

MATERIAL SAFETY DATA SHEET

Created: Sept 20, 2011

Revised: Sept 29, 2011

1. Identification of the Substance/Mixture of the Company/Undertaken

Product Name	Human IL-18 ELISA Kit
Catalog No.	7620
Sheet No.	2
Kit Component	8) Stop solution (0.5mol/L H ₂ SO ₄)
Manufacturer	Medical & Biological Laboratories (MBL) Co., Ltd. KDX Nagoya Sakae Bldg. 10F 4-5-3 Sakae, Naka-ku, Nagoya 460-0008, Japan TEL: +81-265-76-4999 (9 AM to 5 PM JST; Hiroshi Takatoya) FAX: +81-265-76-1964 E-mail: takatoya.hiroshi@mbl.co.jp
Supplier	MBL International Co. 4 H Constitution Way Woburn, MA 01801, USA TEL: +1-800-200-5459 x1113 (Dr. Bindi M. Doshi: Technical Service Manager) FAX: +1-781-939-6963 E-mail: bindi.doshi@mblintl.com
Intended Use	For <i>in vitro</i> diagnostic use

2. Hazards Identification**GHS Classification**

Health Hazard	Acute toxicity (Oral): Not classified. Acute toxicity (Dusts and Mists): Not classified. Skin Corrosion / Irritation: Category 2 Serious eye damage / Eye irritation: Category 1 Skin Sensitization: Not classified. Germ Cell Mutagenicity: Not classified. Reproductive Toxicity: Not classified. Specific Target Organ Toxicity (Single Exposure): Category 2 (Respiratory system) Specific Target Organ Toxicity (Repeated Exposure): Category 2 (Respiratory system)
Environmental Hazards	Hazardous To The Aquatic Environment (Acute): Not classified. Hazardous To The Aquatic Environment (Chronic): Not classified. Hazards other than described above are out of classification or not classified.

Symbol**Signal Word**

DANGER

Hazard Statements

H315 Causes skin irritation.
H318 Causes serious eye damage.
H371 May cause breathing difficulties if inhaled.
H373 May cause damage to respiratory organs through prolonged or repeated exposure.

Precautionary Statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/protective clothing/eye protection/face

First-aid Measures

IF ON SKIN: Wash with plenty of soap and water.(P302+P352)
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or if you feel unwell, call a Poison Center or doctor/physician.
Take off contaminated clothing and wash before reuse.

Storage	Store vials with the lids tightly closed at 4-8°C preferably in the dark.
Disposal Considerations	Dispose of contents/container to be specified, in accordance with local/regional/national/international regulation.

3. Composition/Information on Ingredients

Chemical Identity	
Substance / Mixture	Mixture
Hazardous Ingredients	Sulfuric acid included in "component 8) Stop solution".
Synonyms	Hydrogen sulfate; Sulphuric acid; Oil of vitriol.
Concentration	4.9% (May cause irritation of the skin, the eyes, the respiratory system at this concentration)
Formula	H ₂ SO ₄
Molecular Weight	98.08
CAS No.	7664-93-9
EC No. (EINECS)	231-639-5

4. First-aid Measures

After Inhalation	Move person into fresh air. If not breathing, give artificial respiration. In case of severe disturbance, consult a physician.
After Skin Contact:	Rinse skin with plenty of water. Remove contaminated clothes and protective gloves. Wash clothes thoroughly before reuse. Clean shoes. In case of severe disturbance consult a physician.
After Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes. In case of severe disturbance, consult a physician.
After Swallowing	Do not induce vomiting. Never give anything by mouth to an unconscious person. In case of severe disturbance, consult a physician.
Protection of First Aider	Do not take any actions which are connected to any personal risk or which were not adequately trained. If vapors are suspected, wear appropriate airpurifying respirator. For first-aid providing persons there exists a possible risk due to mouth-to-mouth resuscitation. Remove contaminated clothing. Wear protective gloves.

For detailed information to health impacts and symptoms see section 11.

5. Fire-fighting Measures

Suitable Extinguishing Agents	Consider adjacent fires when choosing the extinguishing medium.
Protective Equipment	Wear appropriate personal protective equipment.

6. Accidental Release Measures

Personal Precautions	Do not take any actions which are connected to any personal risk or which were not adequately trained. Evacuate surrounding. Prohibit access for not protected persons. Do not touch or tread spilled substance. Avoid inhalation of vapors or mist. Care for sufficient ventilation. Wear adequate personal protective equipment (see section 8).
Procedures for Cleaning/absorption	Eliminate leakage. Remove container from contaminated area. Swab with a cloth or adsorb with an inert dry material and dispose in an appropriate labeled container. Dispose via an approved waste disposal company.
Ventilation	No special ventilation is necessary.
Environmental Precautions	Avoid spreading and drain-off of spilled material as well as contact with soil, watercourses, drains or canalization.

7. Handling and Storage

Handling	Do not ingest. Avoid contact with eyes, skin or clothes. Use only with sufficient ventilation. Do not inhale vapor or mist. After handling wash hands thoroughly.
Storage	Store vials with the lids tightly closed at 4-8°C preferably in the dark. After usage close opened containers again tightly.

8. Exposure Controls and Personal Protection

Control Parameters	None known.
Protective Equipments	Follow usual standard laboratory practices. The use of latex gloves, safety glasses and protective work clothing is recommended. Respiratory protection is not required. Preventive measures are unnecessary other than the clothes which cover the body.

Hygiene Measures

Do not eat, drink or store food and beverages in areas where chemicals are used. Wash hands before breaks and at the end of the work shift.

9. Physical and Chemical Properties**Mounting Medium****Physical Data**

Form	Slution
Color	Colorless
Odor	Odorless
pH	<1.0
Boiling point/Boiling range	Not determined.
Flash point	No data.
Flammability	Not flammable.
Explosive Properties	No explosion hazard.
Oxidizing properties	Not determined.
Vapor pressure	No data.
Evaporation rate	Not determined.
Relative density	Not determined.
Solubility in /Miscibility with water	Soluble/miscible.
Partition coefficient	Not determined.
Viscosity	Not determined.
Evaporation rate	Not determined.

10. Stability and Reactivity

Chemical Stability	Stable under normal ambient and storage and handling temperatures.
Thermal decomposition/conditions to be avoided	Thermal stress.
Incompatible materials to be avoided	Strong bases.
Hazardous decomposition products	Not known.

11. Toxicological Information

Acute Toxicity	Acute toxicity (Oral; estimated): 31,000 mg/kg Acute toxicity (Dermal; estimated): 31,000 mg/kg Acute toxicity (Vapours; estimated): 7.1 mg/kg Harmful if swallowed. May cause severe and permanent damage to the digestive tract. Causes gastrointestinal tract burns.
Skin Irritant Effect	Causes skin burns. May cause allergic reactions to certain sensitive individuals.
Eye Irritant Effect	Causes severe eye burns.
Chronic Toxicity	Not available.
Sensitization	Not available.
Mutagenicity	Not available.
Teratogenicity	Not available.
Reproduction Toxicity	Not available.

*The product is not subject to classification according to GHS ver. 3.

12. Ecological Information**<Sulfuric acid>**

Ecotoxicity	LC ₅₀ (prawns): 42.5 ppm/48 hr (salt water) EC ₅₀ (daphnids): 29 mg/L/24 hr LC ₅₀ (bluegill): 16-28 mg/L/96 hr (SIDS 2003)
Biodegradability	Not available.
Mobility	Not available.

13. Disposal Considerations

Waste	Dispose as special waste in compliance with applicable national, regional or local regulations.
Empty Packaging	Dispose in compliance with applicable national, regional or local regulations.

14. Transport Information

UN No.	None.
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Transport Regulations

This product is not subject to the rules of the following traffic systems:

Street traffic: ADR (directive 94/55/EC)

Rail traffic: RID (directive 96/49/EC)

Sea traffic: IMDG

Air traffic: ICAO/IATA

Indicate Precaution

Store between 2~8°C. Do not freeze.

Other Information

Protect from direct sunlight and high temperature. Avoid damaging containers.

15. Regulatory Information**<Sulfuric acid>****US REGULATIONS:**

CWA/311 Haz., NIOSH Recommend. Subst., CERCLA Haz. Subst., SARA III/302 Extre. Haz. Subst., DEA Essen. Chem., DOT Haz. Mat., DOT Haz. Sub. and Rep. Quant., Mass. Subst. List , New Jers. RTK Haz. Subst. List , Penn. Haz. Subst. List , Canad. WHMIS IDL 1% conc.

EPA : CERCLA RQ= 1000 lb

SARA RQ= 1000 lb

EPCRA TPQ= 1000 lb

EPA FIFRA 1998 STATUS OF PESTICIDES: Red Completed

OSHA : TQ= Not listed

NFPA : HR= health-3, flam.-0, react.-2

HMIS : HR= health- 3 , flam.- 0 , react.- 2

EUROPEAN REGULATIONS:

The classification and identification was performed according to the European directives 67/548/EC and 1999/45/EC (including amendments) and consider the intended use of the product. A Chemical Safety Assessment was not conducted for substances included in this preparation.

16. Other Information

The information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. The information in this document is intended only as a guide to the appropriate precautionary handling of this material by a person trained in, or supervised by a person trained in chemical handling. The user is responsible for determining the precautions and danger of this chemical material in his application. MBL shall not be held responsible for any damage resulting from the use of the above product or the information contained in this Material Safety Data Sheet. Since conditions and manner of use are outside of our control, MBL can assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

Created: Sept 28, 2011

Revised: Sept 29, 2011

1. Identification of the Substance/Mixture of the Company/Undertaken

Product Name	Human IL-18 ELISA Kit
Catalog No.	7620
Sheet No.	1
Kit components	1) Microwell strips coated with anti-human IL-18 antibody 2) Human IL-18 Calibrator (Lyophilized) 3) Assay diluent 4) Conjugate reagent 5) Conjugate diluent 6) Wash concentrate (x10) 7) Substrate reagent (TMB/H ₂ O ₂) 8) Stop solution (0.5mol/L H ₂ SO ₄) (See Sheet No. 2)
Manufacturer	Medical & Biological Laboratories (MBL) Co., Ltd. KDX Nagoya Sakae Bldg. 10F 4-5-3 Sakae, Naka-ku, Nagoya 460-0008, Japan TEL: +81-265-76-4999 (9 AM to 5 PM JST; Hiroshi Takatoya) FAX: +81-265-76-1964 E-mail: takatoya.hiroshi@mbl.co.jp
Supplier	MBL International Co. 4 H Constitution Way Woburn, MA 01801, USA TEL: +1-800-200-5459 x1113 (Dr. Bindi M. Doshi: Technical Service Manager) FAX: +1-781-939-6963 E-mail: bindi.doshi@mblintl.com
Intended Use	For Research Use Only

2. Hazards Identification

GHS Classification	N/A
Symbol	No Symbol
Signal Word	N/A
Hazard Statement	N/A

3. Composition/Information on Ingredients

Chemical Identity	
Substance / Mixture	Mixture
Hazardous Ingredients	Sodium azide included in "component 3) Assay diluent" as preservative.
Synonyms	Smite, Azide, Azium
Concentration	0.09% (Not hazardous at this concentration)
Formula	NaN ₃
Molecular Weight	65.02
CAS No.	26628-22-8
EC No. (EINECS)	247-852-1
EC Index No.	011-004-00-7

4. First-aid Measures

After Inhalation	Supply fresh air, consult doctor in case of complaints.
After Skin Contact:	Immediately wash skin with water and soap and rinse thoroughly.
After Eye Contact	Immediately rinse opened eye for several minutes under running water. Then consult a doctor.
After Swallowing	Rinse mouth with water. Seek medical attention and appropriate follow-up.

5. Fire-fighting Measures

Suitable Extinguishing Agents	Non-flammable aqueous solution.
Protective Equipment	No special measures required.

6. Accidental Release Measures

Personal Precautions	Use standard laboratory practices including proper personal protective equipment in order to avoid direct contact with material and wash after handling.
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Procedures for Cleaning/absorption	Absorbe liquid with liquid-binding material. Pick up mechanically. Dispose contaminated material as waste according to item 13.
Ventilation	No special ventilation is necessary.
Environmental Precautions	N/A

7. Handling and Storage

Handling	No special measures required. No special precautions are necessary if used correctly. Do not inhale and ingest.
Storage	Store vials with the lids tightly closed at 4-8°C preferably in the dark.

8. Exposure Controls and Personal Protection

Control Parameters	None known.
Protective Equipments	Follow usual standard laboratory practices. The use of latex gloves, safety glasses and protective work clothing is recommended. Respiratory protection is not required.
Hygiene Measures	Do not eat, drink or store food and beverages in areas where chemicals are used. Wash hands before breaks and at the end of the work shift.

9. Physical and Chemical Properties**Assay diluent**

Physical Data	
Form	Solution
Color	Colorless
Odor	Odorless
pH	Neutral
Boiling point/Boiling range	Not determined.
Flash Point	No data.
Flammability	Not flammable.
Explosive Properties	No explosion hazard.
Oxidizing properties	Not determined.
Vapor Pressure	No data.
Evaporation rate	Not determined.
Relative Density	Not determined.
Solubility in /Miscibility with water	Soluble/miscible.
Partition Coefficient	Not determined.
Viscosity	Not determined.

10. Stability and Reactivity

Chemical Stability	Stable under normal ambient and storage and handling temperatures.
Reactivity	"Component 3) Assay diluent" contain low concentration of sodium azide (0.09%). Sodium azide can form explosive compounds with heavy metals and may result in the build up of shock-sensitive compounds. Sodium azide reacts with the acid and a poisonous and explosive hydronitric acid may be generated.
Thermal decomposition/conditions to be avoided	No decomposition if used according to specification.
Incompatible materials to be avoided	Acid, metals and metallic compounds.
Hazardous decomposition products	No dangerous decomposition products known.

11. Toxicological Information

Acute Toxicity	Not known.
Skin Irritant Effect	Not known.
Eye Irritant Effect	Not known.
Chronic Toxicity	Not known.
Sensitization	Not known.
Mutagenicity	Not known.
Teratogenicity	Not known.
Reproduction Toxicity	Not known.

*The product is not subject to classification according to GHS ver. 3.

12. Ecological Information

Ecotoxicity	Not determined.
Biodegradability	Not determined.
Mobility	Not determined.

13. Disposal Considerations

Waste	Dispose as special waste in compliance with applicable national, regional or local regulations.
Empty Packaging	Dispose in compliance with applicable national, regional or local regulations.

14. Transport Information

UN No.	None.
Transport regulations	Transportation of the product is not regulated according to the definition of hazardous in US DOT, IMDG, IATA, ICAO, Canadian TDG, or European ADR.
Indicate precaution	Store between 2~8°C. Do not freeze.
Other information	Protect from direct sunlight and high temperature. Avoid damaging containers.

15. Regulatory Information

The product does not contain a hazardous ingredient in an amount that requires identification and labeling according to European guidelines accordance with EEC directives (67/548/EEC, 99/45/EEC). The product is exempt from WHMIS requirements in Canada.

16. Other Information

The information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. The information in this document is intended only as a guide to the appropriate precautionary handling of this material by a person trained in, or supervised by a person trained in chemical handling. The user is responsible for determining the precautions and danger of this chemical material in his application. MBL shall not be held responsible for any damage resulting from the use of the above product or the information contained in this Material Safety Data Sheet. Since conditions and manner of use are outside of our control, MBL can assume no liability in connection with any use of this information.