

## MATERIAL SAFETY DATA SHEET

Telephone: (978)927-5054  
 Toll free: (800)632-5227  
 Fax: (978)921-1350  
 e-mail: info@neb.com  
 Msds Revision Date: 1/09

**Competent Cells**  
**#C1002**

### SECTION 1—CHEMICAL INFORMATION

**Product Name:** *K. Lactis* YCT284 Competent Cells                          SARA 313                          NO

### SECTION 2—COMPOSITION/INFORMATION ON INGREDIENT

The hazards indentified with this product are those associated with the following component (s):

Glycerol	20 %	Cas.	#56-81-5	NO
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### SECTION 3—HAZARDOUS IDENTIFICATION

#### EMERGENCY OVERVIEW

Caution: Avoid contact and inhalation.

#### HMIS RATING

HEALTH: 2

FLAMMABILITY: 0

REACTIVITY: 0

#### NFPA RATING

HEALTH: 2

FLAMMABILITY: 0

REACTIVITY: 0

For additional information on toxicity, please refer to Section 11.

### SECTION 4—FIRST AID MEASURES

**ORAL EXPOSURE:** If swallowed, wash out mouth with water provided person is conscious. Call a physician.

**INHALATION EXPOSURE:** If inhaled, remove to fresh air.If breathing becomes difficult, call a physician.

**DERMAL EXPOSURE:** In case of contact, immediately wash skin with soap and copious amounts of water. Remove clothing and call a physician.

**EYE EXPOSURE:** In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

### SECTION 5—FIRE FIGHTING MEASURES

**Extinguishing Media:** Suitable: Water spray.

Carbon Dioxide, dry chemical powder or appropriate foam.

**Special Firefighting Procedures:** Wear self contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

**Specific Hazard(s):** Emits toxic fumes under fire conditions.

**Flash point:** N/A

**Flammability:** N/A

**Autoignition Temp:** N/A

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## SECTION 6—ACCIDENTAL RELEASE MEASURES

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**PROCEDURE(S) OF PERSONAL PRECAUTION(S):** Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves and Chemical safety goggles.

**METHODS FOR CLEANING UP:** Cover with dry lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

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## SECTION 7—HANDLING AND STORAGE

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**Handling:** User Exposure: Avoid inhalation. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure.

**Storage:** Suitable: Keep tightly closed.

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## SECTION 8—EXPOSURE CONTROLS/PPE

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**Engineering Controls:** Safety shower and eye bath. Mechanical exhaust required.

**Personal Protective Equipment:** Government approved respirator.

**Hand:** Compatible chemical-resistant gloves.

**Eye:** Chemical safety goggles.

**General Hygiene Measures:** Wash hands thoroughly after handling. Wash contaminated clothing before use.

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## SECTION 9—PHYSICAL AND CHEMICAL PROPERTIES

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**Physical Properties:**

**Melting Point:** 20°C

**Boiling Point:** 182°C

**Flash Point:** 320°F, 160°C Method: closed up

**Autoignition Temp:** 370°C

**Explosion Limits in Air:**

**Lower:** 0.9%

**Specific Gravity:** 1.262

**Solubility:** Water -Z26130

**Vapor Pressure:** < 1 MMHG @ 20°C

**Vapor Density:** 3.1 G/L

**PH:** 5.5–8.0

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## SECTION 10—STABILITY AND REACTIVITY

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**Stability:** Stable

**Materials to Avoid:** Strong oxidizing agents.

**Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide, sulfur dioxides.

**Hazardous Polymerization:** Hazardous Polymerization: Will not occur

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## SECTION 11—TOXICOLOGICAL INFORMATION

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**Route of exposure:**

**Skin contact:** May cause skin irritation.

**Multiple Routes:** May be harmful by inhalation, ingestion, or skin absorption.

**Eye contact:** May cause eye irritation.

**Inhalation:** May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

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

**IRRITATION DATA:**

SKN-RBT 500 MG/24H MLD

EYE-RBT 126 MG MLD

EYE-RBT 500 MG/24H MLD

85JCAE -, 207, 1986

BIOFX\* 9-4/970

85JCAE -, 207, 1986

**TOXICITY DATA:**

ORL-RAT LD50: 12600 MG/KG  
IHL-RAT LC50: > 570 MG/M3/1H  
IPR-RAT LD50: 4420 MG/KG  
SCU-RAT LD50: 100 MG/KG  
IVN-RAT LD50: 5566 MG/KG  
ORL-MUS LD50: 4090 MG/KG  
IPR-MUS LD50: 8700 MG/KG  
SCU-MUS LD50: 91 MG/KG  
IVN-MUS LD50: 4250 MG/KG  
ORL-RBT LD50: 27 GM/KG  
SKN-RBT LD50: >10 GM/KG  
IVN-RBT LD50: 53 GM/KG  
ORL-GPG LD50: 7750 MG/KG

FEPRA7 4, 142, 1945  
BIOFX\* 9-4/970  
RCOCB8 56, 125,1987  
NIIRDN 6, 215, 1982  
ARZNAD 26,1581,1976  
FRZKAP 6), 56, 1977  
ARZNAD 28,1579,1978  
NIIRDN 6, 215, 1982  
JAPMA8 39, 583, 1950  
DMDJAP 31, 276,1959  
BIOFX\* 9-4/970  
NIIRDN 6, 215, 1982  
JIHTAB 23, 259, 1941

**TARGET ORGAN DATA:**

Behavioral (headache)  
Gastrointestinal (nausea or vomiting)  
Kidney, ureter, bladder (changes in tubules)  
Kidney, ureter, bladder (changes in urine comp)  
Paternal effects (spermatogenesis)  
Paternal effects (testes, epididymis, sperm duct)  
Effects on fertility (male fertility index)  
Effects on fertility (post-implantation mortality)  
Only selected registry of toxic effects of chemical substance  
(RTECS) data is presented here. See actual entry in RTECS

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**SECTION 12–ECOLOGICAL INFORMATION**

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No Data Available.

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**SECTION 13–DISPOSAL CONSIDERATIONS**

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Contact a licensed professional waste disposal service to dispose of this material. This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state and local environmental regulations.

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**SECTION 14–TRANSPORT INFORMATION**

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**DOT**

Proper Shipping Name: None  
Non-Hazardous for Air Transport: non-hazardous for air transport.

**IATA**

Non-Hazardous for Air Transport: non-hazardous for air transport.

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**SECTION 15–REGULATORY INFORMATION**

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**US Classification and Label Text**

**US Statements:** Avoid contact and inhalation.

**United States Regulatory Information:**

**Sara Listed:** No

**Canada Regulatory Information** WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

**DSL:** Yes

**NDSL:** No

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**SECTION 16–OTHER INFORMATION**

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**DISCLAIMER**

For R&D use only. Not for drug, household or other uses.

**The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. New England Biolabs shall not be held liable for any damage resulting from handling or from contact with the above product.**