

MATERIAL SAFETY DATA SHEET
Adipogenesis Assay IBMX Solution (1,000X)

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Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108

Printed: 09/02/2010
Revision: 09/02/2010
Supersedes Revision: 10/17/2006
Date Created: 10/17/2006

1. Product and Company Identification

Product Code: 10008978
Product Name: Adipogenesis Assay IBMX Solution (1,000X)
Manufacturer Information
Company Name: Cayman Chemical Company
Emergency Contact: Cayman Chemical Company (800)364-9897
Information: Cayman Chemical Company (734)971-3335

2. Hazards Identification

Emergency Overview: Combustible.
Harmful.
Target Organ(s): eyes, heart, kidney, nerves, skin.

Route(s) of Entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection

Health Hazards (Acute and Chronic): Harmful if swallowed.
Material is readily absorbed through skin.
Material may be irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation or skin absorption.
May cause eye, skin, or respiratory system irritation.
The toxicological properties of this product have not been fully evaluated.

LD 50 / LC 50: Please refer to Section 11.

Signs and Symptoms Of Exposure: Ingestion may cause gastrointestinal irritation with nausea, vomiting, diarrhea, headache, and dizziness.

3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	RTECS #
1. Xanthine, 3-isobutyl-1-methyl-	28822-58-4	1.0 -15.0 %	249-259-3	ZD8500000
2. Dimethyl sulfoxide, anhydrous	67-68-5	85.0 -99.0 %	200-664-3	PV6210000

4. First Aid Measures

Emergency and First Aid Procedures: If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
If swallowed, wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.
In case of contact with eyes, hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.
In case of skin contact, immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

5. Fire Fighting Measures

Flash Pt: 89.00 C Method Used: Closed Cup
Explosive Limits: LEL: 3.5% at 25.0 C UEL: 42% at 25.0 C
Autoignition Pt: 215.00 C
Special Fire Fighting Procedures: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.
Note: Combustible as diluted in dimethyl sulfoxide

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Unusual Fire and Explosion Hazards:	Can release vapors that form explosive mixtures at temperatures at or above the flashpoint. Container explosion may occur under fire conditions. Emits toxic fumes under fire conditions. Sensitive to static discharge.
Hazardous Combustion Products:	No data available.
Suitable Extinguishing Media:	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.
Unsuitable Extinguishing Media:	A solid water stream may be inefficient.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled:	Avoid release into the environment. Avoid breathing vapors and provide adequate ventilation. Remove all sources of ignition. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves). Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.
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7. Handling and Storage

Hazard Label Information:	Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling
Precautions To Be Taken in Handling:	Avoid breathing (dust, vapor, mist, gas). Avoid prolonged or repeated exposure. Keep away from sources of ignition. Prevent the build up of electrostatic charge.
Precautions To Be Taken in Storing:	Keep away from heat, sparks, and flame. Keep tightly closed. Store at correct temperature.
Other Precautions:	Hygroscopic.

8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	Other Limits
1. Xanthine, 3-isobutyl-1-methyl-	28822-58-4	No data.	No data.	No data.
2. Dimethyl sulfoxide, anhydrous	67-68-5	No data.	No data.	No data.

Protective Equipment Summary - Hazard Label Information:	Compatible chemical-resistant gloves Eye wash station in work area Lab coat Safety glasses Safety shower in work area Vent Hood
Respiratory Equipment (Specify Type):	NIOSH approved respirator, as conditions warrant.
Eye Protection:	Safety glasses
Protective Gloves:	Compatible chemical-resistant gloves
Other Protective Clothing:	Lab coat
Ventilation:	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
Work/Hygienic/Maintenance Practices:	Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Wash thoroughly after handling.

9. Physical and Chemical Properties

Physical States:	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Solid
Melting Point:	No data.
Boiling Point:	No data.
Autoignition Pt:	215.00 C
Flash Pt:	89.00 C Method Used: Closed Cup
Explosive Limits:	LEL: 3.5% at 25.0 C UEL: 42% at 25.0 C

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Specific Gravity (Water = 1): No data.
Bulk density: No data.
Vapor Pressure (vs. Air or mm Hg): 0.37 MM_HG at 20.0 C
Vapor Density (vs. Air = 1): No data.
Evaporation Rate (vs Butyl Acetate=1): No data.
Solubility in Water: No data.
Percent Volatile: No data.
Heat Value: No data.
Particle Size: No data.
Corrosion Rate: No data.
pH: No data.
Appearance and Odor: No data available.

10. Stability and Reactivity

Stability: Unstable [] Stable [X]
Conditions To Avoid - Instability: heat, flames and sparks
Incompatibility - Materials To Avoid: acid chlorides
phosphorus halides
strong acids
alkali metals
strong oxidizing agents
strong reducing agents
Hazardous Decomposition Or Byproducts: carbon monoxide
carbon dioxide
nitrogen oxides
sulfur oxides
Possibility of Hazardous Reactions: Will occur [] Will not occur [X]
Conditions To Avoid - Hazardous Reactions: No data available.

11. Toxicological Information

: The toxicological effects of this product have not been thoroughly studied.

DMSO - Toxicity Data: Oral LD50 (rat): 14,500 mg/kg; Inhalation LC50 (rat): 40,250 ppm (4h);
Dermal LD50 (rabbit): > 5,000 mg/kg; Irritation Data: Eyes (rabbit): 500 mg (24h) mild; Skin
(rabbit): 500 mg (24h) mild;

Chronic Toxicological Effects: Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here.
See actual entry in RTECS for complete information.
DMSO RTECS Number: PV6210000

Carcinogenicity/Other Information: No data available.
Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

: Avoid release into the environment.
Runoff from fire control or dilution water may cause pollution.

13. Disposal Considerations

Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.

14. Transport Information

LAND TRANSPORT (US DOT)
DOT Proper Shipping Name Not dangerous goods.
LAND TRANSPORT (European ADR/RID)
ADR/RID Shipping Name Not dangerous goods.

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AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name Not dangerous goods.

Additional Transport Information: Transport in accordance with local, state, and federal regulations.

15. Regulatory Information

European Community Hazard Symbol codes Xn: Harmful

European Community Risk and Safety Phrases

- R22 - Harmful if swallowed.
- S24/25 - Avoid contact with skin and eyes.
- S37/39 - Wear suitable gloves and eye/face protection.

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Xanthine, 3-isobutyl-1-methyl-	28822-58-4	No	No	No	No
2. Dimethyl sulfoxide, anhydrous	67-68-5	No	No	No	No

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	HPV/LPV
1. Xanthine, 3-isobutyl-1-methyl-	28822-58-4	HAP, ODC ()	No	No	
2. Dimethyl sulfoxide, anhydrous	67-68-5	HAP, ODC ()	No	Inventory	

16. Other Information

Company Policy or Disclaimer

For research use only, not for human or veterinary clinical use.

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required

MATERIAL SAFETY DATA SHEET
Adipogenesis Assay Insulin Solution (1,000X)

Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108

Printed: 09/02/2010
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Supersedes Revision: 10/17/2006
Date Created: 10/17/2006

1. Product and Company Identification

Product Code: 10008979
Product Name: Adipogenesis Assay Insulin Solution (1,000X)
Manufacturer Information
Company Name: Cayman Chemical Company
Emergency Contact: Cayman Chemical Company (800)364-9897
Information: Cayman Chemical Company (734)971-3335

2. Hazards Identification

Emergency Overview: Avoid contact and inhalation.
Route(s) of Entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection
Health Hazards (Acute and Chronic): Material may be irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation, ingestion, or skin absorption.
May cause eye, skin, or respiratory system irritation.
The toxicological properties of this product have not been fully evaluated.
Signs and Symptoms Of Exposure: No data available.

3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	RTECS #
1. Insulin from Bovine Pancreas Cell Culture Tested	11070-73-8	0.0 -5.0 %	234-291-2	NA
2. Water	7732-18-5	95.0 -100.0 %	231-791-2	ZC0110000

4. First Aid Measures

Emergency and First Aid Procedures: If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
If swallowed, wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.
In case of contact with eyes, hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.
In case of skin contact, immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

5. Fire Fighting Measures

Flash Pt: No data.
Explosive Limits: LEL: No data. UEL: No data.
Special Fire Fighting Procedures: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.
Unusual Fire and Explosion Hazards: No data available.
Hazardous Combustion Products: No data available.
Suitable Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.
Use water spray to cool fire-exposed containers.
Unsuitable Extinguishing Media: A solid water stream may be inefficient.

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6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled: Avoid release into the environment.
 Avoid breathing vapors and provide adequate ventilation.
 As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
 Absorb spill with inert material (e.g. dry sand or earth), then place in a proper chemical waste container.

7. Handling and Storage

Hazard Label Information: Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation.
 Wash thoroughly after handling

Precautions To Be Taken in Handling: Avoid breathing (dust, vapor, mist, gas).
 Avoid prolonged or repeated exposure.

Precautions To Be Taken in Storing: Keep tightly closed.
 Store at correct temperature.

8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	Other Limits
1. Insulin from Bovine Pancreas Cell Culture Tested	11070-73-8	No data.	No data.	No data.
2. Water	7732-18-5	No data.	No data.	No data.

Protective Equipment Summary - Hazard Label Information: Compatible chemical-resistant gloves Eye wash station in work area Lab coat Safety glasses Safety shower in work area Vent Hood

Respiratory Equipment (Specify Type): NIOSH approved respirator, as conditions warrant.

Eye Protection: Safety glasses

Protective Gloves: Compatible chemical-resistant gloves

Other Protective Clothing: Lab coat

Ventilation: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Work/Hygienic/Maintenance Practices: Do not take internally.
 Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
 Wash thoroughly after handling.

9. Physical and Chemical Properties

Physical States: [] Gas [X] Liquid [] Solid

Melting Point: No data.

Boiling Point: No data.

Autoignition Pt: No data.

Flash Pt: No data.

Explosive Limits: LEL: No data. UEL: No data.

Specific Gravity (Water = 1): No data.

Bulk density: No data.

Vapor Pressure (vs. Air or mm Hg): No data.

Vapor Density (vs. Air = 1): No data.

Evaporation Rate (vs Butyl Acetate=1): No data.

Solubility in Water: No data.

Percent Volatile: No data.

Heat Value: No data.

Particle Size: No data.

Corrosion Rate: No data.

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pH: No data.
Appearance and Odor: No data available.

10. Stability and Reactivity

Stability: Unstable [] Stable [X]
Conditions To Avoid - Instability: No data available.
Incompatibility - Materials To Avoid: strong oxidizing agents
Hazardous Decomposition Or Byproducts: carbon dioxide
 carbon monoxide
 nitrogen oxides
 sulfur oxides
Possibility of Hazardous Reactions: Will occur [] Will not occur [X]
Conditions To Avoid - Hazardous Reactions: No data available.

11. Toxicological Information

: The toxicological effects of this product have not been thoroughly studied.
Carcinogenicity/Other Information: No data available.
Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

: Avoid release into the environment.
 Runoff from fire control or dilution water may cause pollution.

13. Disposal Considerations

Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.

14. Transport Information

LAND TRANSPORT (US DOT)
DOT Proper Shipping Name Not dangerous goods.
LAND TRANSPORT (European ADR/RID)
ADR/RID Shipping Name Not dangerous goods.
AIR TRANSPORT (ICAO/IATA)
ICAO/IATA Shipping Name Not dangerous goods.
Additional Transport Information: Transport in accordance with local, state, and federal regulations.

15. Regulatory Information

European Community Hazard Symbol codes
 No data available.

European Community Risk and Safety Phrases
 S24/25 - Avoid contact with skin and eyes.
 S37/39 - Wear suitable gloves and eye/face protection.

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Insulin from Bovine Pancreas Cell Culture Tested	11070-73-8	No	No	No	No
2. Water	7732-18-5	No	No	No	No

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	HPV/LPV
1. Insulin from Bovine Pancreas Cell Culture Tested	11070-73-8	HAP, ODC ()	No	No	
2. Water	7732-18-5	HAP, ODC ()	No	Inventory	

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16. Other Information

Company Policy or Disclaimer

For research use only, not for human or veterinary clinical use.

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required

MATERIAL SAFETY DATA SHEET

Adipogenesis Assay Dexamethasone Solution (1,000X)

Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108

Printed: 09/02/2010
Revision: 09/02/2010
Supersedes Revision: 10/17/2006
Date Created: 10/17/2006

1. Product and Company Identification

Product Code: 10008980
Product Name: Adipogenesis Assay Dexamethasone Solution (1,000X)
Manufacturer Information
Company Name: Cayman Chemical Company
Emergency Contact: Cayman Chemical Company (800)364-9897
Information: Cayman Chemical Company (734)971-3335
Synonyms: Dexamethasone Solution (1,000X);

2. Hazards Identification

Emergency Overview: Combustible.
 Target Organ(s): eyes, skin.
 The hazards identified with this product are those associated with the solvent(s).

Route(s) of Entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection

Health Hazards (Acute and Chronic): Material is readily absorbed through skin.
 Material may be irritating to the mucous membranes and upper respiratory tract.
 May be harmful by inhalation, ingestion, or skin absorption.
 May cause eye, skin, or respiratory system irritation.
 The toxicological properties of this product have not been fully evaluated.

LD 50 / LC 50: Please refer to Section 11.

Signs and Symptoms Of Exposure: Ingestion may cause gastrointestinal irritation with nausea, vomiting, diarrhea, headache, and dizziness.

3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	RTECS #
1. Dexamethasone solution	50-02-2	0.0 -1.0 %	200-003-9	TU3980000
2. Dimethyl sulfoxide, anhydrous	67-68-5	99.0 -100.0 %	200-664-3	PV6210000

4. First Aid Measures

Emergency and First Aid Procedures: If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
 If swallowed, wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.
 In case of contact with eyes, hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.
 In case of skin contact, immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

5. Fire Fighting Measures

Flash Pt: 89.00 C Method Used: Closed Cup
Explosive Limits: LEL: 3.5% at 25.0 C UEL: 42% at 25.0 C
Autoignition Pt: 215.00 C
Special Fire Fighting Procedures: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.
 Note: Combustible as diluted in dimethyl sulfoxide

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Unusual Fire and Explosion Hazards:	Can release vapors that form explosive mixtures at temperatures at or above the flashpoint. Container explosion may occur under fire conditions. Emits toxic fumes under fire conditions. Sensitive to static discharge.
Hazardous Combustion Products:	No data available.
Suitable Extinguishing Media:	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.
Unsuitable Extinguishing Media:	A solid water stream may be inefficient.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled:	Avoid release into the environment. Avoid breathing vapors and provide adequate ventilation. Remove all sources of ignition. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves). Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.
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7. Handling and Storage

Hazard Label Information:	Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling
Precautions To Be Taken in Handling:	Avoid breathing (dust, vapor, mist, gas). Avoid prolonged or repeated exposure. Keep away from sources of ignition. Prevent the build up of electrostatic charge.
Precautions To Be Taken in Storing:	Keep away from heat, sparks, and flame. Keep tightly closed. Store at correct temperature.
Other Precautions:	Hygroscopic.

8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	Other Limits
1. Dexamethasone solution	50-02-2	No data.	No data.	No data.
2. Dimethyl sulfoxide, anhydrous	67-68-5	No data.	No data.	No data.

Protective Equipment Summary - Hazard Label Information:	Compatible chemical-resistant gloves Eye wash station in work area Lab coat Safety glasses Safety shower in work area Vent Hood
Respiratory Equipment (Specify Type):	NIOSH approved respirator, as conditions warrant.
Eye Protection:	Safety glasses
Protective Gloves:	Compatible chemical-resistant gloves
Other Protective Clothing:	Lab coat
Ventilation:	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
Work/Hygienic/Maintenance Practices:	Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Wash thoroughly after handling.

9. Physical and Chemical Properties

Physical States:	[] Gas [X] Liquid [] Solid
Melting Point:	No data.
Boiling Point:	No data.
Autoignition Pt:	215.00 C
Flash Pt:	89.00 C Method Used: Closed Cup
Explosive Limits:	LEL: 3.5% at 25.0 C UEL: 42% at 25.0 C

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Specific Gravity (Water = 1):	No data.
Bulk density:	No data.
Vapor Pressure (vs. Air or mm Hg):	0.37 MM_HG at 20.0 C
Vapor Density (vs. Air = 1):	No data.
Evaporation Rate (vs Butyl Acetate=1):	No data.
Solubility in Water:	No data.
Percent Volatile:	No data.
Heat Value:	No data.
Particle Size:	No data.
Corrosion Rate:	No data.
pH:	No data.
Appearance and Odor:	No data available.

10. Stability and Reactivity

Stability:	Unstable [] Stable [X]
Conditions To Avoid - Instability:	heat, flames and sparks
Incompatibility - Materials To Avoid:	acid chlorides phosphorus halides strong acids alkali metals strong oxidizing agents strong reducing agents
Hazardous Decomposition Or Byproducts:	carbon monoxide carbon dioxide sulfur oxides
Possibility of Hazardous Reactions:	Will occur [] Will not occur [X]
Conditions To Avoid - Hazardous Reactions:	No data available.

11. Toxicological Information

:	The toxicological effects of this product have not been thoroughly studied.
Chronic Toxicological Effects:	DMSO - Toxicity Data: Oral LD50 (rat): 14,500 mg/kg; Inhalation LC50 (rat): 40,250 ppm (4h); Dermal LD50 (rabbit): > 5,000 mg/kg; Irritation Data: Eyes (rabbit): 500 mg (24h) mild; Skin (rabbit): 500 mg (24h) mild; Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information. DMSO RTECS Number: PV6210000
Carcinogenicity/Other Information:	No data available.
Carcinogenicity:	NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

:	Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.
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13. Disposal Considerations

Waste Disposal Method:	Dispose in accordance with local, state, and federal regulations.
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14. Transport Information

LAND TRANSPORT (US DOT)	
DOT Proper Shipping Name	Not dangerous goods.
LAND TRANSPORT (European ADR/RID)	
ADR/RID Shipping Name	Not dangerous goods.
AIR TRANSPORT (ICAO/IATA)	

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ICAO/IATA Shipping Name Not dangerous goods.
Additional Transport Information: Transport in accordance with local, state, and federal regulations.

15. Regulatory Information

European Community Hazard Symbol codes

No data available.

European Community Risk and Safety Phrases

S24/25 - Avoid contact with skin and eyes.
 S37/39 - Wear suitable gloves and eye/face protection.

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Dexamethasone solution	50-02-2	No	No	No	No
2. Dimethyl sulfoxide, anhydrous	67-68-5	No	No	No	No

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	HPV/LPV
1. Dexamethasone solution	50-02-2	HAP, ODC ()	No	Inventory	
2. Dimethyl sulfoxide, anhydrous	67-68-5	HAP, ODC ()	No	Inventory	

16. Other Information

Company Policy or Disclaimer

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N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required

MATERIAL SAFETY DATA SHEET

Lipid Droplets Assay Fixative (10X)

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Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108

Printed: 09/02/2010
Revision: 09/02/2010
Supersedes Revision: 07/14/2009
Date Created: 10/17/2006

1. Product and Company Identification

Product Code: 10008981
Product Name: Lipid Droplets Assay Fixative (10X)
Manufacturer Information
Company Name: Cayman Chemical Company
Emergency Contact: Cayman Chemical Company (800)364-9897
Information: Cayman Chemical Company (734)971-3335
Synonyms: Fixative (10X);

2. Hazards Identification

Emergency Overview: Flammable.
Corrosive.
Toxic.
Limited evidence of a carcinogenic effect.
Avoid contact and inhalation.
Target Organ(s): central nervous system, eyes, gastrointestinal tract, heart, kidney, liver, respiratory system, and skin.

Route(s) of Entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection

Health Hazards (Acute and Chronic): Cannot be made nonpoisonous.
Causes burns.
Harmful vapors.
Lachrymator.
Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
May be fatal or cause blindness if swallowed.
Toxic if inhaled or absorbed through skin.
The toxicological properties of this product have not been fully evaluated.

LD 50 / LC 50: Please refer to Section 11.

Signs and Symptoms Of Exposure: Exposure can cause: burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, dermatitis, drowsiness, dizziness, nausea, vomiting, and visual disturbance.
Inhalation may result in spasm, inflammation, and edema of the larynx and bronchi, pneumonitis, and pulmonary edema.
Skin and respiratory sensitizer.
Methyl alcohol is a defatting agent and may cause skin to become dry and cracked.
Symptoms may be delayed.
Once methanol is absorbed into the body, it is very slowly eliminated.

3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	RTECS #
1. Formaldehyde	50-00-0	37.0 %	200-001-8	LP8925000
2. Methanol	67-56-1	10.0 -15.0 %	200-659-6	PC1400000
3. Water	7732-18-5	48.0 -53.0 %	231-791-2	ZC0110000

4. First Aid Measures

Emergency and First Aid Procedures: If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
If swallowed, wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.

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In case of contact with eyes, hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.
 In case of skin contact, immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

5. Fire Fighting Measures

Flash Pt: No data.

Explosive Limits: LEL: No data. UEL: No data.

Special Fire Fighting Procedures: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.
 Note: Flammable as contains methanol.

Unusual Fire and Explosion Hazards: Can release vapors that form explosive mixtures at temperatures at or above the flashpoint.
 Container explosion may occur under fire conditions.
 Emits toxic fumes under fire conditions.
 Sensitive to static discharge.
 Vapors can travel to a source of ignition and flash back.

Hazardous Combustion Products: No data available.

Suitable Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.
 Use water spray to cool fire-exposed containers.

Unsuitable Extinguishing Media: A solid water stream may be inefficient.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled: Avoid release into the environment.
 Avoid breathing vapors and provide adequate ventilation.
 Remove all sources of ignition.
 As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
 Absorb spill with inert material (e.g. dry sand or earth), then place in a proper chemical waste container.

7. Handling and Storage

Hazard Label Information: Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation.
 Wash thoroughly after handling

Precautions To Be Taken in Handling: Avoid breathing (dust, vapor, mist, gas).
 Avoid prolonged or repeated exposure.
 Keep away from sources of ignition.
 Prevent the build up of electrostatic charge.

Precautions To Be Taken in Storing: Keep away from heat, sparks, and flame.
 Keep tightly closed.
 Store at correct temperature.

8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA TWA	ACGIH TWA	Other Limits
1. Formaldehyde	50-00-0	PEL: 0.75 ppm STEL: 2 ppm (15 min)	CEIL: 0.3 ppm	No data.
2. Methanol	67-56-1	PEL: 200 ppm	TLV: 200 ppm STEL: 250 ppm	No data.
3. Water	7732-18-5	No data.	No data.	No data.

Protective Equipment Summary - Hazard Label Information: Compatible chemical-resistant gloves Eye wash station in work area Lab coat Safety glasses Safety shower in work area Vent Hood

Respiratory Equipment (Specify Type): NIOSH approved respirator, as conditions warrant.

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Eye Protection:	Safety glasses
Protective Gloves:	Compatible chemical-resistant gloves
Other Protective Clothing:	Lab coat
Ventilation:	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
Work/Hygienic/Maintenance Practices:	Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Wash thoroughly after handling.

9. Physical and Chemical Properties

Physical States:	[] Gas [X] Liquid [] Solid
Melting Point:	No data.
Boiling Point:	No data.
Autoignition Pt:	No data.
Flash Pt:	No data.
Explosive Limits:	LEL: No data. UEL: No data.
Specific Gravity (Water = 1):	No data.
Bulk density:	No data.
Vapor Pressure (vs. Air or mm Hg):	No data.
Vapor Density (vs. Air = 1):	No data.
Evaporation Rate (vs Butyl Acetate=1):	No data.
Solubility in Water:	No data.
Percent Volatile:	No data.
Heat Value:	No data.
Particle Size:	No data.
Corrosion Rate:	No data.
pH:	No data.
Appearance and Odor:	No data available.

10. Stability and Reactivity

Stability:	Unstable [] Stable [X]
Conditions To Avoid - Instability:	heat, flames and sparks
Incompatibility - Materials To Avoid:	acid anhydrides acid chlorides acids alkali metals alkalis amines aniline isocyanates nitromethane perchloric acid peroxides phenol reducing agents strong acids strong bases strong oxidizing agents
Hazardous Decomposition Or Byproducts:	carbon dioxide carbon monoxide
Possibility of Hazardous Reactions:	Will occur [] Will not occur [X]

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Conditions To Avoid - Hazardous Reactions: No data available.

11. Toxicological Information

: The toxicological effects of this product have not been thoroughly studied.

Formaldehyde - Toxicity Data: Oral LDLo (wmn): 108 mg/kg; Oral LD50 (rat): 100 mg/kg; Skin LD50 (rabbit): 270 µL/kg; Inhalation (rat): LC50: 203 mg/m³; Irritation Data: Eyes (rabbit): 750 µg Severe;

Methanol - Toxicity Data: Oral LD50 (rat): 5,628 mg/kg; Inhalation LC50 (rat): 64,000 ppm (4h); Skin LD50 (rabbit): 15,800 mg/kg; Irritation Data: Skin (rabbit): 20 mg (24h) moderate; Eyes (rabbit): 100 mg (24h) moderate;

Chronic Toxicological Effects:

Formaldehyde - Investigated as a tumorigen, mutagen, and reproductive effector.

Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here.

See actual entry in RTECS for complete information.

Formaldehyde RTECS Number: LP8925000

Methanol RTECS Number: PC1400000

Carcinogenicity/Other Information:

Formaldehyde - California Prop. 65 carcinogen.

IARC: 1 - Group 1: Carcinogenic to humans (Formaldehyde)

NTP: Reasonably anticipated to be a human carcinogen (Formaldehyde)

Carcinogenicity:

NTP? Yes IARC Monographs? Yes OSHA Regulated? Yes

12. Ecological Information

: Avoid release into the environment.

Runoff from fire control or dilution water may cause pollution.

13. Disposal Considerations

Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name Formaldehyde solution, flammable
DOT Hazard Class: 3 (8)
DOT Hazard Label: FLAMMABLE LIQUID, CORROSIVE
UN/NA Number: 1198
Packing Group: III

LAND TRANSPORT (European ADR/RID)

ADR/RID Shipping Name Formaldehyde solution, flammable
UN Number: 1198
Packing Group: III

AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name Formaldehyde solution, flammable
UN Number: 1198
Packing Group: III
IATA Classification: 3 (8)

Additional Transport Information: Transport in accordance with local, state, and federal regulations.

15. Regulatory Information

European Community Hazard Symbol codes T: Toxic; C: Corrosive**European Community Risk and Safety Phrases**

R10 - Flammable.

R23/24/25 - Toxic by inhalation, in contact with skin and if swallowed.

R39/23/24/25 - Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

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- R34 - Causes burns.
- R40 - Limited evidence of a carcinogenic effect
- R43 - May cause sensitization by skin contact.
- S7 - Keep container tightly closed.
- S16 - Keep away from sources of ignition.
- S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.
- S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible.)
- S51 - Use only in well ventilated areas.

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Formaldehyde	50-00-0	Yes 500 LB	Yes 100 LB	Yes	Yes
2. Methanol	67-56-1	No	Yes 5000 LB	Yes	No
3. Water	7732-18-5	No	No	No	No

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	HPV/LPV
1. Formaldehyde	50-00-0	HAP, ODC ()	Yes	Inventory	
2. Methanol	67-56-1	HAP, ODC ()	No	Inventory	
3. Water	7732-18-5	HAP, ODC ()	No	Inventory	

16. Other Information

Company Policy or Disclaimer

For research use only, not for human or veterinary clinical use.

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required

MATERIAL SAFETY DATA SHEET

Lipid Droplets Assay Wash Solution

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Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108

Printed: 09/02/2010
Revision: 09/02/2010
Supersedes Revision: 07/14/2009
Date Created: 10/17/2006

1. Product and Company Identification

Product Code: 10008982
Product Name: Lipid Droplets Assay Wash Solution
Manufacturer Information
Company Name: Cayman Chemical Company
Emergency Contact: Cayman Chemical Company (800)364-9897
Information: Cayman Chemical Company (734)971-3335
Synonyms: Wash Solution;

2. Hazards Identification

Emergency Overview: Flammable.
Irritant.
Avoid contact and inhalation.
Target Organ(s): cardiovascular system, eyes, gastrointestinal tract, kidney, liver, nerves, respiratory system, skin.

Route(s) of Entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection

Health Hazards (Acute and Chronic): Causes eye, skin, or respiratory system irritation.
Material is irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation, ingestion, or skin absorption.
The toxicological properties of this product have not been fully evaluated.

LD 50 / LC 50: Please refer to Section 11.

Signs and Symptoms Of Exposure: Irritating to eyes, nose, throat; may cause nausea, headache, drowsiness, dizziness; dry cracking skin; narcosis; central nervous system depression.

3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	RTECS #
1. Isopropyl alcohol	67-63-0	55.0 -75.0 %	200-661-7	NT8050000
2. Water	7732-18-5	25.0 -45.0 %	231-791-2	ZC0110000

4. First Aid Measures

Emergency and First Aid Procedures: If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
If swallowed, wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.
In case of contact with eyes, hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.
In case of skin contact, immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

5. Fire Fighting Measures

Flash Pt: No data.
Explosive Limits: LEL: No data. UEL: No data.
Special Fire Fighting Procedures: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.
Note: Flammable as contains isopropyl alcohol

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Unusual Fire and Explosion Hazards:	Can release vapors that form explosive mixtures at temperatures at or above the flashpoint. Container explosion may occur under fire conditions. Emits toxic fumes under fire conditions. Sensitive to static discharge. Vapors can travel to a source of ignition and flash back.
Hazardous Combustion Products:	No data available.
Suitable Extinguishing Media:	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.
Unsuitable Extinguishing Media:	A solid water stream may be inefficient.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled:	Avoid release into the environment. Avoid breathing vapors and provide adequate ventilation. Remove all sources of ignition. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves). Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.
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7. Handling and Storage

Hazard Label Information:	Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling
Precautions To Be Taken in Handling:	Avoid breathing (dust, vapor, mist, gas). Avoid prolonged or repeated exposure. Keep away from sources of ignition. Prevent the build up of electrostatic charge.
Precautions To Be Taken in Storing:	Keep away from heat, sparks, and flame. Keep tightly closed. Store at correct temperature.

8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TWA	Other Limits
1. Isopropyl alcohol	67-63-0	PEL: 400 ppm	TLV: 200 ppm STEL: 400 ppm	No data.
2. Water	7732-18-5	No data.	No data.	No data.

Protective Equipment Summary - Hazard Label Information:	Compatible chemical-resistant gloves Eye wash station in work area Lab coat Safety glasses Safety shower in work area Vent Hood
Respiratory Equipment (Specify Type):	NIOSH approved respirator, as conditions warrant.
Eye Protection:	Safety glasses
Protective Gloves:	Compatible chemical-resistant gloves
Other Protective Clothing:	Lab coat
Ventilation:	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
Work/Hygienic/Maintenance Practices:	Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Wash thoroughly after handling.

9. Physical and Chemical Properties

Physical States:	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Solid
Melting Point:	No data.
Boiling Point:	No data.
Autoignition Pt:	No data.
Flash Pt:	No data.

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Explosive Limits:	LEL: No data.	UEL: No data.
Specific Gravity (Water = 1):	No data.	
Bulk density:	No data.	
Vapor Pressure (vs. Air or mm Hg):	No data.	
Vapor Density (vs. Air = 1):	No data.	
Evaporation Rate (vs Butyl Acetate=1):	No data.	
Solubility in Water:	No data.	
Percent Volatile:	No data.	
Heat Value:	No data.	
Particle Size:	No data.	
Corrosion Rate:	No data.	
pH:	No data.	
Appearance and Odor:	No data available.	

10. Stability and Reactivity

Stability:	Unstable [] Stable [X]
Conditions To Avoid - Instability:	heat, flames and sparks
Incompatibility - Materials To Avoid:	acetaldehyde acid anhydrides acids aluminium ethylene oxide halogenated compounds isocyanates oxidizing agents
Hazardous Decomposition Or Byproducts:	carbon dioxide carbon monoxide
Possibility of Hazardous Reactions:	Will occur [] Will not occur [X]
Conditions To Avoid - Hazardous Reactions:	No data available.

11. Toxicological Information

:	The toxicological effects of this product have not been thoroughly studied.
Chronic Toxicological Effects:	Isopropyl Alcohol - Toxicity Data: Oral LD50 (rat): 5,045 mg/kg; Inhalation LC50 (rat): 16,000 ppm (8h); Dermal LD50 (rabbit): 12,800 mg/kg; Irritation Data: Eyes (rabbit): 100 mg (24h) moderate; Skin (rabbit): 500 mg mild; Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information. Isopropyl Alcohol RTECS Number: NT8050000
Carcinogenicity/Other Information:	IARC: Group 3: Not classifiable as to its carcinogenicity to humans (Isopropyl Alcohol)
Carcinogenicity:	NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

:	Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.
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13. Disposal Considerations

Waste Disposal Method:	Dispose in accordance with local, state, and federal regulations.
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14. Transport Information

LAND TRANSPORT (US DOT)	
DOT Proper Shipping Name	Isopropyl alcohol solution
DOT Hazard Class:	3

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Lipid Droplets Assay Wash Solution

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DOT Hazard Label:	FLAMMABLE LIQUID
UN/NA Number:	1219
Packing Group:	II
LAND TRANSPORT (European ADR/RID)	
ADR/RID Shipping Name	Isopropyl alcohol solution
UN Number:	1219
Packing Group:	II
AIR TRANSPORT (ICAO/IATA)	
ICAO/IATA Shipping Name	Isopropyl alcohol solution
UN Number:	1219
Packing Group:	II
IATA Classification:	3
Additional Transport Information:	Transport in accordance with local, state, and federal regulations.

15. Regulatory Information

European Community Hazard Symbol codes Xi: Irritant

European Community Risk and Safety Phrases

- R10 - Flammable.
- R36 - Irritating to eyes.
- R67 - Vapours may cause drowsiness and dizziness
- S7 - Keep container tightly closed.
- S16 - Keep away from sources of ignition.
- S24/25 - Avoid contact with skin and eyes.
- S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Isopropyl alcohol	67-63-0	No	No	Yes	No
2. Water	7732-18-5	No	No	No	No

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	HPV/LPV
1. Isopropyl alcohol	67-63-0	HAP, ODC ()	No	Inventory	
2. Water	7732-18-5	HAP, ODC ()	No	Inventory	

16. Other Information

Company Policy or Disclaimer

For research use only, not for human or veterinary clinical use.

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required

MATERIAL SAFETY DATA SHEET

Lipid Droplets Assay Oil Red O Solution

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Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108

Printed: 09/02/2010
Revision: 09/02/2010
Supersedes Revision: 07/14/2009
Date Created: 10/17/2006

1. Product and Company Identification

Product Code: 10008983
Product Name: Lipid Droplets Assay Oil Red O Solution
Manufacturer Information
Company Name: Cayman Chemical Company
Emergency Contact: Cayman Chemical Company (800)364-9897
Information: Cayman Chemical Company (734)971-3335
Synonyms: Oil Red O Solution;

2. Hazards Identification

Emergency Overview: Highly Flammable.
Irritant.
Avoid contact and inhalation.
Target Organ(s): cardiovascular system, eyes, gastrointestinal tract, kidney, liver, nerves, respiratory system, skin.

Route(s) of Entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection

Health Hazards (Acute and Chronic): Causes eye, skin, or respiratory system irritation.
Material is irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation, ingestion, or skin absorption.
The toxicological properties of this product have not been fully evaluated.

LD 50 / LC 50: Please refer to Section 11.

Signs and Symptoms Of Exposure: Irritating to eyes, nose, throat; may cause nausea, headache, drowsiness, dizziness; dry cracking skin; narcosis; central nervous system depression.

3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	RTECS #
1. 1-[[4-[(Dimethylphenyl)azo]dimethylphenyl]azo]-2-naphthol	1320-06-5	0.0 -5.0 %	215-295-3	NA
2. Isopropyl alcohol	67-63-0	95.0 -100.0 %	200-661-7	NT8050000

4. First Aid Measures

Emergency and First Aid Procedures: If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
If swallowed, wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.
In case of contact with eyes, hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.
In case of skin contact, immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

5. Fire Fighting Measures

Flash Pt: 11.67 C Method Used: Closed Cup
Explosive Limits: LEL: 2.0% UEL: 12.7%
Autoignition Pt: 425.00 C
Special Fire Fighting Procedures: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.
Note: Flammable as diluted in isopropyl alcohol

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Unusual Fire and Explosion Hazards:	Can release vapors that form explosive mixtures at temperatures at or above the flashpoint. Container explosion may occur under fire conditions. Emits toxic fumes under fire conditions. Sensitive to static discharge. Vapors can travel to a source of ignition and flash back.
Hazardous Combustion Products:	No data available.
Suitable Extinguishing Media:	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.
Unsuitable Extinguishing Media:	A solid water stream may be inefficient.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled:	Avoid release into the environment. Avoid breathing vapors and provide adequate ventilation. Remove all sources of ignition. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves). Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.
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7. Handling and Storage

Hazard Label Information:	Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling
Precautions To Be Taken in Handling:	Avoid breathing (dust, vapor, mist, gas). Avoid prolonged or repeated exposure. Keep away from sources of ignition. Prevent the build up of electrostatic charge.
Precautions To Be Taken in Storing:	Keep away from heat, sparks, and flame. Keep tightly closed. Store at correct temperature.
Other Precautions:	Hygroscopic.

8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TWA	Other Limits
1. 1-[[4-[(Dimethylphenyl)azo]dimethylphenyl]azo]-2-naphthol	1320-06-5	No data.	No data.	No data.
2. Isopropyl alcohol	67-63-0	PEL: 400 ppm	TLV: 200 ppm STEL: 400 ppm	No data.

Protective Equipment Summary - Hazard Label Information:	Compatible chemical-resistant gloves Eye wash station in work area Lab coat Safety glasses Safety shower in work area Vent Hood
Respiratory Equipment (Specify Type):	NIOSH approved respirator, as conditions warrant.
Eye Protection:	Safety glasses
Protective Gloves:	Compatible chemical-resistant gloves
Other Protective Clothing:	Lab coat
Ventilation:	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
Work/Hygienic/Maintenance Practices:	Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Wash thoroughly after handling.

9. Physical and Chemical Properties

Physical States:	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Solid
Melting Point:	-89.00 C
Boiling Point:	82.78 C

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Lipid Droplets Assay Oil Red O Solution

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Autoignition Pt:	425.00 C
Flash Pt:	11.67 C Method Used: Closed Cup
Explosive Limits:	LEL: 2.0% UEL: 12.7%
Specific Gravity (Water = 1):	0.79
Bulk density:	No data.
Vapor Pressure (vs. Air or mm Hg):	33 MM_HG
Vapor Density (vs. Air = 1):	No data.
Evaporation Rate (vs Butyl Acetate=1):	No data.
Solubility in Water:	No data.
Percent Volatile:	No data.
Heat Value:	No data.
Particle Size:	No data.
Corrosion Rate:	No data.
pH:	No data.
Appearance and Odor:	No data available.

10. Stability and Reactivity

Stability:	Unstable [] Stable [X]
Conditions To Avoid - Instability:	heat, flames and sparks
Incompatibility - Materials To Avoid:	acetaldehyde acid anhydrides acids aluminium ethylene oxide halogenated compounds isocyanates oxidizing agents
Hazardous Decomposition Or Byproducts:	carbon dioxide carbon monoxide
Possibility of Hazardous Reactions:	Will occur [] Will not occur [X]
Conditions To Avoid - Hazardous Reactions:	No data available.

11. Toxicological Information

:	The toxicological effects of this product have not been thoroughly studied.
Chronic Toxicological Effects:	Isopropyl Alcohol - Toxicity Data: Oral LD50 (rat): 5,045 mg/kg; Inhalation LC50 (rat): 16,000 ppm (8h); Dermal LD50 (rabbit): 12,800 mg/kg; Irritation Data: Eyes (rabbit): 100 mg (24h) moderate; Skin (rabbit): 500 mg mild; Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information. Isopropyl Alcohol RTECS Number: NT8050000
Carcinogenicity/Other Information:	IARC: Group 3: Not classifiable as to its carcinogenicity to humans (Isopropyl Alcohol)
Carcinogenicity:	NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

:	Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.
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13. Disposal Considerations

Waste Disposal Method:	Dispose in accordance with local, state, and federal regulations.
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 Supercedes Revision: 07/14/2009

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name Isopropyl alcohol solution
DOT Hazard Class: 3
DOT Hazard Label: FLAMMABLE LIQUID
UN/NA Number: 1219
Packing Group: II

LAND TRANSPORT (European ADR/RID)

ADR/RID Shipping Name Isopropyl alcohol solution
UN Number: 1219
Packing Group: II

AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name Isopropyl alcohol solution
UN Number: 1219
Packing Group: II
IATA Classification: 3

Additional Transport Information: Transport in accordance with local, state, and federal regulations.

15. Regulatory Information

European Community Hazard Symbol codes F: Highly Flammable; Xi: Irritant

European Community Risk and Safety Phrases

- R11 - Highly flammable.
- R36 - Irritating to eyes.
- R67 - Vapours may cause drowsiness and dizziness
- S7 - Keep container tightly closed.
- S16 - Keep away from sources of ignition.
- S24/25 - Avoid contact with skin and eyes.
- S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. 1-[[4-[(Dimethylphenyl)azo]dimethylphenyl]azo]-2-naphthol	1320-06-5	No	No	No	No
2. Isopropyl alcohol	67-63-0	No	No	Yes	No

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	HPV/LPV
1. 1-[[4-[(Dimethylphenyl)azo]dimethylphenyl]azo]-2-naphthol	1320-06-5	HAP, ODC ()	No	Inventory	
2. Isopropyl alcohol	67-63-0	HAP, ODC ()	No	Inventory	

16. Other Information

Company Policy or Disclaimer

For research use only, not for human or veterinary clinical use.

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required

MATERIAL SAFETY DATA SHEET

Lipid Droplets Assay Dye Extraction Solution

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Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108

Printed: 09/02/2010
Revision: 09/02/2010
Supersedes Revision: 07/14/2009
Date Created: 10/17/2006

1. Product and Company Identification

Product Code: 10008984
Product Name: Lipid Droplets Assay Dye Extraction Solution
Manufacturer Information
Company Name: Cayman Chemical Company
Emergency Contact: Cayman Chemical Company (800)364-9897
Information: Cayman Chemical Company (734)971-3335
Synonyms: Dye Extraction Solution;

2. Hazards Identification

Emergency Overview: Highly Flammable.
Irritant.
Avoid contact and inhalation.
Target Organ(s): cardiovascular system, eyes, gastrointestinal tract, kidney, liver, nerves, respiratory system, skin.

Route(s) of Entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection

Health Hazards (Acute and Chronic): Causes eye, skin, or respiratory system irritation.
Material is irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation, ingestion, or skin absorption.
The toxicological properties of this product have not been fully evaluated.

LD 50 / LC 50: Please refer to Section 11.

Signs and Symptoms Of Exposure: Irritating to eyes, nose, throat; may cause nausea, headache, drowsiness, dizziness; dry cracking skin; narcosis; central nervous system depression.

3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	RTECS #
1. Isopropyl alcohol	67-63-0	100.0 %	200-661-7	NT8050000

4. First Aid Measures

Emergency and First Aid Procedures: If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
If swallowed, wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.
In case of contact with eyes, hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.
In case of skin contact, immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

5. Fire Fighting Measures

Flash Pt: 11.67 C Method Used: Closed Cup
Explosive Limits: LEL: 2.0% UEL: 12.7%
Autoignition Pt: 425.00 C
Special Fire Fighting Procedures: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.
Note: Flammable

MATERIAL SAFETY DATA SHEET

Lipid Droplets Assay Dye Extraction Solution

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Unusual Fire and Explosion Hazards: Can release vapors that form explosive mixtures at temperatures at or above the flashpoint.
 Container explosion may occur under fire conditions.
 Emits toxic fumes under fire conditions.
 Sensitive to static discharge.
 Vapors can travel to a source of ignition and flash back.

Hazardous Combustion Products: No data available.

Suitable Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.
 Use water spray to cool fire-exposed containers.

Unsuitable Extinguishing Media: A solid water stream may be inefficient.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled: Avoid release into the environment.
 Avoid breathing vapors and provide adequate ventilation.
 Remove all sources of ignition.
 As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
 Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.

7. Handling and Storage

Hazard Label Information: Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation.
 Wash thoroughly after handling

Precautions To Be Taken in Handling: Avoid breathing (dust, vapor, mist, gas).
 Avoid prolonged or repeated exposure.
 Keep away from sources of ignition.
 Prevent the build up of electrostatic charge.

Precautions To Be Taken in Storing: Keep away from heat, sparks, and flame.
 Keep tightly closed.
 Store at correct temperature.

Other Precautions: Hygroscopic.

8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TWA	Other Limits
1. Isopropyl alcohol	67-63-0	PEL: 400 ppm	TLV: 200 ppm STEL: 400 ppm	No data.

Protective Equipment Summary - Hazard Label Information: Compatible chemical-resistant gloves Eye wash station in work area Lab coat Safety glasses Safety shower in work area Vent Hood

Respiratory Equipment (Specify Type): NIOSH approved respirator, as conditions warrant.

Eye Protection: Safety glasses

Protective Gloves: Compatible chemical-resistant gloves

Other Protective Clothing: Lab coat

Ventilation: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Work/Hygienic/Maintenance Practices: Do not take internally.
 Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
 Wash thoroughly after handling.

9. Physical and Chemical Properties

Physical States: [] Gas [X] Liquid [] Solid

Melting Point: -88.33 C

Boiling Point: 82.78 C

Autoignition Pt: 425.00 C

Flash Pt: 11.67 C Method Used: Closed Cup

MATERIAL SAFETY DATA SHEET

Lipid Droplets Assay Dye Extraction Solution

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Explosive Limits:	LEL: 2.0%	UEL: 12.7%
Specific Gravity (Water = 1):	0.79	
Bulk density:	No data.	
Vapor Pressure (vs. Air or mm Hg):	33 MM_HG	
Vapor Density (vs. Air = 1):	No data.	
Evaporation Rate (vs Butyl Acetate=1):	No data.	
Solubility in Water:	No data.	
Percent Volatile:	No data.	
Heat Value:	No data.	
Particle Size:	No data.	
Corrosion Rate:	No data.	
pH:	No data.	
Appearance and Odor:	Colorless liquid with the odor of rubbing alcohol	

10. Stability and Reactivity

Stability:	Unstable [] Stable [X]
Conditions To Avoid - Instability:	heat, flames and sparks
Incompatibility - Materials To Avoid:	acetaldehyde acid anhydrides acids aluminium ethylene oxide halogenated compounds isocyanates oxidizing agents
Hazardous Decomposition Or Byproducts:	carbon dioxide carbon monoxide
Possibility of Hazardous Reactions:	Will occur [] Will not occur [X]
Conditions To Avoid - Hazardous Reactions:	No data available.

11. Toxicological Information

:	The toxicological effects of this product have not been thoroughly studied.
Chronic Toxicological Effects:	Isopropyl Alcohol - Toxicity Data: Oral LD50 (rat): 5,045 mg/kg; Inhalation LC50 (rat): 16,000 ppm (8h); Dermal LD50 (rabbit): 12,800 mg/kg; Irritation Data: Eyes (rabbit): 100 mg (24h) moderate; Skin (rabbit): 500 mg mild; Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information. Isopropyl Alcohol RTECS Number: NT8050000
Carcinogenicity/Other Information:	IARC: Group 3: Not classifiable as to its carcinogenicity to humans (Isopropyl Alcohol)
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13. Disposal Considerations

Waste Disposal Method:	Dispose in accordance with local, state, and federal regulations.
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14. Transport Information

LAND TRANSPORT (US DOT)	
DOT Proper Shipping Name	Isopropyl Alcohol
DOT Hazard Class:	3

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Lipid Droplets Assay Dye Extraction Solution

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DOT Hazard Label:	FLAMMABLE LIQUID
UN/NA Number:	1219
Packing Group:	II
LAND TRANSPORT (European ADR/RID)	
ADR/RID Shipping Name	Isopropyl Alcohol
UN Number:	1219
Packing Group:	II
AIR TRANSPORT (ICAO/IATA)	
ICAO/IATA Shipping Name	Isopropyl Alcohol
UN Number:	1219
Packing Group:	II
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US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Isopropyl alcohol	67-63-0	No	No	Yes	No

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	HPV/LPV
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