



microgenics

**MAS**  
CONTROLS

## Material Safety Data Sheet

### Section 1 – Chemical Product and Company Identification

**MSDS Name:**

MAS Liquimmune Control – Liquid Assayed Immunoassay Control

**Catalog Numbers:**

LIG-101, LIG-202, LIG-303, LIG-S1

**Synonyms:**

None Known.

**Company Identification:**

Microgenics Corporation

46360 Fremont Blvd.

Fremont, CA 94538

**Company Phone Number:**

(510) 979-5000

**Emergency Phone Number:**

(510) 979-5000

**CHEMTREC Phone Number, US:**

(800) 424-9300

**CHEMTREC Phone Number, Europe:**

(202) 483-7616

### Section 2 – Composition, Information on Ingredients

| CAS#          | Chemical Name: | Percent | EINECS/<br>ELINCS |
|---------------|----------------|---------|-------------------|
| 20830-75-5    | Digoxin        | <0.1%   | 244-068-1         |
| 50-06-6       | Phenobarbital  | <0.1%   | 200-007-0         |
| 57-83-0       | Progesterone   | <0.1%   | 200-350-6         |
| Not available | Human Serum    | N/A     | Not available.    |

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

*Appearance: clear yellow to amber liquid*

*Caution! May be harmful if swallowed. May cause respiratory and digestive tract irritation. May cause eye and skin irritation. This product is a substance of human origin. Even though tests are negative for infectious diseases, this product should be handled as a potentially infectious biological material. The toxicological properties of this material have not been fully investigated.*

*Target Organs: no data found.*



## Potential Health Effects

### Eye:

May cause eye irritation.

### Skin:

May cause skin irritation.

### Ingestion:

May cause irritation of the digestive tract. May be harmful if swallowed.

### Inhalation:

May cause respiratory tract irritation.

### Chronic:

No information found.

## Section 4 - First Aid Measures

### Eyes:

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

### Skin:

In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

### Ingestion:

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

### Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

### Notes to Physician:

Treat symptomatically and supportively.

## Section 5 - Fire Fighting Measures

### General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

### Extinguishing Media:

Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

### Autoignition Temperature:

No information found.

### Explosion Limits:

Lower: Not available. Upper: Not available.

### Flash Point:

No information found.

### NFPA Rating:

(estimated) Health: 1; Flammability: 0; Instability: 0



## Section 6 – Accidental Release Measures

### General Information:

Use proper personal protective equipment as indicated in Section 8.

### Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation. Wash area with a 5% chlorine bleach solution or equivalent, then rinse with water. This product is a substance of human origin. Collect and handle as potentially infectious biological material.

## Section 7 – Handling and Storage

### Handling:

Wash thoroughly after handling. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. This material is prepared from a human source base. Donors have been tested by FDA approved methods and found negative for antibodies to HIV-1 and HIV-2, non-reactive for HBsAg, and non-reactive for HCV. Handle as potentially infectious material. This material should be handled at the biosafety level 2 (BSL2) consistent with the U.S. Department of Health and Human Services, the U.S. Public Health Service, Centers for Disease Control (CDC), and National Institute of Health (NIH) guidelines "Biosafety in Microbiological and Biomedical Laboratories" (May 1988, HHS Publication No. (NIH) 88-8395). Use PPE in accordance with OSHA's bloodborne pathogens standard, 29 CFR 1910.1030.

### Storage:

Store in a tightly closed container. For shelf life, store between -15° to -25°C.

## Section 8 – Exposure Controls, Personal Protection

### Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

### Exposure Limits

| Chemical Name: | ACGIH        | NIOSH        | OSHA         |
|----------------|--------------|--------------|--------------|
| Digoxin        | None listed. | None listed. | None listed. |
| Phenobarbital  | None listed. | None listed. | None listed. |
| Progesterone   | None listed. | None listed. | None listed. |
| Human Serum    | None listed. | None listed. | None listed. |

OSHA Vacated PELs  
Not available.

## Personal Protective Equipment

### Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

### Skin:

Wear appropriate protective gloves to prevent skin exposure.

### Clothing:

Wear appropriate protective clothing to prevent skin exposure.

### Respirators:

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.



## Section 9 – Physical and Chemical Properties

|                                   |                       |
|-----------------------------------|-----------------------|
| <b>Physical State:</b>            | Liquid                |
| <b>Color:</b>                     | clear yellow to amber |
| <b>Odor:</b>                      | No information found. |
| <b>pH:</b>                        | 7.4                   |
| <b>Vapor Pressure:</b>            | No information found. |
| <b>Vapor Density:</b>             | No information found. |
| <b>Evaporation Rate:</b>          | No information found. |
| <b>Viscosity:</b>                 | No information found. |
| <b>Boiling Point:</b>             | No information found. |
| <b>Freezing/Melting Point:</b>    | No information found. |
| <b>Decomposition Temperature:</b> | No information found. |
| <b>Solubility in water:</b>       | Soluble.              |
| <b>Specific Gravity/Density:</b>  | No information found. |
| <b>Molecular Formula:</b>         | Solution              |
| <b>Molecular Weight:</b>          | No information found. |

## Section 10 – Stability and Reactivity

### Chemical Stability:

Stable at room temperature in closed containers under normal storage and handling conditions.

### Conditions to Avoid:

Excess heat.

### Incompatibilities with Other Materials

None reported.

### Hazardous Decomposition Products

None.

### Hazardous Polymerization

Will not occur.

## Section 11 – Toxicological Information

### RTECS:

CAS# 20830-75-5: 1H6125000.

CAS# 50-06-6: CQ6825000.

CAS# 57-83-0: TW0175000.

### LD50/LC50:

CAS# 20830-75-5:

Oral, mouse: LD50 = 17780 ug/kg

Oral, rat: LD50 = 28270 ug/kg.

CAS# 50-06-6:

Oral, mouse: LD50 = 137 mg/kg

Oral, rabbit: LD50 = 185 mg/kg

Oral, rat: LD50 = 162 mg/kg.

CAS# 57-83-0:

No information found.



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**Carcinogenicity:**

CAS# 20830-75-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 50-06-6

ACGIH: Not listed.

California: carcinogen; initial date 1/1/90

NIOSH: Not listed.

NTP: Not listed.

OSHA: Possible Select carcinogen

IARC: Group 2B carcinogen

CAS# 57-83-0

ACGIH: Not listed.

California: carcinogen; initial date 1/1/88

NIOSH: Not listed.

NTP: Suspect carcinogen

OSHA: Possible Select carcinogen

IARC: Not listed.

**Epidemiology:**

No information found.

**Teratogenicity:**

No information found.

**Reproductive:**

No information found.

**Mutagenicity:**

No information found.

**Neurotoxicity:**

No information found.

**Other:**

The toxicological properties have not been fully investigated.

## Section 12– Ecological Information

No information found.

## Section 13 – Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste.

US EPA guidelines for the classification determination are listed in 40CFR Parts 261.3.

Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P Series Wastes**

None of the components are on this list.

**RCRA U Series Wastes**

None of the components are on this list.



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## Section 14 – Transport Information

### US DOT

**Proper Shipping Name:** Not regulated as a hazardous material  
**Hazard Class:** Not regulated as a hazardous material.  
**UN Number:** Not regulated as a hazardous material.  
**Packing Group:** Not regulated as a hazardous material.

### Canadian TDG

No information found.  
Not available.

## Section 15 – Regulatory Information

### US Federal

#### TSCA

CAS# 20830-75-5 is listed on the TSCA Inventory.  
CAS# 50-06-6 is not listed on the TSCA Inventory. It is for research and development use only.  
CAS# 57-83-0 is listed on the TSCA Inventory.

#### Health and Safety Reporting List

None of the components are on this list.

#### Chemical Test Rules

None of the components are on this list.

#### TSCA Section 12b

None of the components are on this list.

#### TSCA Significant New Use Rule (SNUR)

None of the components are on this list.

#### CERCLA Hazardous Substances and corresponding RQs

None of the components are on this list.

#### SARA Section 302 Extremely Hazardous Substances

CAS# 20830-75-5: 10 lb TPQ (lower threshold); 10,000 lb TPQ (upper threshold)

#### SARA Hazard Categories

None of the components are on this list.

#### SARA Section 313

None of the components are on this list.

#### Clean Air Act - Hazardous Air Pollutants (HAPs)

None of the components are on this list.

#### Clean Air Act - Class 1 Ozone Depleters

None of the components are on this list.

#### Clean Air Act - Class 2 Ozone Depleters

None of the components are on this list.

#### Clean Water Act - Hazardous Substances

None of the components are on this list.

#### Clean Water Act - Priority Pollutants

None of the components are on this list.

#### Clean Water Act - Toxic Pollutants

None of the components are on this list.

#### OSHA - Highly Hazardous

None of the components are on this list.



#### OSHA - Specifically Regulated Chemicals

None of the components are on this list.

#### US State

##### State Right to Know

Digoxin can be found on the following state Right-to-Know lists: New Jersey, Pennsylvania, Massachusetts.  
Phenobarbital can be found on the following state Right-to-Know lists: California, Minnesota, Massachusetts.  
Progesterone can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

##### California Prop 65

CAS# 20830-75-5 No information found.

WARNING: This product contains Phenobarbital, a chemical known to the State of California to cause cancer.

WARNING: This product contains Progesterone, a chemical known to the State of California to cause cancer.

CAS# Not available No information found.

##### California No Significant Risk Level

CAS# 20830-75-5 No information found.

CAS# 50-06-6: 2 ug/day NSRL

CAS# 57-83-0 No information found.

CAS# Not available No information found.

#### European/International Regulations

##### European Labelling in Accordance with EC Directives:

Hazard Symbols: Not available.

Risk Phrases: Not available.

Safety Phrases: S 24/25 Avoid contact with skin and eyes.

##### WGK (Water Danger/Protection)

No information found.

##### United Kingdom Occupational Exposure Limits

No information found.

##### United Kingdom Maximum Exposure Limits

No information found.

##### Canadian DSL/NDSL

CAS# 20830-75-5 is listed on Canada's DSL List.

CAS# 50-06-6 is listed on Canada's DSL List.

CAS# 57-83-0 is listed on Canada's NDSL List.

##### Canadian WHMIS Classifications

This product does not have a WHMIS classification.

##### Canadian Ingredient Disclosure List

No information found.

##### Exposure Limits

No information found.

## Section 16 – Other Information

Color information has been updated.

MSDS Creation Date: September 24, 2003

Revision: 1

*This MSDS is intended for review and guidance in the receipt, storage, handling, use and disposal of product purchased from Fisher Scientific, and for no other purpose. Use this product only as directed and in accordance with applicable instructions and warnings provided with the product. Please consult your institution's policies regarding use of this product. If you have obtained this MSDS other than in connection with the supply of this product from Fisher Scientific, this MSDS should be consulted for general information only, and should not be relied upon for any purpose. As with the use of all hazardous materials, you should in all instances follow the guidance of the MSDS provided or available with the specific product purchased.*