

# Material Safety Data Sheet

## OptiMax™ Standard Diluent



### 1. Product and Company Identification

Product Name	OptiMax™ Standard Diluent
Product Number	OM-059
MSDS Number	0010
Validation Date	July 1, 2011
Print Date	July 8, 2011
Company	Siloam Biosciences, Inc.
Address	413 Northland Blvd Cincinnati, OH 45240 United States
Telephone	+1 513 429 2976
Fax	+1 513 429 2946
Emergency Phone	+1 513 429 2976 (Monday-Friday, 8:00AM-5:00PM, ET)
Use of Substance/Preparation	Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific applications.

### 2. Hazards Identification

OSHA/HCS Status	<p>The toxicity of OptiMax™ Standard Diluent has not been evaluated against the criteria established in CFR 1910.1200 App A for Toxic and Hazardous Substances.</p> <p>However, OptiMax™ Standard Diluent is composed of materials that are widely used in commercial products for laboratory applications and each of which has a well-established safety profile indicating that the material is non-hazardous.</p>
Emergency Overview	<p>Wear proper personal protective equipment and practice safe laboratory technique (see Section 8) to prevent exposure. Use recommended Engineering and Hygiene Measures (see Section 8).</p> <p>If exposure occurs, follow the first aid procedures described in Section 4 of this document.</p>
Routes of Entry	Dermal contact. Eye contact. Inhalation. Ingestion.

## **OptiMax™ Standard Diluent**

### Potential Acute Health Effects

Skin	No known effects.
Eyes	No known effects.
Inhalation	No known effects.
Ingestion	No known effects.

### Potential Chronic Health Effects

Chronic Effects	OptiMax™ Standard Diluent has not been evaluated for chronic health effects.
Carcinogenicity	OptiMax™ Standard Diluent has not been evaluated for chronic health effects.
Mutagenicity	OptiMax™ Standard Diluent has not been evaluated for chronic health effects.
Teratogenicity	OptiMax™ Standard Diluent has not been evaluated for chronic health effects.
Developmental Effects	OptiMax™ Standard Diluent has not been evaluated for chronic health effects.
Fertility Effects	OptiMax™ Standard Diluent has not been evaluated for chronic health effects.
Target Organs	None known.

### Over-Exposure Signs/Symptoms

Inhalation	Not defined.
Ingestion	Not defined.
Skin	Not defined.
Eyes	Not defined.

Medical Conditions Aggravated By Over-Exposure	Not defined.
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The preparation is not classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification	Not Classified.
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See toxicological information (Section 11)

## **3. Composition/Information on Ingredients**

### United States

<u>Name</u>	<u>CAS Number</u>	<u>%</u>
Trade Secret #14	NA	~ 90
Trade Secret #15	NA	~ 10
Kathon CG/ICP	NA	0.09

### Substance/Preparation    Preparation

There are no ingredients or additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

## **4. First Aid Measures**

<b>Skin Contact</b>	Wash contaminated skin with soap and water. Consult a physician if necessary.
<b>Eye Contact</b>	Flush the affected eye with water immediately using an eye wash station. Continue washing for least 15 minutes. Consult a physician.
<b>Inhalation</b>	Move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
<b>Ingestion</b>	Rinse mouth with water. Consult a physician. Never give anything by mouth to an unconscious person.
<b>Protection of First-Aiders</b>	No action shall be taken involving any personal risk or without suitable training.

See section 11 for more detailed information on health effects and symptoms.

## **5. Fire-fighting Measures**

<b>Flammability of The Product</b>	OptiMax™ Standard Diluent is not flammable or combustible.
<b>Extinguishing Media</b>	
<b>Suitable</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Not Suitable</b>	None known.
<b>Special Exposure Hazards</b>	If container is heated, pressure may build within the container resulting in containment breach and release of vapor and/or liquid.
<b>Hazardous Combustion Products</b>	Hazardous decomposition products formed under fire conditions include oxides of phosphorus, sodium oxides, carbon oxides, oxides of nitrogen, hydrogen chloride. Unknown for Trade Secret #15.
<b>Special Protective Equipment for Fire-Fighters</b>	Wear self-contained breathing apparatus for firefighting if necessary.

## **6. Accidental Release Measures**

<b>Personal Precautions</b>	Do not take action involving personal risk without suitable training. Use personal protective equipment (see section 8). Avoid skin and eye contact. Avoid breathing vapor or mist if present. Do not ingest. Keep unnecessary and unprotected personnel away from the spill. Do not walk through spilled material.
<b>Environmental Precautions</b>	Limit dispersal of the spilled material. Prevent contact of the material with soil, waterways, drains, and sewers. Inform the relevant authorities if the product has caused environmental pollution (entry to sewers, waterways, soil, or air).
<b>Small Spill</b>	OptiMax™ Standard Diluent is typically supplied and used in small

volumes ( $\leq 20$  mL). Follow the Environmental Exposure Controls and Engineering Measures detailed in Section 8 of this document to minimize the possibility of spills.

In the event of a small spill:

- (1) Wear the recommended personal protection equipment (Section 8) during cleanup operations.
- (2) Immediately contain the spill using absorbent materials such as absorbent paper.
- (3) Ensure that other laboratory occupants do not touch or walk through the spilled liquid.
- (4) Absorb the spilled liquid using absorbent paper.
- (5) Discard the used absorbent papers according to approved disposal procedures (Section 13).
- (6) Wash the contaminated area with warm tap water containing a laboratory detergent and then rinse the area with water. Dry the cleaned area.
- (7) Discard the used papers according to approved procedures.

## Large Spill

OptiMax™ Standard Diluent may be supplied in larger, custom-packed volumes (e.g. 1 liter) for some users. In the event of a large spill:

- (1) Wear the recommended personal protection equipment (Section 8) during cleanup operations.
- (2) Immediately contain the spill using absorbent materials such as absorbent paper. For larger spills use diatomaceous earth, vermiculite, or other absorbent material to absorb the liquid.
- (3) If the spill is on a floor, ensure other laboratory occupants are notified and that no one walks through the spilled liquid.
- (4) Absorb the spilled liquid using absorbent materials described above (step 2).
- (5) Discard the used absorbent papers according to approved disposal procedures (see Section 13).
- (6) Wash the contaminated area with warm tap water containing a laboratory detergent. Rinse the area with water and dry the cleaned area.
- (7) Discard the used absorbent paper according to approved procedures.

## 7. Handling and Storage

### Handling

- (1) Wear personal protective equipment detailed in Section 8 of this document when using OptiMax™ Standard Diluent.
- (2) Use the Engineering Measures described in Section 8 of this document.
- (3) Employ the Hygiene Measures and Environmental Exposure Controls detailed in Section 8 of this document.
- (4) Follow the disposal directions detailed in Section 13 of this document.

**Storage**

Store refrigerated 2 - 8°C in the original container.

**8. Exposure Control/Personal Protection**

Europe

Exposure limits have not been established for OptiMax™ Standard Diluent.

Consult local authorities for acceptable exposure limits.

**Recommended Monitoring Procedures**

Monitoring is not required.

**Engineering Measures**

- (1) Use approved pipetting devices for transferring buffer. Do not pipet by mouth.
- (2) If vortex mixing is required, place liquid in a capped-tube and securely close cap before mixing.
- (3) If centrifugation is required, place liquid in a capped-tube and securely close the cap before centrifuging.
- (4) Ensure that safety showers and eyewashes are available and in proper working condition.

**Hygiene Measures**

- (1) At the conclusion of laboratory work, wash hands and wrists with soap and water.
- (2) Do not eat, drink, apply cosmetics or contact lenses, or smoke in a laboratory or before washing hands at the conclusion of laboratory work.

If clothing becomes contaminated with buffer, wash contaminated clothing before reusing.

Personal Protection

**Respiratory**

Respiratory protection is not required for users of OptiMax™ Standard Diluent.

**Hands**

Chemical resistant and impervious rubber gloves are recommended when working with OptiMax™ Standard Diluent.

**Eyes**

Laboratory-approved safety glasses with eye shields are recommended for users of OptiMax™ Standard Diluent. Laboratory-approved goggles or full-face shields may be effective substitutes.

**Skin**

Buttoned knee-length laboratory coats are recommended for users of OptiMax™ Standard Diluent. Launder laboratory coats regularly and following contamination with Standard Diluent.

**Environmental Exposure Controls**

Cover work space on laboratory bench with absorbent paper. Discard absorbent paper appropriately if it becomes contaminated. Ensure that an approved spill containment kit is available in the laboratory and that staff are trained in its use.

**9. Physical/Chemical Properties**

**Physical State**

Liquid.

**Color**

Very pale brown, transparent.

## OptiMax™ Standard Diluent

Odor  
Solubility

Odorless.  
Soluble in water.

## 10. Stability and Reactivity

Chemical Stability

The product is stable under recommended storage conditions.

Conditions to Avoid

Strong oxidizing agents.

Incompatible Materials

Strong oxidizing agents.

Hazardous Decomposition  
Products

Carbon monoxide, carbon dioxide, hydrogen chloride, oxides of nitrogen, oxides of sulfur. Unknown for Trade Secret #15.

Possibility of Hazardous  
Reactions

Hazardous reactions will not occur under normal storage conditions and when used according to directions in OptiMax™ ELISA Kit Users' Manual.

## 11. Toxicological Information

United States

Acute Toxicity

Product/Ingredient Name	Result	Species	Dose	Exposure
Standard Diluent	Not Evaluated.			
Trade Secret #14	LD50 Oral	Rat	No Data.	
Trade Secret #15	LD50 Oral	Rat	No Data	
Kathon CG/ICP (Stock Material)	LD50 Oral	Rat, female	2630 mg/kg	
	LD50 Oral	Rat, male	3350 mg/kg	
	LD50 Dermal		>5000mg/kg	
	LC50 Inhalation (nose only)	Rat	0.33 mg Al/L air	4 hours

Conclusion/Summary

The acute toxicity of OptiMax™ Standard Diluent has not been evaluated. However, OptiMax™ Standard Diluent is composed of materials each of which is widely used in laboratory operations and which have well-established safety profiles indicating that the materials are not hazardous.

Chronic Toxicity

Conclusion/Summary

The chronic toxicity of OptiMax™ Standard Diluent has not been evaluated.

Carcinogenicity

Conclusion/Summary

The carcinogenicity of OptiMax™ Standard Diluent has not been evaluated.

## OptiMax™ Standard Diluent

### Classification

Product/Ingredient Name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Standard Diluent	Not tested.	Not tested.	Not tested.	Not tested.	Not tested.	Not tested.
Trade Secret #16	No Data	No Data	No Data	No Data	No Data	No Data
Trade Secret #17	No Data	No Data	No Data	No Data	No Data	No Data
Kathon CG/ICP	No Data	No Data	No Data	No Data	No Data	No Data

### Mutagenicity

Conclusion/Summary The mutagenicity of OptiMax™ Standard Diluent has not been evaluated.

### Teratogenicity

Conclusion/Summary The teratogenicity of OptiMax™ Standard Diluent has not been evaluated.

### Reproductive Toxicity

Conclusion/Summary The reproductive toxicity of OptiMax™ Standard Diluent has not been evaluated.

### Europe

Chronic Effects No known significant effects or critical hazards.

Carcinogenicity No known significant effects or critical hazards.

Mutagenicity No known significant effects or critical hazards.

Teratogenicity No known significant effects or critical hazards.

Developmental Effects No known significant effects or critical hazards.

Fertility Effects No known significant effects or critical hazards.

## 12. Ecological Information

Environmental Effects The environmental effects of OptiMax™ Standard Diluent have not been evaluated.

### United States

#### Aquatic Ecotoxicity

Conclusion/Summary The aquatic toxicity of OptiMax™ Standard Diluent has not been evaluated.

Other Adverse Effects No known significant effects or critical hazards.

## 13. Disposal Considerations

Waste Disposal OptiMax™ Standard Diluent is an aqueous buffered solution containing widely used materials with established safety profiles. OptiMax™ Standard Diluent and materials exposed to Standard Diluent should be discarded according to local regulations for such laboratory materials.

Hazardous Waste Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC.

Disposal should be in accordance with applicable regional, national, and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL

## OptiMax™ Standard Diluent

PROTECTION for additional handling information and protection of employees.

### 14. Transport Information

Regulatory Information	UN Number	Proper Shipping Name	Classes	PG*
DOT Classification	Not regulated.	-	-	-
IATA-DGR Class	Not regulated.	-	-	-

PG\*: Packing Group

### 15. Regulatory Information

#### United States

HCS Classification Not classified.

U.S. Federal Regulations Not listed.

#### Canada

WHMIS (Canada) Not listed.

Canadian Lists Not listed.

Canada Inventory Not listed.

#### EU Regulations

Risk Phrases This product is not classified according to EU legislation.

#### International Regulations

International Lists  
Australia inventory (AICS): Not listed.  
China inventory (IECSC): Not listed.  
Korea inventory (KECI): Not listed.  
Philippines inventory (PICCS): Not listed.  
Japan inventory (ENCS): Not listed.

### 16. Other Information

#### Label Requirements

MAY CAUSE RESPIRATORY TRACT, EYE, AND SKIN IRRITATION. MAY BE HARMFUL IF SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE BASED ON ANIMAL DATA.

#### Hazardous Material Information System (U.S.A.)

Health	
Flammability	
Physical Hazards	

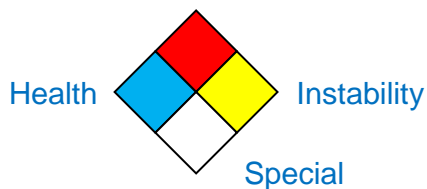
The customer is responsible for determining the PPE code for this material.

#### National Fire Protection

#### Flammability



Association (U.S.A.)



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