Cell Technology
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MATERIAL SAFETY DATA SHEET

EMERGENCY # FOR NATIONAL RESPONSE CENTER **(800) 424-8802**
Prepared 2/13/01

SECTION 1. CHEMICAL IDENTIFICATION

Product Name: SR-VAD-FMK Reagent

Part No:	600079
Synonyms:	SR-VAD-FMK stock / SR-VAD-FMK solution
CAS #:	None.
Chemical Formula:	A sulforhodomine-b derivative of valyl-alay- aspartic acid fluoromethyl ketone.

SECTION 2. HAZARDS IDENTIFICATION

Not known.

SECTION 3. CHARACTERISTICS

SR-VAD-FMK Reagent is a brown powder.

Boiling point °f:	No data available.
Vapor pressure (mm Hg):	No data available.
Vapor density:	No data available.
Solubility in water:	Very low.
Specific gravity:	Not applicable.
% Volatile by volume:	Not applicable.
Evaporation rate:	No data available.
pH:	Not applicable to a powder.

SECTION 4. STORAGE, HANDLING, STABILITY

SR-VAD-FMK Reagent is stable for 18 months when stored at 2°C - 8°C and protected from light. When reconstituted to 150X, store SR-VAD-FMK stock at -20°C for 6 months protected from light. When diluted to 5X, use SR-VAD-FMK immediately. SR-VAD-FMK reagent is light sensitive. It will not decompose in a hazardous manner. Hazardous polymerization will not occur.

SECTION 5. SAFETY CONTROL MEASURES

Gloves and standard laboratory protective clothing and eyewear are recommended. Safe laboratory practices should be followed.

SECTION 6. HEALTH HAZARD DATA

May enter the body through inhalation, ingestion, eye, and skin contact.

SECTION 7. FIRST AID MEASURES

Avoid prolonged exposure. Remove contaminated clothing and shoes, and wash before reuse.

Skin:	Wash skin thoroughly with soap and water.
Eyes:	Flush with water for at least 15 minutes.
Ingestion:	If conscious, give large amounts of water. Seek medical attention.
Inhalation:	Remove to fresh air. If not breathing, administer CPR. If breathing is difficult, give oxygen.

SECTION 8. FIRE/EXPLOSION HAZARD DATA

SR-VAD-FMK Reagent is not a fire hazard nor an explosion hazard. Use any means suitable for extinguishing surrounding fire. It is not necessary to use any special firefighting procedures. Water spray, carbon dioxide, dry chemical powder or appropriate foam can all be used.

SECTION 9. ACCIDENTAL RELEASE MEASURES

For release of large amounts of material, wear safety glasses and rubber gloves. Stop source of leak and isolate spill area. Collect material in an appropriate container and dispose with regular trash. Wash exposed surfaces with acetone or alcohol and rinse with copious amounts of soap and water. Dispose of all waste in accordance with all national, state, and local regulations.

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EMERGENCY # FOR NATIONAL RESPONSE CENTER **(800) 424-8802**
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SECTION 1.

CHEMICAL IDENTIFICATION

Product Name:	**Fixative**
Part No:	600036
Synonyms:	Apoptosis Fixative / FAM-FMK Fixative
CAS #:	Not applicable to mixtures.
Chemical Formula:	Not applicable to mixtures.

SECTION 2.
HAZARDS IDENTIFICATION

Contains formaldehyde. Potential cancer hazard. Repeated or prolonged exposure increases the risk. Formaldehyde exposure has been linked to cancers of the lungs, vasopharynx, oropharynx, and nasal passages. Eye contact may cause permanent damage. Flammable liquid and vapor.

Contains methanol. May be fatal or cause blindness if swallowed. Cannot be made non-poisonous. Harmful if inhaled or absorbed through skin. Strong sensitizer. May cause allergic reaction.

Contains PBS. Irritant to eyes, skin, and respiratory system. Do not get in eyes, on skin, or on clothing.

SECTION 3.
CHARACTERISTICS

Fixative is a clear, colorless solution with a moderately pungent odor.

Boiling point °f:	No data available.
Vapor pressure (mm Hg):	No data available.
Vapor density:	No data available.
Solubility in water:	Soluble at room temperature.
Specific gravity:	Not applicable.
% Volatile by volume:	Not applicable.
Evaporation rate:	No data available.
pH:	7.3-7.7

SECTION 4.
STORAGE AND STABILITY

Fixative is stable for 18 months when stored at RT under ordinary conditions of use and storage. Avoid heat, sparks, open flame. Product is somewhat volatile. Keep in a tightly closed container. Protect against physical damage. Separate from oxidizing and alkaline material. Store apart from any source of ignition. Containers may be hazardous when empty since they contain product residues. Do not breathe vapor or mist.

It may generate hazardous decomposition products such as formic acid. Hazardous polymerization will not occur. This product is incompatible with strong acids, oxidizers, isocyanates, strong alkalines, phenol, anhydrides, oxides and inorganic acids. Contact with HCl may cause formation of the potent carcinogen, bischloromethyl ether.

SECTION 5.
HEALTH HAZARD DATA

May enter the body through inhalation, ingestion, eye, and skin contact.

SECTION 6.
SAFETY CONTROL MEASURES

Personal protective equipment, such as lab coat, safety glasses with side shields, gloves should be worn at all times while handling this product. Use of this product should be restricted to a fume hood or equivalent ventilation conditions. Maintain eye wash fountain and safety shower in work area. Safe laboratory practices should be followed. Always wash thoroughly after handling. Never take internally. Do not breathe vapor or mist.

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SECTION 7.
EXPOSURE GUIDELINES:

AGENCY	component	TWA, STEL, OR CL	UNITS	VALUE
OSHA(PEL)	Methanol	TWA	PPM	200
OSHA (PEL)	Methanol	TWA	Mg/M^3	260
OSHA(PEL)	Methanol	STEL	PPM	250
OSHA(PEL)	Methanol	STEL	Mg/M^3	325
OSHA(PEL)	Formaldehyde	TWA	PPM	0.75
OSHA(PEL)	Formaldehyde	STEL	PPM	2
ACGIH(TLV)	Methanol	TWA	PPM	200
ACGIH(TLV)	Methanol	TWA	Mg/M^3	252
ACGIH(TLV)	Methanol	STEL	PPM	250
ACGIH(TLV)	Methanol	STEL	Mg/M^3	328
ACGIH(TLV	Formaldehyde	STEL	PPM	0.3
ACGIH(TLV)	Formaldehyde	STEL	Mg/M^3	0.37
ACGIH(TLV)	Formaldehyde	CL	PPM	0.3

SECTION 8.
FIRST AID MEASURES

Get immediate medical assistance for all cases of overexposure. Avoid prolonged exposure. Remove contaminated clothing and shoes, and wash before reuse.

Skin: Wash thoroughly with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Launder contaminated clothing. Throw away contaminated shoes.
Eyes: Immediately flush with plenty of water for at least 15 minutes.
Ingestion: If conscious, give large amounts of water, milk, or activated charcoal. Seek medical attention immediately.
Inhalation: Remove to fresh air. If not breathing, administer CPR. If breathing is difficult, give oxygen.

SECTION 9.
FIRE/EXPLOSION HAZARD

Fixative is considered a moderate fire hazard and a moderate explosion hazard. Formaldehyde reacts with nitrogen dioxide, nitromethane, perchloric acid and aniline, or peroxyformic acid to yield explosive compounds. Use dry chemical, “alcohol foam”, carbon dioxide to extinguish fires. Firefighters should wear proper protective equipment and NIOSH-approved self-contained breathing apparatus.

SECTION 10. ACCIDENTAL
RELEASE MEASURES

For large spills, evacuate area of all unnecessary employees. Wear appropriate personal protective equipment including: neoprene (or equivalent) gloves, safety glasses with side shields, and lab coat . Eliminate any ignition sources until the area is determined to be free from explosion or fire hazards. Contain the spill and dispose of in compliance with federal, state, and local regulations. Us regulations (CERCLA) require reporting spills and releases to soil, water, and air in excess of reportable quantities. Toll free number to US coast guard national response center is (800) 424-8802.

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EMERGENCY # FOR NATIONAL RESPONSE CENTER **(800) 424-8802**
Prepared 2/13/01

SECTION 1.
CHEMICAL IDENTIFICATION

Product Name: **10X Apoptosis Wash Buffer**
Catalog #: 600034 and 600035
Synonyms: None.
CAS #: Not applicable to mixtures.
Chemical Formula: Not applicable to mixtures.

SECTION 2.
HAZARDS IDENTIFICATION

Contains sodium azide. Irritant to skin, eyes, and upper respiratory tract. Dilute solutions are less toxic. Overexposure may cause headache, dizziness, gastrointestinal irritation, blurred vision, nausea, vomiting, low blood pressure, slow heart rate, reduced body ph and temperature, convulsions, and unconsciousness. May be fatal if swallowed or absorbed through skin. Do not get in eyes, on skin, or on clothing.

Contains phosphate buffered saline. Irritant to eyes, skin, and respiratory system.

SECTION 3.
CHARACTERISTICS

10X Apoptosis Wash Buffer is a slightly yellow liquid with a very slight odor.

Boiling point °f: No data available.
Vapor pressure (mm Hg): No data available.
Vapor density: No data available.
Solubility in water: Soluble at room temperature.
Specific gravity: Not applicable.
% Volatile by volume: Not applicable.
Evaporation rate: No data available.
pH: 6.8-7.0.

SECTION 4.
STORAGE AND STABILITY

10X Apoptosis Wash Buffer is stable for 18 months when stored at 2°C - 8°C under ordinary conditions of use and storage. Keep in a tightly closed container. Do not allow evaporation to dryness. Containers may be hazardous when empty since they contain product residues.

Because it contains sodium azide, 10X Apoptosis Wash Buffer may generate hazardous decomposition products such as hydrozoic acid fumes and oxides of phosphorus, sodium, and nitrogen. Hazardous polymerization will not occur. This product contains sodium azide, which can be incompatible with strong acids and oxidizers such as: benzoyl chloride; potassium hydroxide; bromine; carbon disulfide; chromyl chloride; copper; dibromalononitrile; dimethyl sulfate; lead; barium carbonate; sulfuric acid; and nitric acid.

SECTION 5.
HEALTH HAZARD DATA

May enter the body through inhalation, ingestion, eye, and skin contact.

SECTION 6.
SAFETY CONTROL MEASURES

Wear lab coat, gloves, chemical safety glasses, face shield, boots, coveralls, etc. as appropriate to avoid skin and eye contact. Maintain eye wash fountain and safety shower in work area. Gloves and standard laboratory protective clothing and eyewear are recommended. Safe laboratory practices should be followed. A system of general exhaust is recommended to keep employee exposures below airborne exposure limits. Local exhaust is preferred.

SECTION 7.
AIRBORNE EXPOSURE LIMITS

Hydrazoic acid, HN_3, vapor is present where NaN_3 is handled.

NIOSH recommended exposure limit (rel) for sodium azide, NaN_3:
0.1ppm as HN_3 (Ceiling) skin.
0.3 mg/m^3 as NaN_3 (Ceiling) skin.

ACGIH threshold limit value (TLV) for sodium azide, NaN_3:
0.11 ppm as HN_3 (Ceiling) A4, not classifiable as a human carcinogen.
0.29 mg/m^3 as NaN_3 (Ceiling), A4, not classifiable as a human carcinogen.

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SECTION 8. FIRST AID MEASURES

Get immediate medical assistance for all cases of overexposure. Avoid prolonged exposure. Remove contaminated clothing and shoes, and wash before reuse.

Skin:	Wash skin thoroughly with soap and water for at least 15 minutes. Remove contaminated clothing and shoes, and wash before reuse.
Eyes:	Flush with water for at least 15 minutes.
Ingestion:	If conscious, give large amounts of water. Induce vomiting. Seek medical attention immediately.
Inhalation:	Remove to fresh air. If not breathing, administer CPR. If breathing is difficult, give oxygen.

SECTION 9. FIRE/EXPLOSION HAZARD DATA

10X Apoptosis Wash Buffer is not a fire hazard nor an explosion hazard. Use any means suitable for extinguishing surrounding fire. Water spray, carbon dioxide, dry chemical powder or appropriate foam can all be used. Firefighters should wear proper protective equipment and NIOSH-approved self-contained breathing apparatus.

SECTION 10. ACCIDENTAL RELEASE MEASURES

For release of large amounts of material, wear respirator, chemical safety glasses, rubber boots, and rubber gloves. Stop source of leak and isolate spill area. Ventilate area. Collect liquid in an appropriate container or absorb with an inert material (such as vermiculite, dry sand, charcoal) and place in chemical waste container. Us regulations (CERCLA) require reporting spills and releases to soil, water, and air in excess of reportable quantities. Toll free number to US coast guard national response center is (800) 424-8802.