SAFETY DATA SHEET

1. Identification

Product identifier: Human IL-18 ELISA Kit
Microwell strips coated with anti-human IL-18 antibody

Other means of identification
Product code: 7620
Recommended use: Research use only.
Recommended restrictions: None known.

Manufacturer / Importer / Supplier / Distributor information

Manufacturer and Supplier (Asia):
Medical & Biological Laboratories (MBL) Co., Ltd.
4-5-3 Sakae, Naka-ku, Nagoya, Aichi 460-0008, Japan
Telephone number: +81-52-238-1901 (Monday to Friday, 9 AM to 5 PM JST)
Fax: +81-52-238-1440
E-mail: sds-support@mlb.co.jp
URL: http://www.mlb.co.jp/a/index.html
Contact person: SDS Support

Supplier:
MBL International Corporation
15A Constitution Way, Woburn, MA 01601, USA
Telephone number: +1-800-200-6458, option 3
Fax: +1-781-939-6963
E-mail: tech@mblintl.com
URL: http://www.mblintl.com/
Contact person: Technical Service

2. Hazard(s) identification

Physical hazards: Not classified.
Health hazards: Not classified.
OSHA hazard(s): Not classified.

Label elements
Hazard symbol: None.
Signal word: None.
Hazard statement: None.

Precautionary statement
Prevention: Observe good industrial hygiene practices.
Response: Wash thoroughly after handling.
Storage: None.
Disposal: None.

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/Information on ingredients

Mixtures:
The manufacturer lists no ingredients as hazardous according to OSHA 29 CFR 1910.1200.

4. First-aid measures

Inhalation: Move injured person into fresh air and keep person calm under observation. Get medical attention if any discomfort continues.

Skin contact: Wash contact areas with soap and water. Get medical attention if irritation develops or persists.

Eye contact: Do not rub eye. Rinse the eye with water immediately. Make sure to remove any contact lenses from the eyes before rinsing. Get medical attention if irritation develops and persists.

Ingestion: Rinse mouth thoroughly if dust is ingested. Get medical attention if any discomfort continues.
### 5. Fire-fighting measures

| Suitable extinguishing media | Use fire-extinguishing media appropriate for surrounding materials. |
| Unsuitable extinguishing media | None known. |
| Specific hazards arising from the chemical | None known. |
| Special protective equipment and precautions for firefighters | Self-contained breathing apparatus and full protective clothing should be worn when fighting chemical fires. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. |
| Fire-fighting equipment/instructions | Use standard firefighting procedures and consider the hazards of other involved materials. |

### 6. Accidental release measures

| Personal precautions, protective equipment and emergency procedures | Avoid prolonged and repeated contact. Wear suitable protective clothing. For personal protection, see Section 8 of the SDS. |
| Methods and materials for containment and cleaning up | Sweep up or vacuum up spillage and collect in suitable container for disposal. After removal, flush contaminated area thoroughly with water. Never return spills to original containers for reuse. |
| Environmental precautions | Prevent further leakage or spillage if safe to do so. |

### 7. Handling and storage

| Precautions for safe handling | Avoid prolonged and repeated contact. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. |
| Conditions for safe storage, including any incompatibilities | Keep container closed. |

### 8. Exposure controls/personal protection

| Occupational exposure limits | No exposure limits noted for ingredient(s). |
| Biological limit values | No biological exposure limits noted for the ingredient(s). |
| Appropriate engineering controls | Provide adequate ventilation. |
| Individual protection measures, such as personal protective equipment | |
| Eye/face protection | If risk of splashing, wear safety goggles or face shield. |
| Skin protection | |
| Hand protection | Wear protective gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier. |
| Other | Wear protective gloves. Wear appropriate clothing to prevent repeated or prolonged skin contact. |
| Respiratory protection | No protection is ordinarily required under normal conditions of use. |
| Thermal hazards | Wear appropriate thermal protective clothing, when necessary. |
| General hygiene considerations | Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. |

### 9. Physical and chemical properties

<p>| Appearance | |
| Physical state | Solid. |
| Form | Solid. |</p>
<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Colorless.</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available.</td>
</tr>
<tr>
<td>pH</td>
<td>Not available.</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>Flammability limit Not available.</td>
</tr>
<tr>
<td>- lower (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability limit</td>
<td>Not available.</td>
</tr>
<tr>
<td>- upper (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not available.</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not available.</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and
Chemical stability Stable at normal conditions.
Possibility of hazardous reactions None known.
Conditions to avoid None known.
Incompatible materials None known.
Hazardous decomposition products No hazard in normal industrial use.

11. Toxicological information

Information on likely routes of exposure

- Ingestion Large quantities: May cause discomfort if swallowed.
- Inhalation Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
- Skin contact Prolonged contact may cause dryness of the skin.
- Eye contact Direct contact with eyes may cause temporary irritation.

Symptoms related to the physical, chemical and toxicological characteristics

- Dry skin.

Information on toxicological effects

- Acute toxicity Large quantities: May cause discomfort if swallowed.
- Skin corrosion/irritation Prolonged contact may cause dryness of the skin.
- Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.
- Respiratory sensitization No data available.
- Skin sensitization Not a skin sensitizer.
- Germ cell mutagenicity No data available.
- Carcinogenicity No data available.
- Reproductive toxicity No data available.
- Specific target organ toxicity - single exposure No data available.
### 12. Ecological information

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecotoxicity</td>
<td>The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills have a harmful or damaging effect on the environment.</td>
</tr>
<tr>
<td>Persistence and degradability</td>
<td>No data available.</td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
<td>No data available.</td>
</tr>
<tr>
<td>Mobility in soil</td>
<td>No data available.</td>
</tr>
<tr>
<td>Mobility in general</td>
<td>The product is water soluble and may spread in water systems.</td>
</tr>
<tr>
<td>Other adverse effects</td>
<td>No data available.</td>
</tr>
</tbody>
</table>

### 13. Disposal considerations

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disposal instructions</td>
<td>Dispose of in accordance with all applicable regulations. Do not discharge into drains, water courses or onto the ground.</td>
</tr>
<tr>
<td>Local disposal regulations</td>
<td>Dispose of in accordance with local regulations.</td>
</tr>
<tr>
<td>Hazardous waste code</td>
<td>Not regulated.</td>
</tr>
<tr>
<td>Waste from residues / unused products</td>
<td>Dispose of in accordance with local regulations.</td>
</tr>
<tr>
<td>Contaminated packaging</td>
<td>Dispose of in same manner as unused product.</td>
</tr>
</tbody>
</table>

### 14. Transport information

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT</td>
<td>Not regulated as dangerous goods.</td>
</tr>
<tr>
<td>IATA</td>
<td>Not regulated as dangerous goods.</td>
</tr>
<tr>
<td>IMDG</td>
<td>Not regulated as dangerous goods.</td>
</tr>
<tr>
<td>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

### 15. Regulatory information

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>US federal regulations</td>
<td>This product is not hazardous according to OSHA 29CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.</td>
</tr>
<tr>
<td>TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)</td>
<td>Not regulated.</td>
</tr>
<tr>
<td>CERCLA Hazardous Substance List (40 CFR 302.4)</td>
<td>Not listed.</td>
</tr>
<tr>
<td>Superfund Amendments and Reauthorization Act of 1986 (SARA) Hazard categories</td>
<td>Immediate Hazard - No</td>
</tr>
<tr>
<td>SARA 302 Extremely hazardous substance</td>
<td>Delayed Hazard - No</td>
</tr>
<tr>
<td>SARA 311/312 Hazardous chemical</td>
<td>Fire Hazard - No</td>
</tr>
<tr>
<td>SARA 313 (TRI reporting)</td>
<td>Pressure Hazard - No</td>
</tr>
<tr>
<td>Other federal regulations</td>
<td>Reactivity Hazard - No</td>
</tr>
<tr>
<td>Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List</td>
<td>No</td>
</tr>
<tr>
<td>Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)</td>
<td>Not regulated.</td>
</tr>
<tr>
<td>Safe Drinking Water Act (SDWA)</td>
<td>Not regulated.</td>
</tr>
<tr>
<td>Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number)</td>
<td>Not listed.</td>
</tr>
<tr>
<td>Drug Enforcement Administration (DEA). List 1 &amp; 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))</td>
<td>Not regulated.</td>
</tr>
<tr>
<td>DEA Exempt Chemical Mixtures Code Number</td>
<td>Not regulated.</td>
</tr>
<tr>
<td>Food and Drug Administration (FDA)</td>
<td>Not regulated.</td>
</tr>
</tbody>
</table>
US state regulations
This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

Massachusetts RTK - Substance List
Not regulated.
New Jersey Worker and Community Right-to-Know Act
Not regulated.
Pennsylvania RTK - Hazardous Substances
Not regulated.
Rhode Island RTK
Not regulated.
California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT)
Not listed.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>EC Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

* A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
  A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

<table>
<thead>
<tr>
<th>Issue date</th>
<th>03/11/2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revision date</td>
<td>09/26/2016</td>
</tr>
<tr>
<td>Version</td>
<td>02</td>
</tr>
<tr>
<td>Further information</td>
<td>Not available,</td>
</tr>
<tr>
<td>Disclaimer</td>
<td>This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

1. Identification

Product identifier
Human IL-18 ELISA Kit
Human IL-18 calibrator (lyophilized)

Other means of identification

Product code
7620

Recommended use
Research use only.

Recommended restrictions
None known.

Manufacturer / Importer / Supplier / Distributor information

Manufacturer and
Medical & Biological Laboratories (MBL) Co., Ltd.

Supplier (Asia)
4-5-3 Sakae, Naka-ku, Nagoya, Aichi 460-0008, Japan

Telephone number
+81-52-238-1901 (Monday to Friday, 9 AM to 5 PM JST)

Fax
+81-52-238-1440

E-mail
sds-support@mbl.co.jp

URL
http://www.mbl.co.jp/e/index.html

Contact person
SDS Support

Supplier
MBL International Corporation
15A Constitution Way, Woburn, MA 01801, USA

Telephone number
+1-800-200-5459, option 3

Fax
+1-781-939-6963

E-mail
technical@mblintl.com

URL
http://www.mblintl.com/

Contact person
Technical Service

2. Hazard(s) identification

Physical hazards
Not classified.

Health hazards
Not classified.

OSHA hazard(s)
Not classified.

Label elements

Hazard symbol
None.

Signal word
None.

Hazard statement
None.

Precautionary statement

Prevention
Observe good industrial hygiene practices.

Response
Wash thoroughly after handling.

Storage
None.

Disposal
None.

Hazard(s) not otherwise classified (HNOC)
None.

3. Composition/Information on ingredients

Mixtures
The manufacturer lists no ingredients as hazardous according to OSHA 29 CFR 1910.1200.

4. First-aid measures

Inhalation
Move injured person into fresh air and keep person calm under observation. Get medical attention if any discomfort continues.

Skin contact
Wash contact areas with soap and water. Get medical attention if irritation develops or persists.

Eye contact
Do not rub eye. Rinse the eye with water immediately. Make sure to remove any contact lenses from the eyes before rinsing. Get medical attention if irritation develops and persists.

Ingestion
Rinse mouth thoroughly if dust is ingested. Get medical attention if any discomfort continues.
**Most important symptoms/effects, acute and delayed**
- Dry skin.

**Indication of immediate medical attention and special treatment needed**
- Treat symptomatically.

**General information**
- Get medical attention if any discomfort develops.

## 5. Fire-fighting measures
- **Suitable extinguishing media**: Use fire-extinguishing media appropriate for surrounding materials.
- **Unsuitable extinguishing media**: None known.
- **Specific hazards arising from the chemical**: None known.
- **Special protective equipment and precautions for firefighters**: Self-contained breathing apparatus and full protective clothing should be worn when fighting chemical fires. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.
- **Fire-fighting equipment/instructions**: Use standard firefighting procedures and consider the hazards of other involved materials.

## 6. Accidental release measures
- **Personal precautions, protective equipment and emergency procedures**: Avoid prolonged and repeated contact. Wear suitable protective clothing. For personal protection, see Section 8 of the SDS.
- **Methods and materials for containment and cleaning up**: Sweep up or vacuum up spillage and collect in suitable container for disposal. After removal, flush contaminated area thoroughly with water. Never return spills to original containers for re-use.
- **Environmental precautions**: Prevent further leakage or spillage if safe to do so.

## 7. Handling and storage
- **Precautions for safe handling**: Avoid prolonged and repeated contact. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
- **Conditions for safe storage, including any incompatibilities**: Keep container closed.

## 8. Exposure controls/personal protection
- **Occupational exposure limits**: No exposure limits noted for ingredient(s).
- **Biological limit values**: No biological exposure limits noted for the ingredient(s).
- **Appropriate engineering controls**: Provide adequate ventilation. Minimize dust generation and accumulation. Provide easy access to water supply and eye wash facilities.
- **Individual protection measures, such as personal protective equipment**
  - **Eye/face protection**: If risk of splashing, wear safety goggles or face shield.
  - **Skin protection**: Wear protective gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier.
  - **Hand protection**: Wear protective gloves. Wear appropriate clothing to prevent repeated or prolonged skin contact.
  - **Respiratory protection**: No protection is ordinarily required under normal conditions of use.
  - **Thermal hazards**: Wear appropriate thermal protective clothing, when necessary.
- **General hygiene considerations**: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties
- **Appearance**
  - **Physical state**: Solid.
  - **Form**: Powder.
Color | White.
---|---
Odor | Odorless.
Odor threshold | Not available.
PH | Not available.
Melting point/freezing point | Not available.
Initial boiling point and boiling range | Not available.
Flash point | Not available.
Evaporation rate | Not available.
Flammability (solid, gas) | Not applicable.
Upper/lower flammability or explosive limits | Not available.
- Flammability limit | Not available.
- lower (%) | Not available.
- Flammability limit | Not available.
- upper (%) | Not available.
Vapor pressure | Not available.
Vapor density | Not available.
Relative density | Not available.
Solubility(ies) | Soluble in water.
Partition coefficient (n-octanol/water) | Not available.
Auto-ignition temperature | Not available.
Decomposition temperature | Not available.
Viscosity | Not available.

**10. Stability and reactivity**
Reactivity | The product is stable and non reactive under normal conditions of use, storage and
Chemical stability | Stable at normal conditions.
Possibility of hazardous reactions | None known.
Conditions to avoid | None known.
Incompatible materials | None known.
Hazardous decomposition products | No hazard in normal industrial use.

**11. Toxicological information**
Information on likely routes of exposure
- Ingestion | Large quantities: May cause discomfort if swallowed.
- Inhalation | Dust may irritate respiratory system.
- Skin contact | Prolonged contact may cause dryness of the skin.
- Eye contact | Direct contact with eyes may cause temporary irritation.
Symptoms related to the physical, chemical and toxicological characteristics | Dry skin.

Information on toxicological effects
- Acute toxicity | Large quantities: May cause discomfort if swallowed.
- Skin corrosion/irritation | Prolonged contact may cause dryness of the skin.
- Serious eye damage/eye irritation | Direct contact with eyes may cause temporary irritation.
- Respiratory sensitization | No data available.
- Skin sensitization | Not a skin sensitizer.
- Germ cell mutagenicity | No data available.
- Carcinogenicity | No data available.
- Reproductive toxicity | No data available.
- Specific target organ toxicity | No data available.
- single exposure |
12. Ecological information

Ecotoxicity
The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills have a harmful or damaging effect on the environment.

Persistence and degradability
No data available.

Bioaccumulative potential
No data available.

Mobility in soil
No data available.

Mobility in general
The product is water soluble and may spread in water systems.

Other adverse effects
No data available.

13. Disposal considerations

Disposal instructions
Dispose of in accordance with all applicable regulations. Do not discharge into drains, water courses or onto the ground.

Local disposal regulations
Dispose of in accordance with local regulations.

Hazardous waste code
Not regulated.

Waste from residues / unused products
Dispose of in accordance with local regulations.

Contaminated packaging
Dispose of in same manner as unused product.

14. Transport information

DOT
Not regulated as dangerous goods.

IATA
Not regulated as dangerous goods.

IMDG
Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable.

15. Regulatory information

US federal regulations
This product is not hazardous according to OSHA 29CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance
No

SARA 311/312 Hazardous chemical
No

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA)
Not regulated.

Drug Enforcement Administration (DEA), List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number
Not listed.

Drug Enforcement Administration (DEA), List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))
Not regulated.

DEA Exempt Chemical Mixtures Code Number
Not regulated.

Food and Drug Administration (FDA)
Not regulated.
US state regulations

- Massachusetts RTK - Substance List
- New Jersey Worker and Community Right-to-Know Act
- Pennsylvania RTK - Hazardous Substances
- Rhode Island RTK
- California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT)

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
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<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
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<tr>
<td>Europe</td>
<td>EC Inventory</td>
<td>Yes</td>
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<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
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<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
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<td>New Zealand</td>
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<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
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<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*"A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s)."

16. Other information

Issue date: 03/11/2015
Revision date: 09/26/2016
Version: 02
Further information: Not available.
Disclaimer: This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.
SAFETY DATA SHEET

1. Identification
Product identifier Human IL-18 ELISA Kit
Assay diluent
Other means of identification
Product code 7620
Recommended use Research use only.
Recommended restrictions None known.
Manufacturer / Importer / Supplier / Distributor information
Manufacturer and Medical & Biological Laboratories (MBL) Co., Ltd.
Supplier (Asia) 4-5-3 Sakae, Naka-ku, Nagoya, Aichi 460-0008, Japan
Telephone number +81-52-238-1901 (Monday to Friday, 9 AM to 5 PM JST)
Fax +81-52-238-1440
E-mail sds-support@mbl.co.jp
URL http://www.mbl.co.jp/e/index.html
Contact person SDS Support
Supplier MBL International Corporation
15A Constitution Way, Woburn, MA 01801, USA
Telephone number +1-800-200-5459, option 3
Fax +1-781-939-6963
E-mail tech@mblintl.com
URL http://www.mblintl.com/
Contact person Technical Service

2. Hazard(s) identification
Physical hazards Not classified.
Health hazards Not classified.
OSHA hazard(s) Not classified.
Label elements
Hazard symbol None.
Signal word None.
Hazard statement None.
Precautionary statement
Prevention Observe good industrial hygiene practices.
Response Wash hands after handling.
Storage Store away from incompatible materials.
Disposal Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC) None.
Supplemental information None.

3. Composition/Information on ingredients
Mixtures
<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium azide</td>
<td>26628-22-8</td>
<td>&lt; 0.1</td>
</tr>
</tbody>
</table>
Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures
Inhalation Move to fresh air. Get medical attention if any discomfort continues.
Skin contact Remove contaminated clothing. Wash skin with soap and water. Get medical attention if irritation develops or persists.
Eye contact: Rinse immediately with plenty of water, also under the eyelids. Get medical attention if irritation develops or persists.

Ingestion: Rinse mouth thoroughly. Get medical attention if any discomfort occurs.

Most important symptoms/effects, acute and delayed: Dry skin.

Indication of immediate medical attention and special treatment needed: Treat symptomatically.

General information: Get medical attention if any discomfort develops.

5. Fire-fighting measures

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: None known.

Specific hazards arising from the chemical: None known.

Special protective equipment and precautions for firefighters: Self-contained breathing apparatus, operated in positive pressure mode and full protective clothing must be worn in case of fire.

Fire-fighting equipment/instructions: Move containers from fire area if you can do it without risk. Use water spray to cool unopened containers. Prevent entry to sewers and public waters.

General fire hazards: The product is non-combustible.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Avoid inhalation of mist and contact with skin and eyes. For personal protection, see Section 8 of the SDS.

Methods and materials for containment and cleaning up: Absorb spillage with suitable absorbent material. After removal, flush contaminated area thoroughly with water. For waste disposal, see Section 13 of the SDS.

Environmental precautions: Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling: Avoid contact with eyes and prolonged skin contact. Wash hands after handling. Observe good industrial hygiene practices.

Conditions for safe handling, including any incompatibilities: Keep container tightly closed. Store away from incompatible materials.

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium azide (CAS 26628-22-8)</td>
<td>Ceiling</td>
<td>0.29 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.11 ppm</td>
</tr>
</tbody>
</table>

US NIOSH Pocket Guide to Chemical Hazards: Ceiling Limit Value and Time Period (if specified)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium azide (CAS 26628-22-8)</td>
<td>Ceiling</td>
<td>0.3 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.1 ppm</td>
</tr>
</tbody>
</table>

Biological limit values: No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls: Provide adequate ventilation. Provide easy access to water supply and eye wash facilities.

Individual protection measures, such as personal protective equipment

Eye/face protection: Risk of splashes: Wear safety glasses with side shields.

Skin protection: Wear protective gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier.
Other
Respiratory protection
Thermal hazards
General hygiene
considerations

Wear appropriate clothing to prevent repeated or prolonged skin contact.
No special precautions. Seek advice from local supervisor.
Wear appropriate thermal protective clothing, when necessary.
Handle in accordance with good industrial hygiene and safety practice. Wash hands after handling. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance
Physical state: Liquid.
Form: Liquid.
Color: Colorless.
Odor: Odorless.
Odor threshold: Not available.
P: Neutral.
Melting point/freezing point: Not available.
Initial boiling point and boiling range: Not available.
Flash point: Not available.
Evaporation rate: Not available.
Flammability (solid, gas): Not applicable.
Upper/lower flammability or explosive limits
- Flammability limit: Not available.
- Flammability limit: Not available.
Vapor pressure: Not available.
Vapor density: Not available.
Relative density: Not available.
Solubility(ies): Soluble in water.
Partition coefficient (n-octanol/water): Not available.
Auto-ignition temperature: Not available.
Decomposition temperature: Not available.
Viscosity: Not available.

10. Stability and reactivity

Reactivity: The product is stable and non reactive under normal conditions of use, storage and
Chemical stability: Stable at normal conditions.
Possibility of hazardous reactions: Sodium azide: Reacts with copper, lead, silver, mercury and carbon disulfide to form
particularly shock-sensitive compounds. Reacts with acids, forming toxic and explosive
hydrogen azide.
Conditions to avoid: None known.
Incompatible materials: Heavy metals. Acids.
Hazardous decomposition products: None known.

11. Toxicological information

Information on likely routes of exposure
Ingestion: Large quantities: May cause discomfort if swallowed.
Inhalation: Under normal conditions of intended use, this material is not expected to be an inhalation
hazard.
Skin contact: Prolonged contact may cause dryness of the skin.
Eye contact: Direct contact with eyes may cause temporary irritation.
Symptoms related to the physical, chemical and toxicological characteristics: Dry skin.

Information on toxicological effects
Acute toxicity
Large quantities: May cause discomfort if swallowed.
Skin corrosion/irritation
May cause mild skin irritation.
Serious eye damage/eye irritation
May cause eye irritation.
Respiratory sensitization
Based on available data, the classification criteria are not met.
Skin sensitization
Based on available data, the classification criteria are not met.
Germ cell mutagenicity
No data available.
Carcinogenicity
- IARC Monographs. Overall Evaluation of Carcinogenicity
  Not listed.
- NTP Report on Carcinogens
  Not listed.
  Not listed.
Reproductive toxicity
No data available.
Specific target organ toxicity
No data available.
- single exposure
- repeated exposure
Specific target organ toxicity
No data available.
Aspiration hazard
Based on available data, the classification criteria are not met.
Chronic effects
Prolonged inhalation may be harmful.

12. Ecological information
Ecotoxicity
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills may have a harmful or damaging effect on the environment.
Persistence and degradability
No data available.
Bioaccumulative potential
No data available.
Mobility in soil
No data available.
Mobility in general
The product is water soluble and may spread in water systems.
Other adverse effects
The environmental hazard of the product is considered to be limited.

13. Disposal considerations
Disposal instructions
Dispose of in accordance with all applicable regulations. Do not discharge into drains, water courses or onto the ground.
Local disposal regulations
Dispose of in accordance with local regulations.
Hazardous waste code
Not regulated.
Waste from residues / unused products
Dispose of in accordance with local regulations.
Contaminated packaging
Dispose of in same manner as unused product.

14. Transport information
DOT
Not regulated as dangerous goods.
IATA
Not regulated as dangerous goods.
IMDG
Not regulated as dangerous goods.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable.

15. Regulatory information
US federal regulations
This product is not hazardous according to OSHA 29CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.
- TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
  Not regulated.
  Not listed.
- CERCLA Hazardous Substance List (40 CFR 302.4)
  Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
Hazard categories

- Immediate Hazard - No
- Delayed Hazard - No
- Fire Hazard - No
- Pressure Hazard - No
- Reactivity Hazard - No

SARA 302 Extremely hazardous substance: No
SARA 311/312 Hazardous chemical: No
SARA 313 (TRI reporting): Not regulated.

Other federal regulations
- Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List: Not regulated.
- Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130): Not regulated.
- Food and Drug Administration (FDA): Not regulated.

US state regulations
- This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.
- Massachusetts RTK - Substance List: Not listed.
- New Jersey Worker and Community Right-to-Know Act: Not listed.
- Pennsylvania RTK - Hazardous Substances: Not listed.
- Rhode Island RTK: Not listed.
- California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Not listed.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>EC Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

- Issue date: 03/11/2015
- Revision date: 09/26/2016
- Version: 02
- Further information: Not available.
- References: Registry of Toxic Effects of Chemical Substances (RTECS)
- HSDB® - Hazardous Substances Data Bank
- Disclaimer: This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.
SAFETY DATA SHEET

1. Identification

Product identifier: Human IL-18 ELISA Kit
Conjugate reagent, Conjugate diluent

Other means of identification:

Product code: 7620

Recommended use:
Research use only.

Recommended restrictions:
None known.

Manufacturer / Importer / Supplier / Distributor information

Manufacturer and Supplier (Asia):
Medical & Biological Laboratories (MBL) Co., Ltd.
4-5-3 Sakae, Naka-ku, Nagoya, Aichi 460-0008, Japan
Telephone number: +81-52-238-1901 (Monday to Friday, 9 AM to 5 PM JST)
Fax: +81-52-238-1440
E-mail: sds-support@mbl.co.jp
URL: http://www.mbl.co.jp/e/index.html
Contact person: SDS Support

Supplier:
MBL International Corporation
15A Constitution Way, Woburn, MA 01801, USA
Telephone number: +1-800-200-5459, option 3
Fax: +1-781-939-6963
E-mail: tech@mblintl.com
URL: http://www.mblintl.com/
Contact person: Technical Service

2. Hazard(s) identification

Physical hazards:
Not classified.

Health hazards:
Not classified.

OSHA hazard(s):
Not classified.

Label elements:

Hazard symbol:
None.

Signal word:
None.

Hazard statement:
None.

Precautionary statement:

Prevention:
Observe good industrial hygiene practices.

Response:
Wash hands after handling.

Storage:
None.

Disposal:
None.

Hazard(s) not otherwise classified (HNOC):
None.

3. Composition/Information on ingredients

Mixtures:

Chemical name:
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one
and 2-methyl-4-isothiazolin-3-one

CAS number:
55965-84-9

%:
< 0.1

Composition comments:
All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation:
Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
<table>
<thead>
<tr>
<th>Skin contact</th>
<th>Remove contaminated clothing. Dry skin with paper towel or similar. Get medical attention if irritation develops or persists.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye contact</td>
<td>Rinse immediately with plenty of water, also under the eyelids. Get medical attention if irritation develops or persists.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Drink plenty of water. Get medical attention if any discomfort occurs.</td>
</tr>
<tr>
<td>Most important symptoms/effects, acute and delayed</td>
<td>Dry skin.</td>
</tr>
<tr>
<td>Indication of immediate medical attention and special treatment needed</td>
<td>Treat symptomatically.</td>
</tr>
<tr>
<td>General information</td>
<td>Get medical attention if any discomfort develops.</td>
</tr>
</tbody>
</table>

5. Fire-fighting measures

<table>
<thead>
<tr>
<th>Suitable extinguishing media</th>
<th>Use fire-extinguishing media appropriate for surrounding materials.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unsuitable extinguishing media</td>
<td>None known.</td>
</tr>
<tr>
<td>Specific hazards arising from the chemical</td>
<td>None known.</td>
</tr>
<tr>
<td>Special protective equipment and precautions for firefighters</td>
<td>Self-contained breathing apparatus, operated in positive pressure mode and full protective clothing must be worn in case of fire.</td>
</tr>
<tr>
<td>Fire-fighting equipment/instructions</td>
<td>Move containers from fire area if you can do that without risk. Use water spray to cool unopened containers. Prevent entry to sewers and public waters.</td>
</tr>
</tbody>
</table>

6. Accidental release measures

<table>
<thead>
<tr>
<th>Personal precautions, protective equipment and emergency procedures</th>
<th>Avoid contact with eyes and prolonged skin contact. For personal protection, see Section 8 of the SDS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methods and materials for containment and cleaning up</td>
<td>Absorb spillage with suitable absorbent material. Flush contaminated area thoroughly with water, following removal of the spillage. For waste disposal, see Section 13 of the SDS.</td>
</tr>
<tr>
<td>Environmental precautions</td>
<td>Prevent further leakage or spillage if safe to do so.</td>
</tr>
</tbody>
</table>

7. Handling and storage

<table>
<thead>
<tr>
<th>Precautions for safe handling</th>
<th>Avoid contact with eyes and prolonged skin contact. Wash hands after handling. Observe good industrial hygiene practices.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conditions for safe storage, including any incompatibilities</td>
<td>Keep container tightly closed.</td>
</tr>
</tbody>
</table>

8. Exposure controls/personal protection

<table>
<thead>
<tr>
<th>Occupational exposure limits</th>
<th>No exposure limits noted for ingredient(s).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological limit values</td>
<td>No biological exposure limits noted for the ingredient(s).</td>
</tr>
<tr>
<td>Appropriate engineering controls</td>
<td>Ensure adequate ventilation is available, especially in confined areas.</td>
</tr>
<tr>
<td>Individual protection measures, such as personal protective equipment</td>
<td>Risk of splashes: Wear safety glasses with side shields.</td>
</tr>
<tr>
<td>Eye/face protection</td>
<td>Risk of contact: Wear protective gloves. Suitable gloves can be recommended by the glove supplier.</td>
</tr>
<tr>
<td>Skin protection</td>
<td>Wear appropriate clothing to prevent repeated or prolonged skin contact.</td>
</tr>
<tr>
<td>Hand protection</td>
<td>Wear appropriate respiratory protection equipment.</td>
</tr>
<tr>
<td>Other</td>
<td>Where excessive vapor, mist or dust may result, use NIOSH approved respiratory protection equipment.</td>
</tr>
<tr>
<td>Respiratory protection</td>
<td>Wear appropriate thermal protective clothing, when necessary.</td>
</tr>
<tr>
<td>Thermal hazards</td>
<td>Handle in accordance with good industrial hygiene and safety practice. Wash hands after handling. Routinely wash work clothing and protective equipment to remove contaminants.</td>
</tr>
</tbody>
</table>

9. Physical and chemical properties
Appearance

- Physical state: Liquid.
- Form: Liquid.
- Color: Pale blue.
- Odor: Odorless.
- Odor threshold: Not available.
- pH: Neutral.
- Melting point/freezing point: Not available.
- Initial boiling point and boiling range: Not available.
- Flash point: Not available.
- Evaporation rate: Not available.
- Flammability (solid, gas): Not applicable.
- Upper/lower flammability or explosive limits:
  - Flammability limit: Not available.
  - lower (%): Not available.
  - Flammability limit: Not available.
  - upper (%): Not available.
- Vapor pressure: Not available.
- Vapor density: Not available.
- Relative density: Not available.
- Solubility(ies): Soluble in water.
- Partition coefficient (n-octanol/water): Not available.
- Auto-ignition temperature: Not available.
- Decomposition temperature: Not available.
- Viscosity: Not available.

10. Stability and reactivity

Reactivity: The product is non-reactive under normal conditions of use, storage and transport.

Chemical stability: Stable at normal conditions.

Possibility of hazardous reactions: Hazardous polymerization does not occur. Hazardous reactions do not occur.

Conditions to avoid: None known.

Incompatible materials: None known.

Hazardous decomposition products: None known.

11. Toxicological information

Information on likely routes of exposure

- Ingestion: Large quantities: May cause discomfort if swallowed.
- Inhalation: Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
- Skin contact: Prolonged contact may cause dryness of the skin.
- Eye contact: Direct contact with eyes may cause temporary irritation.
- Symptoms related to the physical, chemical and toxicological characteristics: Dry skin.

Information on toxicological effects

- Acute toxicity: Large quantities: May cause discomfort if swallowed.
- Skin corrosion/irritation: May cause mild skin irritation.
- Serious eye damage/eye irritation: May cause eye irritation.
- Respiratory sensitization: No data available.
- Skin sensitization: No data available.
- 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.

12. Ecological information
Ecotoxicity: The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills have a harmful or damaging effect on the environment.
Persistence and degradability: No data available.
Bioaccumulative potential: No data available.
Mobility in soil: Expected to be highly mobile in soil.
Mobility in general: The product is water soluble and may spread in water systems.
Other adverse effects: No data available.

13. Disposal considerations
Disposal instructions: Dispose of in accordance with all applicable regulations. Do not discharge into drains, water
Local disposal regulations: Dispose of in accordance with local regulations.
Hazardous waste code: Not regulated.
Waste from residues / unused products: Dispose of in accordance with local regulations.
Contaminated packaging: Dispose of in same manner as unused product.

14. Transport information
DOT: Not regulated as dangerous goods.
IATA: Not regulated as dangerous goods.
IMDG: Not regulated as dangerous goods.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable.

15. Regulatory information
US federal regulations: This product is not hazardous according to OSHA 29CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.
Superfund Amendments and Reauthorization Act of 1986 (SARA) Hazard categories: Immediate Hazard - No, Delayed Hazard - No, Fire Hazard - No, Pressure Hazard - No, Reactivity Hazard - No
SARA 302 Extremely hazardous substance: No
SARA 311/312 Hazardous chemical: No
SARA 313 (TRI reporting): Not regulated.
Other federal regulations: Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List: Not regulated.
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130): Not regulated.
Food and Drug Administration (FDA): Not regulated.
US state regulations: This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.
Massachusetts RTK - Substance List: Not regulated.
New Jersey Worker and Community Right-to-Know Act: Not regulated.
Pennsylvania RTK - Hazardous Substances  
Rhode Island RTK  
California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT)  
Not regulated.  
Not regulated.  
Not listed.

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>EC Inventory</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date 03/11/2015  
Revision date 09/26/2016  
Version 02  
Further information Not available.  
References HSDB® - Hazardous Substances Data Bank  
Registry of Toxic Effects of Chemical Substances (RTECS)  
C&L Inventory database  
Disclaimer This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.
SAFETY DATA SHEET

1. Identification

Product identifier Human IL-18 ELISA Kit
Wash concentrate

Other means of identification

Product code 7620

Recommended use Research use only.

Recommended restrictions None known.

Manufacturer / Importer / Supplier / Distributor information

Manufacturer and Medical & Biological Laboratories (MBL) Co., Ltd.
Supplier (Asia) 4-5-3 Sakae, Naka-ku, Nagoya, Aichi 460-0008, Japan
Telephone number +81-52-238-1901 (Monday to Friday, 9 AM to 5 PM JST)
Fax +81-52-238-1440
E-mail sds-support@mlb.co.jp
Contact person SDS Support

Supplier MBL International Corporation
15A Constitution Way, Woburn, MA 01801, USA
Telephone number +1-800-200-5459, option 3
Fax +1-781-939-6963
E-mail tech@mbiinti.com
URL http://www.mblinti.com/
Contact person Technical Service

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

OSHA hazard(s) Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement None.

Precautionary statement

Prevention Observe good industrial hygiene practices.

Response Wash thoroughly after handling.

Storage None.

Disposal None.

Hazard(s) not otherwise classified (HNOC) None.

3. Composition/Information on ingredients

Mixtures

The manufacturer lists no ingredients as hazardous according to OSHA 29 CFR 1910.1200.

4. First-aid measures

Inhalation Under normal conditions of intended use, this material is not expected to be an inhalation hazard.

Skin contact Remove contaminated clothing. Dry skin with paper towel or similar. Get medical attention if irritation develops or persists.

Eye contact Rinse immediately with plenty of water, also under the eyelids. Get medical attention if irritation develops or persists.
Ingestion

No adverse effects due to ingestion are expected. Get medical attention if any discomfort occurs.

Most important symptoms/effects, acute and delayed

Dry skin.

Indication of immediate medical attention and special treatment needed

Treat symptomatically.

General information

Get medical attention if any discomfort develops.

5. Fire-fighting measures

Suitable extinguishing media

Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media

None known.

Specific hazards arising from the chemical

None known.

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing should be worn when fighting chemical fires. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.

Fire-fighting equipment/instructions

Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards

The product is non-combustible.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid prolonged and repeated contact. Wear suitable protective clothing. For personal protection, see Section 8 of the SDS.

Methods and materials for containment and cleaning up

Absorb spillage with non-combustible, absorbent material. After removal, flush contaminated area thoroughly with water. For waste disposal, see Section 13 of the SDS.

Environmental precautions

Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling

Avoid prolonged and repeated contact. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Keep container closed.

8. Exposure controls/personal protection

Occupational exposure limits

No exposure limits noted for ingredient(s).

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Provide adequate ventilation.

Individual protection measures, such as personal protective equipment

Eye/face protection

If risk of splashing, wear safety goggles or face shield.

Skin protection

Hand protection

Wear protective gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier.

Other

Wear protective gloves. Wear appropriate clothing to prevent repeated or prolonged skin contact.

Respiratory protection

No protection is ordinarily required under normal conditions of use.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance
<table>
<thead>
<tr>
<th>Physical state</th>
<th>Liquid.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Liquid.</td>
</tr>
<tr>
<td>Color</td>
<td>Colorless.</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available.</td>
</tr>
<tr>
<td>pH</td>
<td>Not available.</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td></td>
</tr>
<tr>
<td>Flammability limit</td>
<td>Not available.</td>
</tr>
<tr>
<td>- lower (%)</td>
<td></td>
</tr>
<tr>
<td>Flammability limit</td>
<td>Not available.</td>
</tr>
<tr>
<td>- upper (%)</td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not available.</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not available.</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Soluble in water.</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>Not available.</td>
</tr>
<tr>
<td>(n-octanol/water)</td>
<td></td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

### 10. Stability and reactivity

| Reactivity | The product is stable and non reactive under normal conditions of use, storage and handling. |
| Chemical stability | Stable at normal conditions. |
| Possibility of hazardous reactions | None known. |
| Conditions to avoid incompatible materials | None known. |
| Hazardous decomposition products | No hazard in normal industrial use. |

### 11. Toxicological information

#### Information on likely routes of exposure

| Ingestion | Large quantities: May cause discomfort if swallowed. |
| Inhalation | Under normal conditions of intended use, this material is not expected to be an inhalation hazard. |
| Skin contact | Prolonged contact may cause dryness of the skin. |
| Eye contact | Direct contact with eyes may cause temporary irritation. |
| Symptoms related to the physical, chemical and toxicological characteristics | Dry skin. |

#### Information on toxicological effects

| Acute toxicity | Large quantities: May cause discomfort if swallowed. |
| Skin corrosion/irritation | Prolonged contact may cause dryness of the skin. |
| Serious eye damage/eye irritation | Direct contact with eyes may cause temporary irritation. |
| Respiratory sensitization | No data available. |
| Skin sensitization | Not a skin sensitizer. |
| 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. |

### 12. Ecological information

| Ecotoxicity | The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills may have a harmful or damaging effect on the environment. |
| Persistence and degradability | No data available. |
| Bioaccumulative potential | No data available. |
| Mobility in soil | No data available. |
| Mobility in general | The product is water soluble and may spread in water systems. |
| Other adverse effects | No data available. |

### 13. Disposal considerations

| Disposal instructions | Dispose of in accordance with all applicable regulations. Do not discharge into drains, water courses or onto the ground. |
| Local disposal regulations | Dispose of in accordance with local regulations. |
| Hazardous waste code | Not regulated. |
| Waste from residues / unused products | Dispose of in accordance with local regulations. |
| Contaminated packaging | Dispose of in same manner as unused product. |

### 14. Transport information

| DOT | Not regulated as dangerous goods. |
| IATA | Not regulated as dangerous goods. |
| IMDG | Not regulated as dangerous goods. |
| Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Not applicable. |

### 15. Regulatory information

| US federal regulations | This product is not hazardous according to OSHA 29CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List. |
| TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) | Not regulated. |
| CERCLA Hazardous Substance List (40 CFR 302.4) | Not listed. |

**Superfund Amendments and Reauthorization Act of 1986 (SARA) Hazard categories**

- SARA 302 Extremely hazardous substance: No
- SARA 311/312 Hazardous chemical: No
- SARA 313 (TRI reporting): Not regulated.

**Other federal regulations**

- Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List: Not regulated.
- Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130): Not regulated.
- Drug Enforcement Administration (DEA), List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number: Not listed.
- Drug Enforcement Administration (DEA), List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c)): Not regulated.
DEA Exempt Chemical Mixtures Code Number
Food and Drug Administration (FDA)

US state regulations
This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.
Massachusetts RTK - Substance List
New Jersey Worker and Community Right-to-Know Act
Pennsylvania RTK - Hazardous Substances
Rhode Island RTK
California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT)

International Inventories

Country(s) or region | Inventory name                                  | On inventory (yes/no)*
---------------------|-------------------------------------------------|-------------------
Australia            | Australian Inventory of Chemical Substances (AICS) | Yes               
Canada               | Domestic Substances List (DSL)                   | Yes               
Canada               | Non-Domestic Substances List (NDSL)              | No                
China                | Inventory of Existing Chemical Substances in China (IECSC) | Yes               
Europe               | EC Inventory                                     | Yes               
Japan                | Inventory of Existing and New Chemical Substances (ENCS) | Yes               
Korea                | Existing Chemicals List (ECL)                    | Yes               
New Zealand          | New Zealand Inventory                            | Yes               
Philippines          | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes               
United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes               

* "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information
Issue date          03/11/2015
Revision date        09/26/2016
Version              02
Further information  Not available,
Disclaimer           This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.
SAFETY DATA SHEET

1. Identification

Product identifier Human IL-18 ELISA Kit
Substrate reagent

Other means of identification
Product code 7620
Recommended use Research use only.
Recommended restrictions None known.

Manufacturer / Importer / Supplier / Distributor information

Manufacturer and Medical & Biological Laboratories (MBL) Co., Ltd,
Supplier (Asia) 4-5-3 Sakae, Naka-ku, Nagoya, Aichi 460-0008, Japan
Telephone number +81-52-238-1901 (Monday to Friday, 9 AM to 5 PM JST)
Fax +81-52-238-1440
E-mail sds-support@mbl.co.jp
URL http://www.mbl.co.jp/e/index.html
Contact person SDS Support

Supplier MBL International Corporation
15A Constitution Way, Woburn, MA 01801, USA
Telephone number +1-600-200-5459, option 3
Fax +1-781-939-6963
E-mail tech@mblintl.com
URL http://www.mblintl.com/
Contact person Technical Service

2. Hazard(s) identification

Physical hazards Not classified.
Health hazards Not classified.
OSHA hazard(s) Not classified.

Label elements

Hazard symbol None.
Signal word None.
Hazard statement None.

Precautionary statement
Prevention Observe good industrial hygiene practices.
Response Wash hands after handling.
Storage Store away from incompatible materials.
Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None.

3. Composition/Information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen peroxide</td>
<td>7722-84-1</td>
<td>&lt; 0.1</td>
</tr>
<tr>
<td>3,3',5,5'-Tetramethylbenzidine</td>
<td>54827-17-7</td>
<td>&lt; 0.05</td>
</tr>
</tbody>
</table>

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
Skin contact: Remove contaminated clothing. Dry skin with paper towel or similar. Get medical attention if irritation develops or persists.

Eye contact: Rinse immediately with plenty of water, also under the eyelids. Get medical attention if irritation develops or persists.

Ingestion: Drink plenty of water. Get medical attention if any discomfort occurs.

Most important symptoms/effects, acute and delayed: May cause temporary irritation on skin or eye contact.

Indication of immediate medical attention and special treatment needed: Treat symptomatically.

General information: Get medical attention if any discomfort develops.

5. Fire-fighting measures

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: None known.

Specific hazards arising from the chemical: None known.

Special protective equipment and precautions for firefighters: Self-contained breathing apparatus and full protective clothing should be worn when fighting chemical fires. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.

Fire-fighting equipment/instructions: Move containers from fire area if you can do that without risk. Use water spray to cool unopened containers. Prevent entry to sewers and public waters.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Avoid prolonged and repeated contact. Wear suitable protective clothing. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up: Absorb spillage with suitable absorbent material. After removal, flush contaminated area thoroughly with water.

Environmental precautions: Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling: Avoid contact with eyes and prolonged skin contact. Wear appropriate personal protective equipment (See Section 8). Wash hands after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities: Store away from incompatible materials.

8. Exposure controls/personal protection

Occupational exposure limits

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen peroxide (CAS 7722-84-1)</td>
<td>PEL</td>
<td>1.4 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 ppm</td>
</tr>
</tbody>
</table>

US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen peroxide (CAS 7722-84-1)</td>
<td>TWA</td>
<td>1 ppm</td>
</tr>
</tbody>
</table>

US NIOSH Pocket Guide to Chemical Hazards: Recommended exposure limit (REL)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen peroxide (CAS 7722-84-1)</td>
<td>TWA</td>
<td>1.4 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 ppm</td>
</tr>
</tbody>
</table>

Biological limit values: No biological exposure limits noted for the ingredient(s).

Exposure guidelines: No exposure standards allocated.
Appropriate engineering controls

Individual protection measures, such as personal protective equipment

Eye/face protection
- Risk of splashes: Wear safety glasses with side shields.

Skin protection
- Hand protection: Wear protective gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier.

Other
- Respiratory protection: No special precautions. Seek advice from local supervisor.

General hygiene considerations
- Wear appropriate thermal protective clothing, when necessary. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance
- Physical state: Liquid.
- Form: Liquid.
- Color: Pale amber.
- Odor: Odorless.
- Odor threshold: Not available.

Uppercase/freezing point
- Not available.

Initial boiling point and boiling range
- Not available.

Flash point: Not applicable.

Evaporation rate: Not available.

Flammability (solid, gas): Not applicable.

Flammability or explosive limits
- Flammability limit: Not applicable.
- Lower (%): Not applicable.
- Flammability limit: Not applicable.
- Upper (%): Not applicable.

Vapor pressure: Not available.

Vapor density: Not available.

Relative density: Not available.

Solubility(ies): Soluble in water.

Partition coefficient (n-octanol/water): Not available.

Auto-Ignition temperature: Not available.

Decomposition temperature: Not available.

Viscosity: Not available.

10. Stability and reactivity

Reactivity: The product is non-reactive under normal conditions of use, storage and transport.

Chemical stability: Stable under the prescribed storage conditions.

Possibility of hazardous reactions: None known.

Conditions to avoid
- Contact with incompatible materials. Elevated temperatures. Strong oxidizing agents.

Incompatible materials: None.

Hazardous decomposition products: No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure
- Ingestion: May cause discomfort if swallowed.
Inhalation
Under normal conditions of intended use, this material is not expected to be an inhalation hazard.

Skin contact
Prolonged contact may cause dryness of the skin.

Eye contact
May cause eye irritation on direct contact.

Symptoms related to the physical, chemical and toxicological characteristics
May cause temporary irritation on skin or eye contact.

Information on toxicological effects
Acute toxicity
May cause discomfort if swallowed.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen peroxide (CAS 7722-84-1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>LD50</td>
<td>Rat</td>
</tr>
<tr>
<td>Dermal</td>
<td>LD50</td>
<td>Rat</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation
Prolonged contact may cause dryness of the skin.

Serious eye damage/eye irritation
May cause eye irritation on direct contact.

Respiratory sensitization
No data available.

Skin sensitization
No data available.

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.

12. Ecological information
Ecotoxicity

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen peroxide (CAS 7722-84-1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Algae</td>
<td>EC50</td>
<td>Nitzschia</td>
</tr>
</tbody>
</table>

Persistence and degradability
The product is biodegradable.

Bioaccumulative potential
The product is not bioaccumulating.

Mobility in soil
Expected to be highly mobile in soil.

Mobility in general
The product is water soluble and may spread in water systems.

Other adverse effects
The environmental hazard of the product is considered to be limited.

13. Disposal considerations
Disposal instructions
Dispose of in accordance with all applicable regulations. Do not discharge into drains, water courses or onto the ground.

Local disposal regulations
Dispose of in accordance with local regulations.

Hazardous waste code
Not regulated.

Waste from residues / unused products
Dispose of in accordance with local regulations.

Contaminated packaging
Dispose of in same manner as unused product.

14. Transport information

| DOT | Not regulated as dangerous goods. |
| IATA | Not regulated as dangerous goods. |
| IMDG | Not regulated as dangerous goods. |

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable.
15. Regulatory information

US federal regulations
- This product is not hazardous according to OSHA 29CFR 1910.1200.
- All components are on the U.S. EPA TSCA Inventory List.

Supervision Amendments and Reauthorization Act of 1986 (SARA)
- Hazard categories:
  - SARA 302 Extremely hazardous substance: Immediate Hazard - No
  - SARA 311/312 Hazardous chemical: No
  - SARA 313 (TRI reporting): Not regulated.

Other federal regulations
- Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List: Not regulated.
- Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130): Not regulated.

US state regulations
- This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.
  - Massachusetts RTK - Substance List: Not regulated.
  - New Jersey Worker and Community Right-to-Know Act: Not regulated.
  - Rhode Island RTK: Not regulated.
  - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Not listed.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>EC Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>No</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>No</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

* A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date: 03/11/2015
Revision date: 09/26/2016
Version: 02
List of abbreviations:
- EC50: Effective Concentration, 50%
- LD50: Lethal Dose, 50%.
Further information: Not available.
References:
- HSDB® - Hazardous Substances Data Bank
- Registry of Toxic Effects of Chemical Substances (RTECS)
- IARC Monographs. Overall Evaluation of Carcinogenicity
Disclaimer

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.
SAFETY DATA SHEET

1. Identification

Product identifier Human IL-18 ELISA Kit
Stop solution

Other means of identification
Product code 7620
Recommended use Research use only.
Recommended restrictions None known.

Manufacturer / Importer / Supplier / Distributor information
Manufacturer and Medical & Biological Laboratories (MBL) Co., Ltd.
Supplier (Asia) 4-5-3 Sakae, Naka-ku, Nagoya, Aichi 460-0008, Japan
Telephone number +81-52-238-1901 (Monday to Friday, 9 AM to 5 PM JST)
Fax +81-52-238-1440
E-mail sds-support@mbl.co.jp
URL http://www.mbl.co.jp/e/index.html
Contact person SDS Support
Supplier MBL International Corporation
15A Constitution Way, Woburn, MA 01801, USA
Telephone number +1-800-200-5459, option 3
Fax +1-781-939-6963
E-mail tech@mblintl.com
URL http://www.mblintl.com/
Contact person Technical Service

2. Hazard(s) identification

Physical hazards Not classified.
Health hazards Skin corrosion/irritation Category 1
Serious eye damage/eye irritation Category 1
OSHA hazard(s) Not classified.
Label elements
Hazard symbol

Signal word Danger
Hazard statement Causes severe skin burns and eye damage.
Precautionary statement
Prevention Do not breathe dust or mist. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling.
Response IF SWALLOWED: Rinse mouth. Do not induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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.
Storage Store locked up.
Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC) None.

3. Composition/Information on ingredients
Mixtures
<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid</td>
<td>7664-93-9</td>
<td>&lt; 10</td>
</tr>
</tbody>
</table>

Composition comments: All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation: Move injured person into fresh air and keep person calm under observation. If breathing is difficult, trained personnel should give oxygen. Get medical attention if any discomfort continues.

Skin contact: Take off immediately all contaminated clothing. Flush skin thoroughly with water. Get medical attention immediately. Chemical burns must be treated by a physician.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove any contact lenses and open eyelids wide apart. Continue rinsing. Get medical attention immediately.

Ingestion: Rinse mouth thoroughly. Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Get medical attention if any discomfort continues.

Most important symptoms/effects, acute and delayed: Burning pain and severe corrosive skin damage. Extreme irritation of eyes and mucous membranes, including burning and tearing.

Indication of immediate medical attention and special treatment needed: Treat symptomatically.

General information: First aid personnel must be aware of own risk during rescue.

5. Fire-fighting measures

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: None known.

Specific hazards arising from the chemical: By heating and fire, harmful vapors/gases may be formed.

Special protective equipment and precautions for firefighters: Self-contained breathing apparatus and full protective clothing should be worn when fighting chemical fires. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.

Fire-fighting equipment/instructions: Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Avoid inhalation of spray mist and contact with skin and eyes. Wear appropriate personal protective equipment.

Methods and materials for containment and cleaning up: Absorb spillage with non-combustible, absorbent material. Collect in containers and seal securely.

Environmental precautions: Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling: Avoid inhalation of spray mist and contact with skin and eyes. Wear appropriate personal protective equipment. Wash hands after handling. Observe good industrial hygiene

Conditions for safe storage, including any incompatibilities: Keep container closed. Do not store near heat sources or expose to high temperatures. Protect from direct sunlight.

8. Exposure controls/personal protection

Occupational exposure limits

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid (CAS 7664-93-9)</td>
<td>PEL</td>
<td>1 mg/m3</td>
</tr>
</tbody>
</table>
US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid (CAS 7664-93-9)</td>
<td>TWA</td>
<td>0.2 mg/m³</td>
<td>Thoracic fraction</td>
</tr>
</tbody>
</table>

US. NIOSH: Pocket Guide to Chemical Hazards

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid (CAS 7664-93-9)</td>
<td>REL</td>
<td>1 mg/m³</td>
</tr>
</tbody>
</table>

Biological limit values
No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls
Provide adequate ventilation. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Provide easy access to water supply and eye wash facilities.

Individual protection measures, such as personal protective equipment

Eye/face protection
Wear approved chemical safety goggles.

Skin protection

Hand protection
Use suitable protective gloves if risk of skin contact. Butyl rubber gloves are recommended, but be aware that the liquid may penetrate the gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier.

Other

Respiratory protection
Wear protective clothing appropriate for the risk of exposure.

If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection. Chemical respirator with acid gas cartridge.

Thermal hazards
Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations
Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state
Liquid.

Form
Liquid.

Color
Colorless.

Odor
Odorless.

Odor threshold
Not available.

pH
Not available.

Melting point/freezing point
Not available.

Initial boiling point and boiling range
Not available.

Flash point
Not available.

Evaporation rate
Not available.

Flammability (solid, gas)
Not applicable.

Upper/lower flammability or explosive limits

Flammability limit
Not available.

- lower (%)
Not available.

Flammability limit
Not available.

- upper (%)
Not available.

Vapor pressure
Not available.

Vapor density
Not available.

Relative density
Not available.

Solubility(ies)
Soluble in water.

Partition coefficient (n-octanol/water)
Not available.

Auto-ignition temperature
Not available.

Decomposition temperature
Not available.

Viscosity
Not available.

10. Stability and reactivity

Reactivity
Reacts violently with strong bases.

Chemical stability
Stable under normal temperature conditions.
Possibility of hazardous reactions
This product may react with reducing agents.
Conditions to avoid
Incompatible materials
Reducing agents, Alkalis, Metals.
Hazardous decomposition products
Sulfur dioxide.

11. Toxicological information
Information on likely routes of exposure
Ingestion
May cause discomfort if swallowed. Ingestion may cause nausea, headache and dizziness.

Inhalation
Spray mists may cause respiratory tract irritation.

Skin contact
Causes skin burns.

Eye contact
Causes severe eye burns.

Symptoms related to the physical, chemical and toxicological characteristics
Burning pain and severe corrosive skin damage. Extreme irritation of eyes and mucous membranes, including burning and tearing.

Information on toxicological effects
Acute toxicity
Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid (CAS 7664-93-9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>LD50</td>
<td>2,140 mg/kg</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation
Causes severe skin burns.

Serious eye damage/eye irritation
Causes eye burns.

Respiratory sensitization
No data available.

Skin sensitization
No data available.

Germ cell mutagenicity
No data available.

Carcinogenicity
Exposure to strong inorganic acid mists containing sulfuric acid has been classified as carcinogenic to humans. The information located is insufficient to conclude that sulfuric acid itself is a carcinogen.

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.

12. Ecological information
Ecotoxicity
Large amounts of the product may affect the acidity (pH-factor) in water with possible risk of harmful effects to aquatic organisms.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid (CAS 7664-93-9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td>LCS0</td>
<td>Western mosquitofish (Gambusia affinis) 42 mg/L, 96 hours</td>
</tr>
</tbody>
</table>

Persistence and degradability
No data available.

Bioaccumulative potential
No data available.

Mobility in soil
No data available.

Mobility in general
The product is water soluble and may spread in water systems.

Other adverse effects
None known.

13. Disposal considerations
Disposal instructions
Dispose of in accordance with all applicable regulations. Do not discharge into drains, water courses or onto the ground.
Local disposal regulations Dispose of in accordance with local regulations.
Hazardous waste code D002: Corrosive waste
Waste from residues / unused products Dispose of in accordance with local regulations.
Contaminated packaging Dispose of in same manner as unused product.

14. Transport information

DOT

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN number</td>
<td>UN2796</td>
</tr>
<tr>
<td>UN proper shipping name</td>
<td>Sulphuric acid solution</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>8</td>
</tr>
<tr>
<td>Subsidiary class(es)</td>
<td>-</td>
</tr>
<tr>
<td>Packing group</td>
<td>II</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Read safety instructions, SDS and emergency procedures before handling.</td>
</tr>
<tr>
<td>Labels required</td>
<td>8</td>
</tr>
<tr>
<td>Special provisions</td>
<td>A3, A7, B2, B15, IB2, N6, N34, T8, TP2, TP12</td>
</tr>
<tr>
<td>Packaging exceptions</td>
<td>154</td>
</tr>
<tr>
<td>Packaging non bulk</td>
<td>202</td>
</tr>
<tr>
<td>Packaging bulk</td>
<td>242</td>
</tr>
</tbody>
</table>

IATA

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
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<tr>
<td>Subsidiary class(es)</td>
<td>-</td>
</tr>
<tr>
<td>Packaging group</td>
<td>II</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>No</td>
</tr>
<tr>
<td>Labels required</td>
<td>8</td>
</tr>
<tr>
<td>ERG Code</td>
<td>8L</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Read safety instructions, SDS and emergency procedures before handling.</td>
</tr>
</tbody>
</table>

IMDG

<table>
<thead>
<tr>
<th>Item</th>
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<tr>
<td>Transport hazard class(es)</td>
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</tr>
<tr>
<td>Subsidiary class(es)</td>
<td>-</td>
</tr>
<tr>
<td>Packaging group</td>
<td>II</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>No</td>
</tr>
<tr>
<td>Marine pollutant</td>
<td>No</td>
</tr>
<tr>
<td>Labels required</td>
<td>8</td>
</tr>
<tr>
<td>EmS</td>
<td>F-A, S-B</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Read safety instructions, SDS and emergency procedures before handling.</td>
</tr>
</tbody>
</table>

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

US federal regulations This product is not hazardous according to OSHA 29CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) Not regulated.
CERCLA Hazardous Substance List (40 CFR 302.4) Sulfuric acid (CAS 7664-93-9) Listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
Hazard categories

Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance
SARA 311/312 Hazardous chemical
SARA 313 (TRI reporting)

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Safe Drinking Water Act (SDWA)
Drug Enforcement Administration (DEA), List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number
Drug Enforcement Administration (DEA), List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))
DEA Exempt Chemical Mixtures Code Number

US state regulations

Massachusetts RTK - Substance List
New Jersey Worker and Community Right-to-Know Act
Pennsylvania RTK - Hazardous Substances
Rhode Island RTK
California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT)

WARNING: This product contains a chemical known to the State of California to cause

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>EC Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date 03/11/2015
Revision date 09/26/2016
Version 02
List of abbreviations
LC50: Lethal Concentration, 50%.
LD50: Lethal Dose, 50%.

Further information
Not available.

References
IUCLID (2000)
RTECS (2006, 2008)

Disclaimer
This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.