



# MATERIAL SAFETY DATA SHEET

## Acridinium NHS ester

Page: 1

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

Revision: 10/19/2011  
Supersedes Revision: 08/18/2005

### 1. Identification of the Substance/Mixture and of the Company/Undertaking

**Product Code:** 200200

**Product Name:** Acridinium NHS ester

**Manufacturer Information**

**Company Name:** Cayman Chemical Company

**Emergency Contact:** CHEMTREC Within USA and Canada: +1 (800)424-9300

**Alternate Emergency Contact:** CHEMTREC Outside USA and Canada: +1 (703)527-3887

**Information:** Cayman Chemical Company +1 (734)971-3335

**Web site address:** www.caymanchem.com

**Synonyms:** Acridinium Compound I;  
9[[4-[3-[(2,5-dioxo-1-pyrrolidinyl)oxy]-3-oxopropyl]phenoxy]carbonyl]-10-methyl-acridinium trifluoromethane sulfonate;

### 2. Hazards Identification

**Emergency Overview:** Avoid contact and inhalation.

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

**Potential Health Effects (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.

**Signs and Symptoms Of Exposure:** To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

**Medical Conditions Generally Aggravated By Exposure:** No data available.

### 3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases
1. Acridinium-NHS ester	NA	100.0 %	NA	No phrases apply.

### 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.

**Autoignition Pt:** No data available.



# MATERIAL SAFETY DATA SHEET

## Acridinium NHS ester

Page: 2

Revision: 10/19/2011

Supersedes Revision: 08/18/2005

<b>Fire Fighting Instructions:</b>	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.
<b>Flammable Properties and Hazards:</b>	No data available.
<b>Hazardous Combustion Products:</b>	No data available.
<b>Suitable Extinguishing Media:</b>	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.
<b>Unsuitable Extinguishing Media:</b>	A solid water stream may be inefficient.

### 6. Accidental Release Measures

<b>Steps To Be Taken In Case Material Is Released Or Spilled:</b>	Avoid release into the environment. Avoid raising and breathing dust, 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). Transfer to a chemical waste container for disposal.
---	--

### 7. Handling and Storage

<b>Hazard Label Information:</b>	Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.
<b>Precautions To Be Taken in Handling:</b>	Avoid breathing (dust, vapor, mist, gas). Avoid prolonged or repeated exposure.
<b>Precautions To Be Taken in Storing:</b>	Keep tightly closed. Store at correct temperature.

### 8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	Other Limits
1. Acridinium-NHS ester	NA	No data.	No data.	No data.

<b>Protective Equipment Summary - Hazard Label Information:</b>	Compatible chemical-resistant gloves glasses Safety shower in work area Vent Hood	Eye wash station in work area Lab coat Safety
<b>Respiratory Equipment (Specify Type):</b>	NIOSH approved respirator, as conditions warrant.	
<b>Eye Protection:</b>	Safety glasses	
<b>Protective Gloves:</b>	Compatible chemical-resistant gloves	
<b>Other Protective Clothing:</b>	Lab coat	
<b>Engineering Controls (Ventilation etc.):</b>	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.	
<b>Work/Hygienic/Maintenance Practices:</b>	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

<b>Physical States:</b>	<input type="checkbox"/> Gas <input type="checkbox"/> Liquid <input checked="" type="checkbox"/> Solid
<b>Melting Point:</b>	No data.
<b>Boiling Point:</b>	No data.
<b>Autoignition Pt:</b>	No data.
<b>Flash Pt:</b>	No data.
<b>Specific Gravity (Water = 1):</b>	No data.
<b>Vapor Pressure (vs. Air or mm Hg):</b>	No data.



# MATERIAL SAFETY DATA SHEET

## Acridinium NHS ester

Page: 3

Revision: 10/19/2011

Supercedes Revision: 08/18/2005

Vapor Density (vs. Air = 1):	No data.
Evaporation Rate:	No data.
Solubility in Water:	No data.
Solubility Notes:	~1 mg/ml in DMSO:PBS (pH 7.2) (1:1); ~25 mg/ml in DMF & DMSO;
Percent Volatile:	No data.
Formula:	C <sub>28</sub> H <sub>23</sub> N <sub>2</sub> O <sub>6</sub> · CF <sub>3</sub> SO <sub>3</sub>
Molecular Weight:	632.60
Appearance and Odor:	A crystalline solid

### 10. Stability and Reactivity

Stability:	Unstable [ ]    Stable [ X ]
Conditions To Avoid - Instability:	No data available.
Incompatibility - Materials To Avoid:	No data available.
Hazardous Decomposition Or Byproducts:	No data available.
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:	No data available.
--------------------------------	--------------------

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Acridinium-NHS ester	NA	n.a.	n.a.	n.a.	n.a.

### 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



# MATERIAL SAFETY DATA SHEET

## Acridinium NHS ester

Page: 4

Revision: 10/19/2011

Supersedes Revision: 08/18/2005

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Acridinium-NHS ester	NA	No	No	No	No

### Other US EPA or State Lists

Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65
1. Acridinium-NHS ester	NA	No	No	No	No

### Regulatory Information Statement:

This SDS was prepared in accordance with Regulation (EC) No.1272/2008 and European Directive 67/548/EEC as amended.

## 16. Other Information

### Company Policy or Disclaimer

For research use only, not for human or veterinary 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

## Acridinium Purification Buffer (10X)

Page: 1

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

Revision: 10/19/2011  
Supersedes Revision: 11/12/2010

### 1. Identification of the Substance/Mixture and of the Company/Undertaking

**Product Code:** 200202

**Product Name:** Acridinium Purification Buffer (10X)

**Manufacturer Information**

**Company Name:** Cayman Chemical Company

**Emergency Contact:** CHEMTREC Within USA and Canada: +1 (800)424-9300

**Alternate Emergency Contact:** CHEMTREC Outside USA and Canada: +1 (703)527-3887

**Information:** Cayman Chemical Company +1 (734)971-3335

**Web site address:** www.caymanchem.com

### 2. Hazards Identification

**Emergency Overview:** Avoid contact and inhalation.

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

**Potential Health Effects (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.

**Signs and Symptoms Of Exposure:** To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

**Medical Conditions Generally Aggravated By Exposure:** No data available.

### 3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases	RTECS #
1. Bovine Serum Albumin (BSA)	9048-46-8	1.0 %	232-936-2	No phrases apply.	MT6446000
2. Sodium azide	26628-22-8	0.1 %	247-852-1	R28-32-50/53	VY8050000
3. Sodium chloride	7647-14-5	8.77 %	231-598-3	No phrases apply.	VZ4725000
4. Potassium phosphate, Monobasic	7778-77-0	13.6 %	231-913-4	No phrases apply.	TC6615500
5. Water	7732-18-5	76.53 %	231-791-2	No phrases apply.	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.

<b>Autoignition Pt:</b>	No data available.
<b>Fire Fighting Instructions:</b>	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.
<b>Flammable Properties and Hazards:</b>	No data available.
<b>Hazardous Combustion Products:</b>	No data available.
<b>Suitable Extinguishing Media:</b>	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.
<b>Unsuitable Extinguishing Media:</b>	A solid water stream may be inefficient.

## 6. Accidental Release Measures

<b>Steps To Be Taken In Case Material Is Released Or Spilled:</b>	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 chemical waste container.
---	---

## 7. Handling and Storage

<b>Hazard Label Information:</b>	Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.
<b>Precautions To Be Taken in Handling:</b>	Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.
<b>Precautions To Be Taken in Storing:</b>	Store container tightly closed in cool/well-ventilated place.

## 8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TWA	Other Limits
1. Bovine Serum Albumin (BSA)	9048-46-8	No data.	No data.	No data.
2. Sodium azide	26628-22-8	No data.	CEIL: 0.29 mg/m3	No data.
3. Sodium chloride	7647-14-5	No data.	No data.	No data.
4. Potassium phosphate, Monobasic	7778-77-0	No data.	No data.	No data.
5. Water	7732-18-5	No data.	No data.	No data.

<b>Protective Equipment Summary - Hazard Label Information:</b>	Compatible chemical-resistant gloves    Eye wash station in work area    Lab coat    Safety glasses    Safety shower in work area    Vent Hood
<b>Respiratory Equipment (Specify Type):</b>	NIOSH approved respirator, as conditions warrant.
<b>Eye Protection:</b>	Safety glasses
<b>Protective Gloves:</b>	Compatible chemical-resistant gloves
<b>Other Protective Clothing:</b>	Lab coat
<b>Engineering Controls (Ventilation etc.):</b>	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
<b>Work/Hygienic/Maintenance Practices:</b>	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

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



# MATERIAL SAFETY DATA SHEET

## Acridinium Purification Buffer (10X)

Page: 3

Revision: 10/19/2011

Supercedes Revision: 11/12/2010

**Flash Pt:** No data.

**Specific Gravity (Water = 1):** No data.

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

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

**Evaporation Rate:** No data.

**Solubility in Water:** No data.

**Percent Volatile:** No data.

**pH:** 6.3

**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:** hydrogen chloride gas  
phosphorus oxides  
potassium oxides  
sodium 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:** No data available.

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Bovine Serum Albumin (BSA)	9048-46-8	n.a.	n.a.	n.a.	n.a.
2. Sodium azide	26628-22-8	n.a.	n.a.	A4	n.a.
3. Sodium chloride	7647-14-5	n.a.	n.a.	n.a.	n.a.
4. Potassium phosphate, Monobasic	7778-77-0	n.a.	n.a.	n.a.	n.a.
5. Water	7732-18-5	n.a.	n.a.	n.a.	n.a.

### 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. Bovine Serum Albumin (BSA)	9048-46-8	No	No	No	No
2. Sodium azide	26628-22-8	Yes 500 LB	Yes 1000 LB	Yes	No
3. Sodium chloride	7647-14-5	No	No	No	No
4. Potassium phosphate, Monobasic	7778-77-0	No	No	No	No
5. Water	7732-18-5	No	No	No	No

**Other US EPA or State Lists**

Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65
1. Bovine Serum Albumin (BSA)	9048-46-8	No	No	Inventory	No
2. Sodium azide	26628-22-8	No	No	Inventory	No
3. Sodium chloride	7647-14-5	No	No	Inventory	No
4. Potassium phosphate, Monobasic	7778-77-0	No	No	Inventory	No
5. Water	7732-18-5	No	No	Inventory	No

**Regulatory Information Statement:**

This SDS was prepared in accordance with Regulation (EC) No.1272/2008 and European Directive 67/548/EEC as amended.

### 16. Other Information

**Company Policy or Disclaimer**

For research use only, not for human or veterinary 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

## Acridinium Quench Solution

Page: 1

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

Revision: 10/20/2011  
Supercedes Revision: 09/25/2006

### 1. Identification of the Substance/Mixture and of the Company/Undertaking

**Product Code:** 200203

**Product Name:** Acridinium Quench Solution

**Manufacturer Information**

**Company Name:** Cayman Chemical Company

**Emergency Contact:** CHEMTREC Within USA and Canada: +1 (800)424-9300

**Alternate Emergency Contact:** CHEMTREC Outside USA and Canada: +1 (703)527-3887

**Information:** Cayman Chemical Company +1 (734)971-3335

**Web site address:** www.caymanchem.com

### 2. Hazards Identification

**Emergency Overview:** Avoid contact and inhalation.

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

**Potential Health Effects (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.

**Signs and Symptoms Of Exposure:** To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

**Medical Conditions Generally Aggravated By Exposure:** No data available.

### 3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases	RTECS #
1. Potassium phosphate, Monobasic	7778-77-0	1.36 %	231-913-4	No phrases apply.	TC6615500
2. Sodium chloride	7647-14-5	0.9 %	231-598-3	No phrases apply.	VZ4725000
3. L-Lysine	56-87-1	1.0 %	200-294-2	No phrases apply.	OL5540000
4. Water	7732-18-5	96.74 %	231-791-2	No phrases apply.	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.

**Autoignition Pt:** No data available.

## Acridinium Quench Solution

Revision: 10/20/2011

Supercedes Revision: 09/25/2006

<b>Fire Fighting Instructions:</b>	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.
<b>Flammable Properties and Hazards:</b>	No data available.
<b>Hazardous Combustion Products:</b>	No data available.
<b>Suitable Extinguishing Media:</b>	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.
<b>Unsuitable Extinguishing Media:</b>	A solid water stream may be inefficient.

## 6. Accidental Release Measures

<b>Steps To Be Taken In Case Material Is Released Or Spilled:</b>	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 chemical waste container.
---	---

## 7. Handling and Storage

<b>Hazard Label Information:</b>	Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.
<b>Precautions To Be Taken in Handling:</b>	Avoid breathing (dust, vapor, mist, gas). Avoid prolonged or repeated exposure.
<b>Precautions To Be Taken in Storing:</b>	Keep tightly closed. Store at correct temperature.

## 8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	Other Limits
1. Potassium phosphate, Monobasic	7778-77-0	No data.	No data.	No data.
2. Sodium chloride	7647-14-5	No data.	No data.	No data.
3. L-Lysine	56-87-1	No data.	No data.	No data.
4. Water	7732-18-5	No data.	No data.	No data.

<b>Protective Equipment Summary - Hazard Label Information:</b>	Compatible chemical-resistant gloves glasses Safety shower in work area Vent Hood	Eye wash station in work area Lab coat Safety
<b>Respiratory Equipment (Specify Type):</b>	NIOSH approved respirator, as conditions warrant.	
<b>Eye Protection:</b>	Safety glasses	
<b>Protective Gloves:</b>	Compatible chemical-resistant gloves	
<b>Other Protective Clothing:</b>	Lab coat	
<b>Engineering Controls (Ventilation etc.):</b>	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.	
<b>Work/Hygienic/Maintenance Practices:</b>	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

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



# MATERIAL SAFETY DATA SHEET

## Acridinium Quench Solution

Page: 3

Revision: 10/20/2011

Supercedes Revision: 09/25/2006

**Specific Gravity (Water = 1):** No data.

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

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

**Evaporation Rate:** No data.

**Solubility in Water:** No data.

**Percent Volatile:** No data.

**pH:** 8.0

**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 dioxides  
carbon monoxides  
nitrogen oxides  
phosphorus oxides  
potassium 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:** No data available.

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Potassium phosphate, Monobasic	7778-77-0	n.a.	n.a.	n.a.	n.a.
2. Sodium chloride	7647-14-5	n.a.	n.a.	n.a.	n.a.
3. L-Lysine	56-87-1	n.a.	n.a.	n.a.	n.a.
4. Water	7732-18-5	n.a.	n.a.	n.a.	n.a.

### 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.



# MATERIAL SAFETY DATA SHEET

## Acridinium Quench Solution

Page: 4

Revision: 10/20/2011

Supercedes Revision: 09/25/2006

### 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. Potassium phosphate, Monobasic	7778-77-0	No	No	No	No
2. Sodium chloride	7647-14-5	No	No	No	No
3. L-Lysine	56-87-1	No	No	No	No
4. Water	7732-18-5	No	No	No	No

#### Other US EPA or State Lists

Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65
1. Potassium phosphate, Monobasic	7778-77-0	No	No	Inventory	No
2. Sodium chloride	7647-14-5	No	No	Inventory	No
3. L-Lysine	56-87-1	No	No	Inventory	No
4. Water	7732-18-5	No	No	Inventory	No

#### Regulatory Information Statement:

This SDS was prepared in accordance with Regulation (EC) No.1272/2008 and European Directive 67/548/EEC as amended.

### 16. Other Information

#### Company Policy or Disclaimer

For research use only, not for human or veterinary 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

## Acridinium Labeling Buffer

Page: 1

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

Revision: 10/20/2011  
Supercedes Revision: 09/25/2006

### 1. Identification of the Substance/Mixture and of the Company/Undertaking

**Product Code:** 200204

**Product Name:** Acridinium Labeling Buffer

**Manufacturer Information**

**Company Name:** Cayman Chemical Company

**Emergency Contact:** CHEMTREC Within USA and Canada: +1 (800)424-9300

**Alternate Emergency Contact:** CHEMTREC Outside USA and Canada: +1 (703)527-3887

**Information:** Cayman Chemical Company +1 (734)971-3335

**Web site address:** www.caymanchem.com

### 2. Hazards Identification

**Emergency Overview:** Avoid contact and inhalation.

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

**Potential Health Effects (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.

**Signs and Symptoms Of Exposure:** To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

**Medical Conditions Generally Aggravated By Exposure:** No data available.

### 3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases	RTECS #
1. Potassium phosphate, Monobasic	7778-77-0	1.36 %	231-913-4	No phrases apply.	TC6615500
2. Sodium chloride	7647-14-5	0.9 %	231-598-3	No phrases apply.	VZ4725000
3. Water	7732-18-5	97.74 %	231-791-2	No phrases apply.	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.

**Autoignition Pt:** No data available.

**Fire Fighting Instructions:** 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.



# MATERIAL SAFETY DATA SHEET

Page: 2

## Acridinium Labeling Buffer

Revision: 10/20/2011

Supercedes Revision: 09/25/2006

<b>Flammable Properties and Hazards:</b>	No data available.
<b>Hazardous Combustion Products:</b>	No data available.
<b>Suitable Extinguishing Media:</b>	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.
<b>Unsuitable Extinguishing Media:</b>	A solid water stream may be inefficient.

### 6. Accidental Release Measures

<b>Steps To Be Taken In Case Material Is Released Or Spilled:</b>	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 chemical waste container.
---	---

### 7. Handling and Storage

<b>Hazard Label Information:</b>	Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.
<b>Precautions To Be Taken in Handling:</b>	Avoid breathing (dust, vapor, mist, gas). Avoid prolonged or repeated exposure.
<b>Precautions To Be Taken in Storing:</b>	Keep tightly closed. Store at correct temperature.

### 8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	Other Limits
1. Potassium phosphate, Monobasic	7778-77-0	No data.	No data.	No data.
2. Sodium chloride	7647-14-5	No data.	No data.	No data.
3. Water	7732-18-5	No data.	No data.	No data.

<b>Protective Equipment Summary - Hazard Label Information:</b>	Compatible chemical-resistant gloves   Eye wash station in work area   Lab coat   Safety glasses   Safety shower in work area   Vent Hood
<b>Respiratory Equipment (Specify Type):</b>	NIOSH approved respirator, as conditions warrant.
<b>Eye Protection:</b>	Safety glasses
<b>Protective Gloves:</b>	Compatible chemical-resistant gloves
<b>Other Protective Clothing:</b>	Lab coat
<b>Engineering Controls (Ventilation etc.):</b>	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
<b>Work/Hygienic/Maintenance Practices:</b>	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

<b>Physical States:</b>	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Solid
<b>Melting Point:</b>	No data.
<b>Boiling Point:</b>	No data.
<b>Autoignition Pt:</b>	No data.
<b>Flash Pt:</b>	No data.
<b>Specific Gravity (Water = 1):</b>	No data.
<b>Vapor Pressure (vs. Air or mm Hg):</b>	No data.



# MATERIAL SAFETY DATA SHEET

## Acridinium Labeling Buffer

Page: 3

Revision: 10/20/2011

Supercedes Revision: 09/25/2006

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

**Evaporation Rate:** No data.

**Solubility in Water:** No data.

**Percent Volatile:** No data.

**pH:** 8.0

**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:** phosphorus oxides  
potassium 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:** No data available.

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Potassium phosphate, Monobasic	7778-77-0	n.a.	n.a.	n.a.	n.a.
2. Sodium chloride	7647-14-5	n.a.	n.a.	n.a.	n.a.
3. Water	7732-18-5	n.a.	n.a.	n.a.	n.a.

### 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



# MATERIAL SAFETY DATA SHEET

## Acridinium Labeling Buffer

Page: 4

Revision: 10/20/2011

Supercedes Revision: 09/25/2006

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Potassium phosphate, Monobasic	7778-77-0	No	No	No	No
2. Sodium chloride	7647-14-5	No	No	No	No
3. Water	7732-18-5	No	No	No	No

### Other US EPA or State Lists

Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65
1. Potassium phosphate, Monobasic	7778-77-0	No	No	Inventory	No
2. Sodium chloride	7647-14-5	No	No	Inventory	No
3. Water	7732-18-5	No	No	Inventory	No

### Regulatory Information Statement:

This SDS was prepared in accordance with Regulation (EC) No.1272/2008 and European Directive 67/548/EEC as amended.

## 16. Other Information

### Company Policy or Disclaimer

For research use only, not for human or veterinary 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

## Acridinium Trigger Solution I

Page: 1

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

Revision: 10/18/2011  
Supersedes Revision: 09/25/2006

### 1. Identification of the Substance/Mixture and of the Company/Undertaking

**Product Code:** 200205

**Product Name:** Acridinium Trigger Solution I

**Manufacturer Information**

**Company Name:** Cayman Chemical Company

**Emergency Contact:** CHEMTREC Within USA and Canada: +1 (800)424-9300

**Alternate Emergency Contact:** CHEMTREC Outside USA and Canada: +1 (703)527-3887

**Information:** Cayman Chemical Company +1 (734)971-3335

**Web site address:** www.caymanchem.com

### 2. Hazards Identification

**Emergency Overview:** Avoid contact and inhalation.

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

**Potential Health Effects (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.

**Signs and Symptoms Of Exposure:** To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

**Medical Conditions Generally Aggravated By Exposure:** No data available.

### 3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases	RTECS #
1. Sodium hydroxide	1310-73-2	0.8 %	215-185-5	R35	WB4900000
2. Water	7732-18-5	99.2 %	231-791-2	No phrases apply.	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.

**Autoignition Pt:** No data available.

**Fire Fighting Instructions:** 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.



# MATERIAL SAFETY DATA SHEET

## Acridinium Trigger Solution I

Page: 2

Revision: 10/18/2011

Supercedes Revision: 09/25/2006

<b>Flammable Properties and Hazards:</b>	No data available.
<b>Hazardous Combustion Products:</b>	No data available.
<b>Suitable Extinguishing Media:</b>	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.
<b>Unsuitable Extinguishing Media:</b>	A solid water stream may be inefficient.

### 6. Accidental Release Measures

<b>Steps To Be Taken In Case Material Is Released Or Spilled:</b>	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 chemical waste container.
---	---

### 7. Handling and Storage

<b>Hazard Label Information:</b>	Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.
<b>Precautions To Be Taken in Handling:</b>	Avoid breathing (dust, vapor, mist, gas). Avoid prolonged or repeated exposure.
<b>Precautions To Be Taken in Storing:</b>	Keep tightly closed. Store at correct temperature.

### 8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TWA	Other Limits
1. Sodium hydroxide	1310-73-2	PEL: 2 mg/m3	CEIL: 2 mg/m3	No data.
2. Water	7732-18-5	No data.	No data.	No data.

<b>Protective Equipment Summary - Hazard Label Information:</b>	Compatible chemical-resistant gloves    Eye wash station in work area    Lab coat    Safety glasses    Safety shower in work area    Vent Hood
<b>Respiratory Equipment (Specify Type):</b>	NIOSH approved respirator, as conditions warrant.
<b>Eye Protection:</b>	Safety glasses
<b>Protective Gloves:</b>	Compatible chemical-resistant gloves
<b>Other Protective Clothing:</b>	Lab coat
<b>Engineering Controls (Ventilation etc.):</b>	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
<b>Work/Hygienic/Maintenance Practices:</b>	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

<b>Physical States:</b>	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Solid
<b>Melting Point:</b>	No data.
<b>Boiling Point:</b>	No data.
<b>Autoignition Pt:</b>	No data.
<b>Flash Pt:</b>	No data.
<b>Specific Gravity (Water = 1):</b>	No data.
<b>Vapor Pressure (vs. Air or mm Hg):</b>	No data.
<b>Vapor Density (vs. Air = 1):</b>	No data.



# MATERIAL SAFETY DATA SHEET

## Acridinium Trigger Solution I

Page: 3

Revision: 10/18/2011

Supercedes Revision: 09/25/2006

**Evaporation Rate:** No data.

**Solubility in Water:** No data.

**Percent Volatile:** 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:** No data available.

**Hazardous Decomposition Or Byproducts:** No data available.

**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:** No data available.

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Sodium hydroxide	1310-73-2	n.a.	n.a.	n.a.	n.a.
2. Water	7732-18-5	n.a.	n.a.	n.a.	n.a.

### 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. Sodium hydroxide	1310-73-2	No	Yes 1000 LB	No	No
2. Water	7732-18-5	No	No	No	No

#### Other US EPA or State Lists



# MATERIAL SAFETY DATA SHEET

## Acridinium Trigger Solution I

Page: 4

Revision: 10/18/2011

Supersedes Revision: 09/25/2006

Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65
1. Sodium hydroxide	1310-73-2	No	No	Inventory	No
2. Water	7732-18-5	No	No	Inventory	No

**Regulatory Information Statement:**

This SDS was prepared in accordance with Regulation (EC) No.1272/2008 and European Directive 67/548/EEC as amended.

### 16. Other Information

**Company Policy or Disclaimer**

For research use only, not for human or veterinary 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

## Acridinium Trigger Solution II

Page: 1

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

Revision: 10/19/2011  
Supersedes Revision: 09/25/2006

### 1. Identification of the Substance/Mixture and of the Company/Undertaking

**Product Code:** 200206

**Product Name:** Acridinium Trigger Solution II

**Manufacturer Information**

**Company Name:** Cayman Chemical Company

**Emergency Contact:** CHEMTREC Within USA and Canada: +1 (800)424-9300

**Alternate Emergency Contact:** CHEMTREC Outside USA and Canada: +1 (703)527-3887

**Information:** Cayman Chemical Company +1 (734)971-3335

**Web site address:** www.caymanchem.com

### 2. Hazards Identification

**Emergency Overview:** Avoid contact and inhalation.

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

**Potential Health Effects (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.

**Signs and Symptoms Of Exposure:** To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

**Medical Conditions Generally Aggravated By Exposure:** No data available.

### 3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases	RTECS #
1. Hydrogen peroxide	7722-84-1	0.06 %	231-765-0	R5-8-20/22-35-41	MX0899000
2. Water	7732-18-5	99.94 %	231-791-2	No phrases apply.	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.

**Autoignition Pt:** No data available.

**Fire Fighting Instructions:** 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.



# MATERIAL SAFETY DATA SHEET

## Acridinium Trigger Solution II

Page: 2

Revision: 10/19/2011

Supercedes Revision: 09/25/2006

<b>Flammable Properties and Hazards:</b>	No data available.
<b>Hazardous Combustion Products:</b>	No data available.
<b>Suitable Extinguishing Media:</b>	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.
<b>Unsuitable Extinguishing Media:</b>	A solid water stream may be inefficient.

### 6. Accidental Release Measures

<b>Steps To Be Taken In Case Material Is Released Or Spilled:</b>	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 chemical waste container.
---	---

### 7. Handling and Storage

<b>Hazard Label Information:</b>	Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.
<b>Precautions To Be Taken in Handling:</b>	Avoid breathing (dust, vapor, mist, gas). Avoid prolonged or repeated exposure.
<b>Precautions To Be Taken in Storing:</b>	Keep tightly closed. Store at correct temperature.

### 8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	Other Limits
1. Hydrogen peroxide	7722-84-1	1 ppm	1 ppm	No data.
2. Water	7732-18-5	No data.	No data.	No data.

<b>Protective Equipment Summary - Hazard Label Information:</b>	Compatible chemical-resistant gloves    Eye wash station in work area    Lab coat    Safety glasses    Safety shower in work area    Vent Hood
<b>Respiratory Equipment (Specify Type):</b>	NIOSH approved respirator, as conditions warrant.
<b>Eye Protection:</b>	Safety glasses
<b>Protective Gloves:</b>	Compatible chemical-resistant gloves
<b>Other Protective Clothing:</b>	Lab coat
<b>Engineering Controls (Ventilation etc.):</b>	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
<b>Work/Hygienic/Maintenance Practices:</b>	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

<b>Physical States:</b>	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Solid
<b>Melting Point:</b>	No data.
<b>Boiling Point:</b>	No data.
<b>Autoignition Pt:</b>	No data.
<b>Flash Pt:</b>	No data.
<b>Specific Gravity (Water = 1):</b>	No data.
<b>Vapor Pressure (vs. Air or mm Hg):</b>	No data.
<b>Vapor Density (vs. Air = 1):</b>	No data.



# MATERIAL SAFETY DATA SHEET

## Acridinium Trigger Solution II

Page: 3

Revision: 10/19/2011

Supercedes Revision: 09/25/2006

**Evaporation Rate:** No data.

**Solubility in Water:** No data.

**Percent Volatile:** 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:** No data available.

**Hazardous Decomposition Or Byproducts:** No data available.

**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:** No data available.

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Hydrogen peroxide	7722-84-1	n.a.	n.a.	A3	n.a.
2. Water	7732-18-5	n.a.	n.a.	n.a.	n.a.

### 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. Hydrogen peroxide	7722-84-1	Yes 1000 LB	Yes NA	No	No
2. Water	7732-18-5	No	No	No	No

#### Other US EPA or State Lists



# MATERIAL SAFETY DATA SHEET

## Acridinium Trigger Solution II

Page: 4

Revision: 10/19/2011

Supersedes Revision: 09/25/2006

Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65
1. Hydrogen peroxide	7722-84-1	No	No	Inventory	No
2. Water	7732-18-5	No	No	Inventory	No

**Regulatory Information Statement:**

This SDS was prepared in accordance with Regulation (EC) No.1272/2008 and European Directive 67/548/EEC as amended.

### 16. Other Information

**Company Policy or Disclaimer**

For research use only, not for human or veterinary 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

## Acridinium Desalting Column

Page: 1

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

Revision: 10/21/2011  
Supercedes Revision: 09/25/2006

### 1. Identification of the Substance/Mixture and of the Company/Undertaking

**Product Code:** 200207  
**Product Name:** Acridinium Desalting Column  
**Manufacturer Information**  
**Company Name:** Cayman Chemical Company  
**Emergency Contact:** CHEMTREC Within USA and Canada: +1 (800)424-9300  
**Alternate Emergency Contact:** CHEMTREC Outside USA and Canada: +1 (703)527-3887  
**Information:** Cayman Chemical Company +1 (734)971-3335  
**Web site address:** www.caymanchem.com

### 2. Hazards Identification

**Emergency Overview:** Avoid contact and inhalation.  
**Route(s) of Entry:** Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection  
**Potential Health Effects (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.  
**Signs and Symptoms Of Exposure:** To the best of our knowledge, the toxicological properties have not been thoroughly investigated.  
**Medical Conditions Generally Aggravated By Exposure:** No data available.

### 3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases
1. Acridinium Desalting Column	NA	100.0 %	NA	No phrases apply.

### 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.  
**Autoignition Pt:** No data available.  
**Fire Fighting Instructions:** 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.  
**Flammable Properties and Hazards:** No data available.



# MATERIAL SAFETY DATA SHEET

## Acridinium Desalting Column

Page: 2

Revision: 10/21/2011

Supercedes Revision: 09/25/2006

<b>Hazardous Combustion Products:</b>	No data available.
<b>Suitable Extinguishing Media:</b>	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.
<b>Unsuitable Extinguishing Media:</b>	A solid water stream may be inefficient.

### 6. Accidental Release Measures

<b>Steps To Be Taken In Case Material Is Released Or Spilled:</b>	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 chemical waste container.
---	---

### 7. Handling and Storage

<b>Hazard Label Information:</b>	Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.
<b>Precautions To Be Taken in Handling:</b>	Avoid breathing (dust, vapor, mist, gas). Avoid prolonged or repeated exposure.
<b>Precautions To Be Taken in Storing:</b>	Keep tightly closed. Store at correct temperature.

### 8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	Other Limits
1. Acridinium Desalting Column	NA	No data.	No data.	No data.
<b>Protective Equipment Summary - Hazard Label Information:</b>	Compatible chemical-resistant gloves   Eye wash station in work area   Lab coat   Safety glasses   Safety shower in work area   Vent Hood			
<b>Respiratory Equipment (Specify Type):</b>	NIOSH approved respirator, as conditions warrant.			
<b>Eye Protection:</b>	Safety glasses			
<b>Protective Gloves:</b>	Compatible chemical-resistant gloves			
<b>Other Protective Clothing:</b>	Lab coat			
<b>Engineering Controls (Ventilation etc.):</b>	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.			
<b>Work/Hygienic/Maintenance Practices:</b>	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

<b>Physical States:</b>	<input type="checkbox"/> Gas <input type="checkbox"/> Liquid <input type="checkbox"/> Solid
<b>Melting Point:</b>	No data.
<b>Boiling Point:</b>	No data.
<b>Autoignition Pt:</b>	No data.
<b>Flash Pt:</b>	No data.
<b>Specific Gravity (Water = 1):</b>	No data.
<b>Vapor Pressure (vs. Air or mm Hg):</b>	No data.
<b>Vapor Density (vs. Air = 1):</b>	No data.
<b>Evaporation Rate:</b>	No data.
<b>Solubility in Water:</b>	No data.



# MATERIAL SAFETY DATA SHEET

## Acridinium Desalting Column

Page: 3

Revision: 10/21/2011

Supercedes Revision: 09/25/2006

**Percent Volatile:** No data.

**Appearance and Odor:** A suspended solid

### 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:** No data available.

**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:** No data available.

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Acridinium Desalting Column	NA	n.a.	n.a.	n.a.	n.a.

### 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. Acridinium Desalting Column	NA	No	No	No	No

#### Other US EPA or State Lists

Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65
1. Acridinium Desalting Column	NA	No	No	No	No

**Regulatory Information Statement:** This SDS was prepared in accordance with Regulation (EC) No.1272/2008 and European Directive 67/548/EEC as amended.



# MATERIAL SAFETY DATA SHEET

## Acridinium Desalting Column

Page: 4

Revision: 10/21/2011

Supersedes Revision: 09/25/2006

### 16. Other Information

#### Company Policy or Disclaimer

For research use only, not for human or veterinary 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**