

**Hydrogen Peroxide Assay (urinary) Reagent 1**

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

Revision: 03/18/2011
 Supersedes Revision: 03/07/2011

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

Product Code: 706012
Product Name: Hydrogen Peroxide Assay (urinary) Reagent 1
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: Corrosive.
 Avoid contact and inhalation.

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

Potential Health Effects (Acute and Chronic): Causes severe burns.
 Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract, eyes, and skin.
 May be harmful by inhalation, ingestion, or skin absorption.

Signs and Symptoms Of Exposure: Eye contact may cause blurred vision, redness, pain and tissue burns.
 Effects may be delayed.
 Inhalation may result in spasm, inflammation, and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema.
 Inhalation may cause coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.
 To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Medical Conditions Generally Aggravated By Exposure: Persons with pre-existing skin disorders or eye problems or impaired respiratory function may be more susceptible to the effects of the substance.

3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases	RTECS #
1. Ferrous ammonium sulfate	7783-85-9	0.0 -5.0 %	NA	R36/37/38	BR6500000
2. Sulfuric acid	7664-93-9	10.0 -50.0 %	231-639-5	R35	WS5600000
3. Water	7732-18-5	45.0 -90.0 %	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.

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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.		
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. 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.		
Precautions To Be Taken in Storing:	Keep tightly closed. Keep out of direct sunlight. Keep away from incompatible materials. Store at correct temperature.		
Other Precautions:	Air sensitive. Light sensitive.		

8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TWA	Other Limits
1. Ferrous ammonium sulfate	7783-85-9	No data.	No data.	No data.
2. Sulfuric acid	7664-93-9	PEL: 1 mg/m3	TLV: (1 mg/m3) STEL: (3 mg/m3)	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.		
Eye Protection:	Safety glasses		
Protective Gloves:	Compatible chemical-resistant gloves		
Other Protective Clothing:	Lab coat		
Engineering Controls (Ventilation etc.):	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.		

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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.
Specific Gravity (Water = 1):	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.
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:	azides bases carbides chlorates cyanides fulminates halides hydrogen peroxide metals nitrates nitromethane organic materials picrates perchlorates permanganates phosphorous strong reducing agents strong oxidizing agents zinc salts Reacts violently with: cyclopentadiene, cyclopentanone oxime, nitroaryl amines, hexalithium disilicide, phosphorous(III) oxide, powdered metals.
Hazardous Decomposition Or Byproducts:	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.

Sulfuric acid - Toxicity Data: Oral LD50 (rat): 2,140 mg/kg; Inhalation LC50 (rat): 510 mg/m³ (2h); Irritation Data: Eyes (rabbit): severe irritation; Skin (rabbit): extremely corrosive and destructive to tissue;

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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.
Sulfuric Acid RTECS Number: WS5600000

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Ferrous ammonium sulfate	7783-85-9	n.a.	n.a.	n.a.	n.a.
2. Sulfuric acid	7664-93-9	n.a.	No	A2	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: Sulfuric acid with not more than 51% acid
DOT Hazard Class: 8
DOT Hazard Label: CORROSIVE
UN/NA Number: 2796
Packing Group: II

LAND TRANSPORT (European ADR/RID)

ADR/RID Shipping Name: Sulphuric acid, with 51% or less acid
UN Number: 2796
Hazard Class: 8 - CORROSIVE
Packing Group: II

AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name: Sulphuric acid, with 51% or less acid
UN Number: 2796
Hazard Class: 8 - CORROSIVE
Packing Group: II
IATA Classification: 8

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

15. Regulatory Information

European Community Hazard Symbol codes: C: Corrosive

European Community Risk and Safety Phrases

- R35 - Causes severe burns.
- 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.
- 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.)

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Ferrous ammonium sulfate	7783-85-9	No	No	No	No
2. Sulfuric acid	7664-93-9	Yes 1000 LB	Yes 1000 LB	Yes	No



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Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
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. Ferrous ammonium sulfate	7783-85-9	No	No	No	No
2. Sulfuric acid	7664-93-9	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



Hydrogen Peroxide Assay (urinary) Reagent 2

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

Revision: 03/07/2011
Supersedes Revision: 10/21/2004

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

Product Code: 706014

Product Name: Hydrogen Peroxide Assay (urinary) Reagent 2

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. Sorbitol	50-70-4	0.0 -5.0 %	200-061-5	No phrases apply.	LZ4290000
2. Xylenol orange	3618-43-7	0.0 -1.0 %	222-805-8	No phrases apply.	NA
3. Sodium azide	26628-22-8	0.0 -0.1 %	247-852-1	R28-32-50/53	VY8050000
4. Water	7732-18-5	94.9 -100.0 %	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.

Hydrogen Peroxide Assay (urinary) Reagent 2

Revision: 03/07/2011

Supercedes Revision: 10/21/2004

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.
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. 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.
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 TWA	Other Limits
1. Sorbitol	50-70-4	No data.	No data.	No data.
2. Xylenol orange	3618-43-7	No data.	No data.	No data.
3. Sodium azide	26628-22-8	No data.	CEIL: 0.29 mg/m3	No data.
4. 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
Engineering Controls (Ventilation etc.):	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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Supercedes Revision: 10/21/2004

Specific Gravity (Water = 1):	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.
Appearance and Odor:	No data available.

10. Stability and Reactivity

Stability:	Unstable [<input type="checkbox"/>] Stable [<input checked="" type="checkbox"/>]
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 [<input type="checkbox"/>] Will not occur [<input checked="" type="checkbox"/>]
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.
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Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Sorbitol	50-70-4	n.a.	n.a.	n.a.	n.a.
2. Xylenol orange	3618-43-7	n.a.	n.a.	n.a.	n.a.
3. Sodium azide	26628-22-8	n.a.	n.a.	A4	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.
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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)

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.



SAFETY DATA SHEET

Hydrogen Peroxide Assay (urinary) Reagent 2

Revision: 03/07/2011

Supercedes Revision: 10/21/2004

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Sorbitol	50-70-4	No	No	No	No
2. Xylenol orange	3618-43-7	No	No	No	No
3. Sodium azide	26628-22-8	Yes 500 LB	Yes 1000 LB	Yes	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. Sorbitol	50-70-4	No	No	Inventory	No
2. Xylenol orange	3618-43-7	No	No	Inventory	No
3. Sodium azide	26628-22-8	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



Hydrogen Peroxide (urinary) Standard

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

Revision: 03/07/2011
Supersedes Revision: 11/18/2004

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

Product Code: 706016

Product Name: Hydrogen Peroxide (urinary) Standard

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: Hydrogen Peroxide;

2. Hazards Identification

Emergency Overview: Corrosive.
Harmful.
Oxidizing.
Avoid contact and inhalation.

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

Potential Health Effects (Acute and Chronic): Causes burns.
Causes serious eye damage.
Harmful if swallowed or by inhalation.
Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

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

Signs and Symptoms Of Exposure: Exposure may cause: nausea, headache, vomiting, stomach pains, sore throat, cough, dizziness, or shortness of breath.
Eye contact may result in pain, redness, blurred vision, or corneal ulcer.
Skin contact may result in redness, itching, pain, severe burn, or vesiculation skin.
To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Medical Conditions Generally Aggravated By Exposure: Persons with pre-existing skin disorders or eye problems or impaired respiratory function may be more susceptible to the effects of the substance.

3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases	RTECS #
1. Hydrogen peroxide	7722-84-1	30.0 %	231-765-0	R5-8-20/22-35	MX0899000
2. Water	7732-18-5	70.0 %	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.
Flammable Properties and 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.

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 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.
Precautions To Be Taken in Storing:	Keep tightly closed. Store at correct temperature.
Other Precautions:	Keep away from combustible materials. Light sensitive.

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.

Protective Equipment Summary - Hazard Label Information:	Compatible chemical-resistant gloves Safety glasses Eye wash station in work area Safety shower in work area Lab coat Safety glasses 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
Engineering Controls (Ventilation etc.):	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.

Hydrogen Peroxide (urinary) Standard

Revision: 03/07/2011

Supercedes Revision: 11/18/2004

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.

Specific Gravity (Water = 1): 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.

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: brass
bronze
chromium
combustible materials
copper
iron and iron salts
lead
manganese
nickel
oxidizable materials
powdered metals
silver
zinc

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.

Carcinogenicity/Other Information: IARC: Group 3: Not classifiable as to its carcinogenicity to humans (Hydrogen peroxide)

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.



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Hydrogen Peroxide (urinary) Standard

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: Hydrogen peroxide, aqueous solution (with 20% or more but 40% or less hydrogen peroxide (stabilized as necessary))

DOT Hazard Class: 5.1

DOT Hazard Label: OXIDIZER, CORROSIVE

UN/NA Number: 2014

Packing Group: II

LAND TRANSPORT (European ADR/RID)

ADR/RID Shipping Name: Hydrogen peroxide, aqueous solution (with 20% or more but 40% or less hydrogen peroxide (stabilized as necessary))

UN Number: 2014

Hazard Class: 5.1 - OXIDIZER, CORROSIVE

Packing Group: II

AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name: Hydrogen peroxide, aqueous solution (with 20% or more but 40% or less hydrogen peroxide (stabilized as necessary))

UN Number: 2014

Hazard Class: 5.1 - OXIDIZER, CORROSIVE

Packing Group: II

IATA Classification: 5.1 (8)

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

15. Regulatory Information

European Community Hazard Symbol codes C: Corrosive; O: Oxidizing; Xn: Harmful

European Community Risk and Safety Phrases

- R5 - Heating may cause an explosion.
- R8 - Contact with combustible material may cause fire.
- R20/22 - Harmful by inhalation and if swallowed.
- R35 - Causes severe burns.
- R41 - Risk of serious damage to the eyes.
- S17 - Keep away from combustible material.
- 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.
- S28 - After contact with skin, wash immediately with plenty of soap-suds.
- 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.)

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

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



SAFETY DATA SHEET

Hydrogen Peroxide (urinary) Standard

Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65
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



Hydrogen Peroxide Assay (urinary) Catalase

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

Revision: 03/07/2011
Supersedes Revision: 06/26/2006

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

Product Code: 10005395

Product Name: Hydrogen Peroxide Assay (urinary) Catalase

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: Exposure may cause sensitization.
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. Catalase	9001-05-2	0.0 -1.0 %	232-577-1	No phrases apply.	FI4378000
2. Potassium phosphate, Monobasic	7778-77-0	99.0 -100.0 %	231-913-4	No phrases apply.	TC6615500

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.

Hydrogen Peroxide Assay (urinary) Catalase

Revision: 03/07/2011

Supercedes Revision: 06/26/2006

Flammable Properties and 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.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled:	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.
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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.
Precautions To Be Taken in Storing:	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. Catalase	9001-05-2	No data.	No data.	No data.
2. Potassium phosphate, Monobasic	7778-77-0	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
Engineering Controls (Ventilation etc.):	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 type="checkbox"/> Liquid <input checked="" type="checkbox"/> Solid
Melting Point:	No data.
Boiling Point:	No data.
Autoignition Pt:	No data.
Flash Pt:	No data.
Specific Gravity (Water = 1):	No data.
Vapor Pressure (vs. Air or mm Hg):	No data.

Hydrogen Peroxide Assay (urinary) Catalase

Revision: 03/07/2011

Supercedes Revision: 06/26/2006

Vapor Density (vs. Air = 1):	No data.
Evaporation Rate (vs Butyl Acetate=1):	No data.
Solubility in Water:	No data.
Percent Volatile:	No data.
Appearance and Odor:	A lyophilized powder

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.

Potassium phosphate, Monobasic - Toxicity Data: Dermal LD50 (rabbit): > 4,640 mg/kg;

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.

Potassium phosphate, Monobasic RTECS Number: TC6615500

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Catalase	9001-05-2	n.a.	n.a.	n.a.	n.a.
2. Potassium phosphate, Monobasic	7778-77-0	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.
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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)

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.



SAFETY DATA SHEET

Hydrogen Peroxide Assay (urinary) Catalase

Revision: 03/07/2011

Supercedes Revision: 06/26/2006

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. Catalase	9001-05-2	No	No	No	No
2. Potassium phosphate, Monobasic	7778-77-0	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. Catalase	9001-05-2	No	No	Inventory	No
2. Potassium phosphate, Monobasic	7778-77-0	No	No	Inventory	No

Regulatory Information Statement:

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