

FCM Lysing solution (1X): sc-3621

DESCRIPTION

FCM Lysing Solution (1X) can be used to lyse red blood cells following antibody labeling of hematopoietic cells. FCM Lysing Solution (1X) maintains leukocyte viability, and enhances light scatter separation of lymphocyte and red blood cell debris when analyzed by flow cytometry.

Product size: 150 ml.

APPLICATION NOTES

FIXED AND PERMEABILIZED CELLS FOR INTRACELLULAR STAINING

- Once supernatant is aspirated from cell preparation, resuspend pellet in enough 1X PBS to have a final cell concentration of 10 million cells/ml.
- OPTIONAL:** For mouse Fc Receptor blocking, incubate the cell suspension with 1 microgram of sc-18867 L per 1 ml of cell suspension for 10 minutes.

- Block by incubating the cell suspension with 1 mg of sc-18867 L per 1 ml of cell suspension for 10 minutes.
 - Resuspend pellet in approximately 50 ml 1X PBS to wash away any excess blocking antibody.
 - Centrifuge for 5 minutes at 1000 RPM.
 - Once supernatant is aspirated from cell preparation, resuspend pellet in FCM Fixation Buffer (sc-3622). Use 1 mL per million cells.
 - Incubate for 30 minutes at room temperature on a rotator.
 - Centrifuge for 5 minutes at 1500-2000 RPM. Cells get more buoyant after fixation. If pellet is too small, spin again at a higher RPM, but do not exceed 3000 RPM.
 - Pour off supernatant. Cells may be lost if aspirating from this point on, so always decant. Use a quick motion and don't allow the supernatant to wash back and forth over the cells.
 - Resuspend pellet in approximately 50 ml 1X PBS to wash away any excess Fixation Buffer.
 - Centrifuge for 5 minutes at 1500-2000 RPM.
 - Decant supernatant. At this point, cells can be resuspended in a small amount of PBS and stored for up to 1 month at 4° C. To permeabilize at this time, proceed to next step.
- NOTE:** You should only proceed with permeabilization if you can stain immediately afterwards.
- If cells have been stored in PBS, centrifuge for 5 minutes at 1500-2000 RPM and decant supernatant.
 - Break up cell pellet and dropwise add the same amount of COLD (stored at -20° C) FCM Permeabilization Buffer, sc-3623 at 1 ml per 1 million cells. Vortex while adding.
 - Incubate for 5 minutes only at RT on a rotator.
 - Immediately centrifuge for 5 minutes at 2000-2500 RPM. Cells are more buoyant after permeabilization and much care must be exercised to maintain volume of cells.

APPLICATION NOTES *cont.*

NOTE: Important: If a pellet is not recovered at this step, be sure to spin again and try to recover more cells.

- Decant supernatant and add approximately 50 ml 1X PBS to wash away any excess Permeabilization Buffer.
- Centrifuge for 5 minutes at 2000-2500 RPM.
- Decant supernatant and resuspend pellet in enough FCM Wash Buffer, sc-3624, for a final cell concentration of 10 million cells/ml. In the staining steps, use FCM Wash Buffer in place of 1X PBS.

STAINING

Follow protocol for direct or indirect staining.

DIRECT STAINING

(with Fluorochrome-Conjugated Antibodies)

- Label tubes.
- Add 20 µl of fluorochrome-conjugated antibodies to tubes.
- Add 100 µl of the prepared cell suspension (equal to 1 million cells) to each tube.
- Vortex and incubate for 15-30 minutes in a covered ice bucket.
- To wash off excess antibody following staining, add 1.5-2 ml of 1X PBS to each tube.
- Centrifuge in tabletop microfuge for 5 minutes at 2000 RPM. This speed should be increased to 3000 or 4000 RPM for intracellular staining.
- Aspirate supernatant, being careful not to disturb pellet.
- Resuspend pellets in 500 µl of 1% paraformaldehyde. Tubes can be stored in the dark for 24 hours (maximum for intracellular staining) to 1 week (maximum for surface staining).

INDIRECT STAINING

(with Fluorochrome-Unconjugated Primary Antibodies and Fluorochrome-Conjugated Secondary Antibodies)

- Label tubes.
- Add unconjugated primary antibodies to tubes. Use approximately 1 µg per tube.
- Add 100 µl of the prepared cell suspension (equal to 1 million cells) to each tube.
- Vortex and incubate for 15-30 min in a covered ice bucket.
- To wash off excess antibody following staining, add 1.5-2 ml of 1X PBS to each tube.
- Centrifuge in tabletop microfuge for 5 minutes at 2000 RPM (or 3000-4000 RPM for intracellular staining).
- Aspirate supernatant, being careful not to disturb pellet.
- Add 100 µl of 1X PBS to each tube. Add fluorochrome-conjugated secondary antibodies to tubes. Use 0.5-1 µg of antibody.

APPLICATION NOTES *cont.*

- Vortex and incubate for 15-30 minutes in a covered ice bucket.
- To wash off excess antibody following staining, add 1.5-2 ml of 1X PBS to each tube.
- Centrifuge in tabletop microfuge for 5 minutes at 2000 RPM (or 3000-4000 RPM for intracellular staining).
- Aspirate supernatant, being careful not to disturb pellet.
- Resuspend pellets in 500 µl of 1% paraformaldehyde. Tubes can be stored in the dark for 24 hours (maximum for intracellular staining) to 1 week (maximum for surface staining).

ACQUIRE

Acquire within 24 hours.

WARNING

FCM Lysing Solution (1X) contains ammonium chloride; NH_4Cl (CAS#12125-02-9, EC#2351864). See MSDS for safety information.

STORAGE

Store at 4° C.

RESEARCH USE

For research use only; not for diagnostic or therapeutic use.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Santa Cruz Biotechnology shall not be held liable for any damage resulting from handling or from contact with the product.

10/21/2010



The Power to Question

SAFETY DATA SHEET

Santa Cruz Biotechnology, Inc.

Revision date 13-Jul-2017

Version 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name

FCM Lysing solution (1x)

Product Code

SC-3621

Recommended use of the chemical and restrictions on use

For research use only. Not intended for diagnostic or therapeutic use.

Details of the supplier of the safety data sheet

Santa Cruz Biotechnology, Inc.

10410 Finnell Street

Dallas, TX 75220

831.457.3800

800.457.3801

scbt@scbt.com

Emergency telephone number

Chemtrec

1.800.424.9300 (Within USA)

+1.703.527.3887 (Outside USA)

2. HAZARDS IDENTIFICATION

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.122).

Classification

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label elements

Signal word

Not classified

Hazard statements

Not classified

Symbols/Pictograms

Not classified

Precautionary Statements - Prevention

Wash hands thoroughly after handling

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Hazards not otherwise classified (HNOC)

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

NFPA

Health hazards

0

Flammability

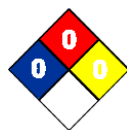
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Stability

0

Physical and chemical properties

-



HMIS

Health hazards

0

Flammability

0

Physical hazards

0

Personal protection

-

3. COMPOSITION/INFORMATION ON INGREDIENTS

Molecular Weight

No information available

Formula

No information available

Chemical Name	CAS No	Weight %	Oral LD50	Dermal LD50	Inhalation LC50
Water	7732-18-5	>98	> 90 mL/kg (Rat)	-	-
Ammonium Chloride	12125-02-9	1 - 5	= 1650 mg/kg (Rat)	-	-

4. FIRST AID MEASURES

First Aid Measures

General advice	Consult a physician if necessary. Remove to fresh air.
Eye contact	Wash with plenty of water.
Skin Contact	Wash skin with soap and water.
Inhalation	Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.
Ingestion	Never give anything by mouth to an unconscious person. Clean mouth with water.

Most important symptoms and effects, both acute and delayed

Symptoms	No information available.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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Unsuitable Extinguishing Media	None.
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Specific hazards arising from the chemical

Specific hazards arising from the chemical	No information available.
Hazardous combustion products	No information available.

Explosion data

Sensitivity to Mechanical Impact	No information available.
Sensitivity to Static Discharge	No information available.

Protective equipment and precautions for firefighters

Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
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6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure adequate ventilation, especially in confined areas.
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Environmental precautions

Environmental precautions	See Section 12 for additional Ecological Information.
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Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store at 4 °C.
 Incompatible materials None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters**

Exposure Guidelines

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ammonium Chloride 12125-02-9	STEL: 20 mg/m ³ fume TWA: 10 mg/m ³ fume	(vacated) TWA: 10 mg/m ³ fume (vacated) STEL: 20 mg/m ³ fume	TWA: 10 mg/m ³ fume STEL: 20 mg/m ³ fume

NIOSH IDLH Immediately Dangerous to Life or Health

Appropriate engineering controls

Engineering Controls
 Showers
 Eyewash stations
 Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).
 Skin and Body Protection Wear protective gloves and protective clothing.
 Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
 General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State liquid
 Appearance No information available
 Odor No information available

Property**Values**

pH No information available
 Melting point/freezing point No information available
 Boiling point No information available
 Flash point No information available
 Density No information available
 Evaporation rate No information available
 Upper flammability limits No information available
 Lower flammability limit No information available
 Vapor pressure No information available
 Vapor density No information available
 Specific gravity No information available
 Water solubility No information available
 Solubility in other solvents No information available
 Partition coefficient No information available
 Autoignition temperature No information available

Decomposition temperature	No information available
Kinematic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available

10. STABILITY AND REACTIVITY

Reactivity	Not applicable
Chemical stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	None under normal processing.
Hazardous polymerization	No information available.
Conditions to avoid	Extremes of temperature and direct sunlight.
Incompatible materials	Strong oxidizing agents.
Hazardous Decomposition Products	None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	No data available.
Eye contact	No data available.
Skin Contact	No data available.
Ingestion	No data available.

Information on toxicological effects

Symptoms	No information available.
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Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity	No information available.
Target Organ Effects	Eyes, Respiratory system, Skin.

Numerical measures of toxicity - Product Information

Unknown acute toxicity	No information available
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12. ECOLOGICAL INFORMATION

Ecotoxicity May cause long lasting harmful effects to aquatic life

Chemical Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Ammonium Chloride 12125-02-9	-	209: 96 h Cyprinus carpio mg/L LC50 static 725: 24 h Lepomis macrochirus mg/L LC50	-	202: 24 h Daphnia magna mg/L LC50

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

Persistence and degradability	No information available.
Bioaccumulation	No information available.
Mobility	No information available.

13. DISPOSAL CONSIDERATIONS

Disposal of wastes	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Do not reuse container.

14. TRANSPORT INFORMATION

DOT	Not regulated
IMDG	Not regulated
IATA	Not regulated

15. REGULATORY INFORMATION

International Inventories

All of the components in the product are on the following Inventory lists

TSCA (United States): Canada (DSL/NDL) Europe (EINECS/ELINCS/NLP) Australia (AICS) South Korea (KECL): China (IECSC) Philippines (PICCS)

Chemical Name	TSCA	DSL	NDL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Water	X	X	-	X	-	-	X	X	X	X
Ammonium Chloride	X	X	-	X	-	X	X	X	X	X

X - Listed

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Ammonium Chloride 12125-02-9	5000 lb			X

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Ammonium Chloride 12125-02-9	X	X	X

16. OTHER INFORMATION

Revision note

No information available

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet