



SAFETY DATA SHEET

1. Identification

Product identifier	IMMUNOCYTO CD107a/LAMP-1 Detection Kit Monensin
Other means of identification	
Product code	4844
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	Flammable liquids	Category 2
Health hazards	Serious eye damage/eye irritation	Category 2
OSHA hazard(s)	Not classified.	

Label elements

Hazard symbol



Signal word

Danger

Hazard statement

Highly flammable liquid and vapor. Causes serious eye irritation.

Precautionary statement

Prevention

Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wash thoroughly after handling. Wear protective gloves/eye protection/face protection.

Response

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. In case of fire: Use appropriate media to extinguish.

Storage

Store in a well-ventilated place. Keep cool.

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

Chemical name	CAS number	%
Ethanol	64-17-5	60 - 70

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. Call a physician if symptoms develop or persist.

Skin contact Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical attention if irritation develops and persists. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/ effects, acute and delayed Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Coughing.

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

General information Get medical attention if any discomfort continues.

5. Fire-fighting measures

Suitable extinguishing media Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health 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 In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers.

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

General fire hazards Highly flammable liquid and vapor.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see Section 8 of the SDS.

Methods and materials for containment and cleaning up Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see Section 13 of the SDS. Wipe up with absorbent material (e.g. cloth, fleece).

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

7. Handling and storage

Precautions for safe handling Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid contact with eyes. Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Ethanol (CAS 64-17-5)	PEL	1,900 mg/m3 1,000 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Ethanol (CAS 64-17-5)	STEL	1,000 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Ethanol (CAS 64-17-5)	TWA	1,900 mg/m3 1,000 ppm

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

Appropriate engineering controls Provide adequate ventilation. Explosion-proof general and local exhaust ventilation.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Other Wear suitable protective clothing.

Respiratory protection In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations 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 Alcohol.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range 78.5 °C (173.3 °F) Ethanol

Flash point 15.0 - 20.0 °C (59.0 - 68.0 °F) (70% Ethanol in water) estimated

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit	Not available.
- upper (%)	
Explosive limit	Not available.
- lower (%)	
Explosive limit	Not available.
- upper (%)	
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	Soluble in water.
Partition coefficient	Not available.
(n-octanol/water)	
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and
Chemical stability	Stable under normal temperature conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	None known.

11. Toxicological information

Information on likely routes of exposure

Ingestion	May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.
Inhalation	Prolonged inhalation may be harmful.
Skin contact	Prolonged or repeated skin contact may cause drying, cracking, or irritation.
Eye contact	Causes serious eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Headache. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Coughing.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
Ethanol (CAS 64-17-5)		
Acute		
<i>Oral</i>	LD50 Rat	7,000 - 11,000 mg/kg
<i>Inhalation</i>	LC50 Mouse	39 g/m ³ , 4 hours

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Causes serious 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	Due to lack of data the classification is not possible.
Carcinogenicity	
IARC Monographs. Overall Evaluation of Carcinogenicity	Not listed.
NTP Report on Carcinogens	Not listed.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	Not listed.

Reproductive toxicity Due to lack of data the classification is not possible.
Specific target organ toxicity - single exposure Due to lack of data the classification is not possible.
Specific target organ toxicity - repeated exposure Due to lack of data the classification is not possible.
Aspiration hazard Due to lack of data the classification is not possible.
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 have a harmful or damaging effect on the environment.

Components	Species	Test Results
Ethanol (CAS 64-17-5)		
Aquatic		
Crustacea	LC50	<i>Ceriodaphnia dubia</i> 5,012 mg/L, 48 hours <i>Daphnia magna</i> 454 mg/L, 11 days
	NOEC	<i>Ceriodaphnia dubia</i> 9.6 mg/L
Fish	LC50	<i>Pimephales promelas</i> 13,480 mg/L, 96 hours

Persistence and degradability No data available.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Ethanol (CAS 64-17-5) -0.31

Mobility in soil This product is water soluble and may disperse in soil.

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

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

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

UN number UN1170
UN proper shipping name Ethanol solution
Transport hazard class(es)
Classes 3
Subsidiary risk -
Label(s) 3
Packing group II
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Special provisions 24, IB2, T4, TP1
Packaging exceptions 4b, 150
Packaging non bulk 202
Packaging bulk 242

IATA

UN number UN1170
UN proper shipping name Ethanol solution
Transport hazard class(es)

Classes	3
Subsidiary risk	-
Packaging group	II
Environmental hazards	No
ERG Code	3L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1170
UN proper shipping name	Ethanol solution
Transport hazard class(es)	
Classes	3
Subsidiary risk	-
Packaging group	II
Environmental hazards	
Marine pollutant	No
EmS	F-E, S-D
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

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 a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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 - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No
SARA 302 Extremely hazardous substance	Not listed.
SARA 311/312 Hazardous chemical	Yes
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.

US state regulations

Massachusetts RTK - Substance List	Ethanol (CAS 64-17-5)
New Jersey Worker and Community Right-to-Know Act	Ethanol (CAS 64-17-5)
Pennsylvania Worker and Community Right-to-Know Law	Ethanol (CAS 64-17-5)
Rhode Island RTK	Not regulated.
California Proposition 65	Not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

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

*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	01/30/2016
Revision date	09/30/2016
Version	10
List of abbreviations	LC50: Lethal Concentration, 50%. LD50: Lethal Dose, 50%. NOEC: No Observed Effect Concentration.
Further information	Not available.
References	HSDB® - Hazardous Substances Data Bank Registry of Toxic Effects of Chemical Substances (RTECS)
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	IMMUNOCYTO CD107a/LAMP-1 Detection Kit Cell suspension solution	
Other means of identification		
Product code	4844	
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	Sensitization, skin	Category 1
	Carcinogenicity	Category 1B
OSHA hazard(s)	Not classified.	
Label elements		
Hazard symbol		
Signal word	Danger	
Hazard statement	May cause an allergic skin reaction. May cause cancer.	
Precautionary statement		
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.	
Response	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. Wash contaminated clothing before reuse.	
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

Chemical name	CAS number	%
Formaldehyde	50-00-0	0.5
Methanol	67-56-1	< 0.2

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. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.

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. Only induce vomiting at the instruction of medical personnel. Get medical attention if any discomfort continues.

Most important symptoms/ effects, acute and delayed May cause an allergic skin reaction. Dermatitis. Rash.

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 Irritating and toxic gases or fumes may be released during a fire. Carbon oxides. Sulfur oxides.

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 not flammable.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Wear suitable protective clothing. Avoid contact with eyes, skin, and clothing. For personal protection, see Section 8 of the SDS.

Methods and materials for containment and cleaning up Absorb spill with vermiculite or other inert material, then place in a container for chemical waste for proper disposal. After removal, flush contaminated area thoroughly with water. Never return spills to original containers for re-use.

Environmental precautions Do not allow to enter drains, sewers or watercourses.

7. Handling and storage

Precautions for safe handling Use with adequate ventilation. Avoid contact with skin and eyes. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store in tightly closed original container in a dry, cool and well-ventilated place. Store away from incompatible materials.

8. Exposure controls/personal protection

Occupational exposure limits
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Type	Value
Formaldehyde (CAS 50-00-0)	STEL	2 ppm
	TWA	0.75 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Methanol (CAS 67-56-1)	PEL	260 mg/m3
		200 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Formaldehyde (CAS 50-00-0)	Ceiling	0.3 ppm
Methanol (CAS 67-56-1)	STEL	250 ppm
	TWA	200 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Formaldehyde (CAS 50-00-0)	Ceiling	0.1 ppm
	TWA	0.016 ppm
Methanol (CAS 67-56-1)	STEL	325 mg/m3
		250 ppm
	TWA	260 mg/m3
		200 ppm

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

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Methanol (CAS 67-56-1)	15 mg/L	Methanol	Urine	*

* For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

Methanol (CAS 67-56-1) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

Methanol (CAS 67-56-1) Skin designation applies.

US - Tennessee OELs: Skin designation

Methanol (CAS 67-56-1) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Methanol (CAS 67-56-1) Can be absorbed through the skin.

US. NIOSH: Pocket Guide to Chemical Hazards

Methanol (CAS 67-56-1) Can be absorbed through the skin.

Appropriate engineering controls

Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors. Provide easy access to water supply and eye wash facilities.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear approved safety glasses or goggles.

Skin protection

Hand protection

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

Other

Wear appropriate clothing to prevent repeated or prolonged skin contact.

Respiratory protection

If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection. In case of inadequate ventilation or risk of inhalation of vapors, use suitable respiratory equipment.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

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.
pH	7.6
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 - lower (%)	Not available.
Flammability limit - 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.
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and
Chemical stability	Stable under normal temperature conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides.

11. Toxicological information

Information on likely routes of exposure

Ingestion	May cause discomfort if swallowed.
Inhalation	Prolonged inhalation may be harmful.
Skin contact	May cause an allergic skin reaction.
Eye contact	Direct contact with eyes may cause temporary irritation.
Symptoms related to the physical, chemical and toxicological characteristics	May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity May cause an allergic skin reaction.

Components	Species	Test Results
Formaldehyde (CAS 50-00-0)		
Acute		
<i>Oral</i>	LD50 Rat	100 mg/kg
<i>Inhalation</i>	LC50 Rat	0.82 mg/L, 0.5 hour

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.	
ACGIH sensitization	Formaldehyde (CAS 50-00-0)	Sensitizer.
Respiratory sensitization	No data available.	
Skin sensitization	May cause an allergic skin reaction.	
Germ cell mutagenicity	No data available.	
Carcinogenicity	May cause cancer.	
IARC Monographs. Overall Evaluation of Carcinogenicity	Formaldehyde (CAS 50-00-0)	Carcinogenic to humans.
NTP Report on Carcinogens	Formaldehyde (CAS 50-00-0)	Known to be human carcinogen.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	Formaldehyde (CAS 50-00-0)	Cancer.
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.	
Chronic effects	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.	

12. Ecological information

Ecotoxicity The product is 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.

Components	Species	Test Results
Formaldehyde (CAS 50-00-0)		
Aquatic		
Crustacea	EC50	Water flea (<i>Daphnia pulex</i>)
Fish	LC50	Striped bass (<i>Morone saxatilis</i>)
		4.3 - 7.8 mg/L, 48 hours
		10.302 - 16.743 mg/L, 96 hours
Methanol (CAS 67-56-1)		
Aquatic		
Crustacea	EC50	Water flea (<i>Daphnia magna</i>)
Fish	LC50	Bluegill (<i>Lepomis macrochirus</i>)
		> 10,000 mg/L, 48 hours
		15,400 mg/L, 96 hours

Persistence and degradability No data available.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Formaldehyde (CAS 50-00-0)	0.31
Methanol (CAS 67-56-1)	-0.77

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 a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 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)
 Formaldehyde (CAS 50-00-0)
 Cancer
 Skin sensitization
 Respiratory sensitization
 Eye irritation
 Skin irritation
 Respiratory tract irritation
 Acute toxicity
 Flammability

CERCLA Hazardous Substance List (40 CFR 302.4)
 Formaldehyde (CAS 50-00-0) Listed.
 Methanol (CAS 67-56-1) Listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
Hazard categories
 Immediate Hazard - Yes
 Delayed Hazard - Yes
 Fire Hazard - No
 Pressure Hazard - No
 Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
Formaldehyde	50-00-0	100	500		

SARA 311/312 Hazardous chemical Yes
SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Formaldehyde	50-00-0	0.1 - < 1

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
 Formaldehyde (CAS 50-00-0)
 Methanol (CAS 67-56-1)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
 Formaldehyde (CAS 50-00-0)

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

Massachusetts RTK - Substance List
 Formaldehyde (CAS 50-00-0)
 Methanol (CAS 67-56-1)

New Jersey Worker and Community Right-to-Know Act
 Formaldehyde (CAS 50-00-0)
 Methanol (CAS 67-56-1)

Pennsylvania RTK - Hazardous Substances
 Formaldehyde (CAS 50-00-0)
 Methanol (CAS 67-56-1)

Rhode Island RTK
 Formaldehyde (CAS 50-00-0)
 Methanol (CAS 67-56-1)

California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT)
 Formaldehyde (CAS 50-00-0)
 Methanol (CAS 67-56-1)

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

*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	01/30/2016
Revision date	09/30/2016
Version	10
List of abbreviations	EC50: Effective Concentration, 50%. LC50: Lethal 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 IMMUNOCYTO CD107a/LAMP-1 Detection Kit
 FITC-labeled anti-human CD107a mAb, FITC-labeled mouse IgG1 isotype control

Other means of identification

Product code 4844

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 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

Chemical name	CAS number	%
Sodium azide	26628-22-8	< 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 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 storage, 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

Components	Type	Value
Sodium azide (CAS 26628-22-8)	Ceiling	0.29 mg/m3 0.11 ppm

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

Components	Type	Value
Sodium azide (CAS 26628-22-8)	Ceiling	0.3 mg/m3 0.1 ppm

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	
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 appropriate clothing to prevent repeated or prolonged skin contact.
Respiratory protection	No special precautions. Seek advice from local supervisor.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	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	Colored, dependent on the conjugates. (Alexa Fluor® 488; yellowish green, Alexa Fluor® 594; purple, Alexa Fluor® 647; pale blue, APC; light blue, Azami-Green; pale green, FITC; yellowish green, PE; pink)
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 - lower (%)	Not available.
Flammability limit - 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	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.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	Not listed.
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	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 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.
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
 No
 No
 Not regulated.

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 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.
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

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

*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 01/30/2016
Revision date 09/30/2016
Version 10
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.