b>Odor</b>   | No data available     |
| <b>Melting point/freezing point</b>                           | No data available     |
| <b>Boiling point, initial boiling point and boiling range</b> | No data available     |
| <b>Flammability</b>   | No data available     |
| <b>Evaporation rate:</b>                                      | No data available     |
| <b>Flammability (solid, gas):</b>                             | No data available     |
| <b>Upper/lower flammability or explosive limits</b>           |                       |
| <b>Upper :</b>  | No data available     |
| <b>Lower :</b>  | No data available     |
| <b>Flash point</b>  | No data available     |
| <b>Auto-ignition temperature:</b>                             | No data available     |
| <b>Decomposition temperature:</b>                             | No data available     |
| <b>pH</b>   | No data available     |
| <b>Viscosity (coefficient of viscosity)</b>                   | No data available     |
| <b>Dynamic viscosity</b>                                      | No data available     |
| <b>Solubilities</b>   | No data available     |
| <b>n-Octanol/water partition coefficient: (log Pow)</b>       | No data available     |
| <b>Vapor pressure</b>   | No data available     |
| <b>Specific Gravity / Relative density</b>                    | No data available     |
| <b>Vapor density</b>  | No data available     |
| <b>Particle characteristics</b>                               | No data available     |

## Section 10: STABILITY AND REACTIVITY

### Stability

|                           |  |
|---------------------------|--|
| <b>Reactivity</b>         | No data available                            |
| <b>Chemical stability</b> | Stable under recommended storage conditions. |

### Hazardous reactions

None under normal processing

### Conditions to avoid

Extremes of temperature and direct sunlight

**Incompatible materials**

Strong oxidizing agents, Reducing agent, Alkali

**Hazardous decomposition products**Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Nitrogen oxides (NO<sub>x</sub>), Sulfur oxides (SO<sub>x</sub>), Phosphorus oxide**Section 11: TOXICOLOGICAL INFORMATION****Acute toxicity**

| Chemical Name                           | Oral LD50                              | Dermal LD50        | Inhalation LC50     |
|---|--|--------------------|---------------------|
| Sulfuric Acid                           | 2140 mg/kg (Rat)                       | N/A                | 347 ppm (Rat) 4 h   |
| Poly (oxyethylene) sorbitan monolaurate | 37000 mg/kg (Rat)<br>36700 µL/kg (Rat) | N/A                | N/A                 |
| 2-Methyl-2H-isothiazol-3-one            | 120 mg/kg (Rat)                        | 200 mg/kg (Rabbit) | 0.11 mg/L (Rat) 4 h |

| Chemical Name | Acute toxicity -oral-source information       | Acute toxicity -dermal-source information     | Acute toxicity -inhalation gas- source information |
|---------------|---|---|--|
| Sulfuric Acid | Based on the NITE GHS classification results. | Based on the NITE GHS classification results. | Based on the NITE GHS classification results.      |

| Chemical Name | Acute toxicity -inhalation vapor- source information | Acute toxicity -inhalation dust- source information | Acute toxicity -inhalation mist- source information |
|---------------|--|---|---|
| Sulfuric Acid | Based on the NITE GHS classification results.        | Based on the NITE GHS classification results.       | Based on the NITE GHS classification results.       |

**Skin irritation/corrosion**

| Chemical Name | Skin corrosion/irritation source information  |
|---------------|---|
| Sulfuric Acid | Based on the NITE GHS classification results. |

**Serious eye damage/ irritation**

| Chemical Name | Serious eye damage/irritation source information |
|---------------|--|
| Sulfuric Acid | Based on the NITE GHS classification results.    |

**Respiratory or skin sensitization**

| Chemical Name | Respiratory or Skin sensitization source information |
|---------------|--|
| Sulfuric Acid | Based on the NITE GHS classification results.        |

**Reproductive cell mutagenicity**

| Chemical Name | germ cell mutagenicity source information     |
|---------------|---|
| Sulfuric Acid | Based on the NITE GHS classification results. |

**Carcinogenicity**

| Chemical Name | Carcinogenicity source information            |
|---------------|---|
| Sulfuric Acid | Based on the NITE GHS classification results. |

| Chemical Name              | NTP | IARC    | ACGIH | JSOH (Japan) |
|----------------------------|-----|---------|-------|--------------|
| Sulfuric Acid<br>7664-93-9 | -   | Group 1 | A2    | -            |

**Reproductive toxicity**

| Chemical Name | Reproductive toxicity source information      |
|---------------|---|
| Sulfuric Acid | Based on the NITE GHS classification results. |

**STOT-single exposure**

| Chemical Name | STOT -single exposure- source information     |
|---------------|---|
| Sulfuric Acid | Based on the NITE GHS classification results. |

**STOT-repeated exposure**

| Chemical Name | STOT -repeated exposure- source information   |
|---------------|---|
| Sulfuric Acid | Based on the NITE GHS classification results. |

**Aspiration hazard**

| Chemical Name | Aspiration Hazard source information          |
|---------------|---|
| Sulfuric Acid | Based on the NITE GHS classification results. |

## Section 12: ECOLOGICAL INFORMATION

**Ecotoxicity**

| Chemical Name                | Algae/aquatic plants | Fish   | Crustacea                                 |
|------------------------------|----------------------|--|---|
| Sulfuric Acid                | N/A                  | LC50: <i>Lepomis macrochirus</i> 16 – 28 mg/L 96 h | LC50: <i>Daphnia magna</i> 29 mg/L 24 h   |
| 2-Methyl-2H-isothiazol-3-one | N/A                  | LC50: <i>Oncorhynchus mykiss</i> 0.07 mg/L, 96h    | EC50: <i>Daphnia magna</i> 0.18 mg/L, 48h |

**Other data**

| Chemical Name | Short-term (acute) hazardous to the aquatic environment source information | Long-term (chronic) hazardous to the aquatic environment source information |
|---------------|--|---|
| Sulfuric Acid | Based on the NITE GHS classification results.                              | Based on the NITE GHS classification results.                               |

|                                      |                          |
|--------------------------------------|--------------------------|
| <b>Persistence and degradability</b> | No information available |
| <b>Bioaccumulative potential</b>     | No information available |
| <b>Mobility in soil</b>              | No information available |
| <b>Hazard to the ozone layer</b>     | No information available |

## Section 13: DISPOSAL CONSIDERATIONS

**Waste from residues**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated container and contaminated packaging**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

## Section 14: TRANSPORT INFORMATION

**ADR/RID**

|                                |   |
|--------------------------------|---|
| <b>UN number</b>               | UN3264  |
| <b>Proper shipping name:</b>   | Corrosive liquid, acidic, inorganic, n.o.s. (Diluted Sulfuric Acid) |
| <b>UN classification</b>       | 8   |
| <b>Subsidiary hazard class</b> |   |
| <b>Packing group</b>           | II  |
| <b>Marine pollutant</b>        | Not applicable  |

**IMDG**

|   |   |
|---|---|
| <b>UN number</b>  | UN3264  |
| <b>Proper shipping name:</b>  | Corrosive liquid, acidic, inorganic, n.o.s. (Diluted Sulfuric Acid) |
| <b>UN classification</b>  | 8   |
| <b>Subsidiary hazard class</b>  |   |
| <b>Packing group</b>  | II  |
| <b>Marine pollutant (Sea)</b>   | Not applicable  |
| <b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b> | No information available  |

**IATA**

**UN number** UN3264  
**Proper shipping name:** Corrosive liquid, acidic, inorganic, n.o.s. (Diluted Sulfuric Acid)  
**UN classification** 8  
**Subsidiary hazard class**  
**Packing group** II  
**Environmentally Hazardous Substance** Not applicable

**Section 15: REGULATORY INFORMATION****International Inventories**

**EINECS/ELINCS** -  
**TSCA** -

**Japanese regulations**

**Fire Service Act** Not applicable  
**Poisonous and Deleterious Substances Control Law** Not applicable  
**Industrial Safety and Health Act** Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57, Para.1, Enforcement Order Art.18)  
 Group 3 Specified Chemical Substance, (Ordinance on Prevention of Hazards Due to Specified Chemical Substances Art.2 Para.1, Item 6)  
 Notifiable Substances (Law Art.57-2, Enforcement Order Art.18-2 Attached Table No.9) No.613  
 Priority Assessment Chemical Substances (Law Article 2, Para.5)  
**Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc**  
**Regulations for the carriage and storage of dangerous goods in ship** Corrosive Substances (Ordinance Art.3, Ministry of Transportation Ordinance Regarding Transport by Ship and Storage, Attached Table 1)  
**Civil Aeronautics Law** Corrosive Substances (Ordinance Art.194, MITL Notification for Air Transportation of Explosives etc., Attached Table 1)  
**Marine Pollution Prevention Law** Enforcement ordinance Appendix No.1 Noxious liquid substance category Y  
**Pollutant Release and Transfer Register Law** Not applicable  
**Water Pollution Control Act** Specified substances (Law Art.2 Para.4, Enforcement Order Art.3-3)  
**Air Pollution Control Law** Specified Substances

**Industrial Safety and Health Law**

| Law Name   | Chemical Name in Regulation | Ordinance Number | Weight % |
|--|-----------------------------|------------------|----------|
| Notifiable Substances (Law Art.57-2, Enforcement Order Art.18-2 Attached Table No.9, and Law Art.56-1) | Sulfuric acid               | 613              | 6.9      |

**Section 16: OTHER INFORMATION**

**Key literature references and sources for data etc.** NITE: National Institute of Technology and Evaluation (JAPAN)  
<http://www.safe.nite.go.jp/japan/db.html>  
 IATA dangerous Goods Regulations

RTECS: Registry of Toxic Effects of Chemical Substances  
Japan Industrial Safety and Health Association GHS Model SDS  
Dictionary of Synthetic Organic Chemistry, SSOCJ, Koudansha  
Scientific Co.Ltd.  
Chemical Dictionary, Kyouritsu Publishing Co., Ltd.  
etc

**Disclaimer**

This SDS is according to JIS Z 7253: 2019. The information provided in 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 guidance for safe handling, and is not to be considered 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 materials or in any process, unless specified in the text. GHS Classification is according to JIS Z7252(2019). \*JIS: Japanese Industrial Standards

**End of Safety Data Sheet**