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[Rev 09.02.10/IA-JK]

**Product:** HOOK™ GST Protein Purification (Yeast)

**Catalog #:** 786-643

**ITEMS SUPPLIED 786-643**

Yeast Suspension Buffer	15ml
Yeast PE-LB™	100ml
LongLife™ Zymolyase®	2 x 0.5ml
Glutathione Resin Column*	5
GST Binding/Wash Buffer	100ml
GST Elution Buffer	100ml

## **Material Safety Data Sheet**

### **Section 1: Chemical Identification**

**Name:** Yeast Suspension Buffer

**Catalog #:** a component of product Cat# 786-643 indicated above.

### **Section 2: Composition/Information on Ingredients**

Contains: Sodium Chloride CAS# 7647-14-5 <5% and proprietary salts/solution, believed to be non-hazardous.

**Section 3: Hazards Identification** Label precautionary statements. Irritating to eyes, respiratory system, and, skin. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

### **Section 4: First-Aid Measures**

**After eye contact:** Immediately flush eyes with copious amounts of water for at least 15 minutes.

**After skin contact:** Immediately wash skin with soap and copious amounts of water.

**After Inhalation:** None needed for non-volatile items. For items emitting vapor and dust particles: Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

**After swallowing:** Wash out mouth with water provided person is conscious. Call a physician. Wash contaminated clothing before reuse.

### **Section 5: Fire Fighting Measures**

**Extinguishing Agents:** Water spray, Carbon dioxide, dry chemical powder or appropriate foam

**Special fire fighting procedures:** None needed

**Unusual fire and explosions hazards:** Not known

### **Section 6: Accidental Release Measures**

**Human Safety Precautions:** Chemical safety goggles, rubber boots and rubber gloves.

**Cleaning/Collecting Measures:** Sweep up, place in a bag and hold for waste disposal.

**Section 7: Handling and Storage** Refer to section 8.

**Section 8: Exposure Controls/Personal Protection**

**Personal protective equipment:** Chemical safety goggles, compatible chemical-respirator, NIOSH/MSHA-approved respirator, and safety shower and eye bath.

**General Protective and Hygiene Measures:** Mechanical exhaust required. None needed Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Irritant. Keep tightly closed. Store in a cool dry place.

**Section 9: Physical and Chemical Properties**

**Form:** Liquid

**Color:** Clear

**Odor:** None

**Section 10: Stability and Reactivity**

**Thermal Decomposition/Conditions to be Avoided:** No decomposition if used according to specifications.

**Dangerous Reactions:** No dangerous reactions known.

**Dangerous Products of Decomposition:** No known dangerous decomposition products.

**Section 11: Toxicological Information**

**Primary Irritant Effects:** Harmful if inhaled or ingested.

**On the skin:** Material is irritating to skin and mucous membranes.

**On the eye:** Causes eye irritation.

**Section 12: Ecological Information** Data not yet available.

**Section 13: Disposal Considerations**

**Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Hand over to hazardous waste disposers. Observe all federal, state and local environmental regulations.

**Section 14: Transport Information** Not dangerous goods, Safe for all transport.

**Section 15: Regulatory information** Irritating to eyes, respiratory system and skin. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

**Section 16: Other Information**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. G-Biosciences shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

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# **Material Safety Data Sheet**

## **Section 1: Chemical Identification**

**Name:** Yeast PE-LB™

**Catalog #:** a component of product Cat# 786-643 indicated above

## **Section 2: Composition/Information on Ingredients**

Contains: Tris-hydroxymethyl amonometahne CAS# 77-86-1 <5% and proprietary salts/solution, believed to be non-hazardous.

## **Section 3: Hazards Identification**

Label precautionary statements. Irritating to eyes, respiratory system, and, skin. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

## **Section 4: First-Aid Measures**

**After eye contact:** Immediately flush eyes with copious amounts of water for at least 15 minutes.

**After skin contact:** Immediately wash skin with soap and copious amounts of water.

**After Inhalation:** None needed for non-volatile items. For items emitting vapor and dust particles: Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

**After swallowing:** Wash out mouth with water provided person is conscious. Call a physician. Wash contaminated clothing before reuse.

## **Section 5: Fire Fighting Measures**

**Extinguishing Agents:** Water spray, Carbon dioxide, dry chemical powder or appropriate foam.

**Special fire fighting procedures:** None needed

**Unusual fire and explosions hazards:** Not known

## **Section 6: Accidental Release Measures**

**Human Safety Precautions:** Chemical safety goggles, rubber boots and rubber gloves.

**Cleaning/Collecting Measures:** Sweep up, place in a bag and hold for waste disposal.

## **Section 7: Handling and Storage**

Refer to section 8.

## **Section 8: Exposure Controls/Personal Protection**

**Personal protective equipment:** Chemical safety goggles, compatible chemical-respirator, NIOSH/MSHA-approved respirator, and safety shower and eye bath.

**General Protective and Hygiene Measures:** Mechanical exhaust required. None needed Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Irritant. Keep tightly closed. Store in a cool dry place.

## **Section 9: Physical and Chemical Properties**

**Form:** Liquid

**Color:** Clear

**Odor:** None

## **Section 10: Stability and Reactivity**

**Thermal Decomposition/Conditions to be Avoided:** No decomposition if used according to specifications.

**Dangerous Reactions:** No dangerous reactions known.

**Dangerous Products of Decomposition:** No known dangerous decomposition products.

## **Section 11: Toxicological Information**

**Primary Irritant Effects:** Harmful if inhaled or ingested.

**On the skin:** Material is irritating to skin and mucous membranes.

**On the eye:** Causes eye irritation.

**Sensitization:** No sensitizing effects known.

## **Section 12: Ecological Information**

Data not yet available

## **Section 13: Disposal Considerations**

### **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Hand over to hazardous waste disposers.

Observe all federal, state and local environmental regulations.

**Section 14: Transport Information** Not dangerous goods. Safe for all transport

## **Section 15: Regulatory information**

Irritating to eyes, respiratory system and skin. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

## **Section 16: Other Information**

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# **Material Safety Data Sheet**

## **Section 1: Chemical Identification**

**Name:** Longlife™ - Zymolyase

**Catalog #:** a component of product Cat# 786-643 as indicated above.

## **Section 2: Composition/Information on Ingredients**

Stabilized preparation of enzyme Zymolyase

## **Section 3: Hazards Identification**

Label precautionary statements. Irritating to eyes, respiratory system, and, skin. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

## **Section 4: First-Aid Measures**

**After eye contact:** Immediately flush eyes with copious amounts of water for at least 15 minutes.

**After skin contact:** Immediately wash skin with soap and copious amounts of water.

**After Inhalation:** None needed for non-volatile items. For items emitting vapor and dust particles: Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

**After swallowing:** Wash out mouth with water provided person is conscious. Call a physician. Wash contaminated clothing before reuse.

## **Section 5: Fire Fighting Measures**

**Extinguishing Agents:** Water spray, Carbon dioxide, dry chemical powder or appropriate foam.

**Special fire fighting procedures:** None needed

**Unusual fire and explosions hazards:** Not known

## **Section 6: Accidental Release Measures**

**Human Safety Precautions:** Chemical safety goggles, rubber boots and rubber gloves.

**Cleaning/Collecting Measures:** Sweep up, place in a bag and hold for waste disposal.

**Section 7: Handling and Storage** Refer to section 8.

## **Section 8: Exposure Controls/Personal Protection**

**Personal protective equipment:** Chemical safety goggles, compatible chemical-respirator, NIOSH/MSHA-approved respirator, and safety shower and eye bath.

**General Protective and Hygiene Measures:** Mechanical exhaust required. None needed Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Irritant. Keep tightly closed. Store in a cool dry place.

## **Section 9: Physical and Chemical Properties**

**Form:** Liquid

**Color:** Cloudy

**Odor:** None

**Section 10: Stability and Reactivity**

**Thermal Decomposition/Conditions to be Avoided:** No decomposition if used according to specifications.

**Dangerous Reactions:** No dangerous reactions known.

**Dangerous Products of Decomposition:** No known dangerous decomposition products.

**Section 11: Toxicological Information**

**Primary Irritant Effects:** Harmful if inhaled or ingested.

**On the skin:** Material is irritating to skin and mucous membranes.

**On the eye:** Causes eye irritation.

**Sensitization:** No sensitizing effects known.

**Section 12: Ecological Information**

Data not yet available.

**Section 13: Disposal Considerations**

**Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Hand over to hazardous waste disposers.

Observe all federal, state and local environmental regulations.

**Section 14: Transport Information** Not dangerous goods. Safe for all transport.

**Section 15: Regulatory information**

Irritating to eyes, respiratory system and skin. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

**Section 16: Other Information**

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# **Material Safety Data Sheet**

## **Section 1: Chemical Identification**

**Name:** Glutathione Resin Column

**Catalog #:** a component of product Cat # 786-643 indicated above

## **Section 2: Composition/Information on Ingredients**

Contain Glutathione Resin

**Section 3: Hazards Identification** Label precautionary statements. Irritating to eyes, respiratory system, and, skin.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

## **Section 4: First-Aid Measures**

**After eye contact:** Immediately flush eyes with copious amounts of water for at least 15 minutes.

**After skin contact:** Immediately wash skin with soap and copious amounts of water.

**After Inhalation:** Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

**After swallowing:** Wash out mouth with water provided person is conscious. Call a physician. Wash contaminated clothing before reuse.

## **Section 5: Fire Fighting Measures**

**Extinguishing Agents:** Water spray, Carbon dioxide, dry chemical powder or appropriate foam.

**Special fire fighting procedures:** None Needed

**Unusual fire and explosions hazards:** None known

## **Section 6: Accidental Release Measures**

**Human Safety Precautions:** Wear chemical safety goggles, rubber boots and heavy rubber gloves.

**Cleaning/Collecting Measures:** Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

## **Section 7: Handling and Storage**

Refer to section 8.

## **Section 8: Exposure Controls/Personal Protection**

**Personal protective equipment:** Chemical safety goggles, compatible chemical-respirator, NIOSH/MSHA-approved respirator, and safety shower and eye bath.

**General Protective and Hygiene Measures:** Mechanical exhaust required. Avoid contact with eyes, skin and clothing. Wash hands thoroughly after handling. Irritant. Keep tightly closed. Store in a cool dry place.

## **Section 9: Physical and Chemical Properties**

**Form:** Suspension

**Color:** Blue-green

**Odor:** None

## **Section 10: Stability and Reactivity**

**Thermal Decomposition/Conditions to be avoided:** No decomposition if used according to specifications. Avoid strong oxidizing agents.

**Dangerous Reactions:** No dangerous reactions known.

**Dangerous Products of Decomposition:** Carbon oxides.

## **Section 11: Toxicological Information**

**Primary Irritant Effects:** Harmful if inhaled or ingested.

**On the skin:** Material is irritating to skin and mucous membranes.

**On the eye:** Causes eye irritation.

**Sensitization:** No sensitizing effects known.

## **Section 12: Ecological Information**

Data not yet available

## **Section 13: Disposal Considerations**

**Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Hand over to hazardous waste disposers. Observe all federal, state and local environmental regulations.

**Section 14: Transport Information** Not dangerous goods. Safe for all transport.

## **Section 15: Regulatory information**

Irritating to eyes, respiratory system and skin. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

## **Section 16: Other Information**

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# **Material Safety Data Sheet**

## **Section 1: Chemical Identification**

**Name:** GST Binding/Wash Buffer

**Catalog #:** a component of product Cat # 786-643 as indicated above

## **Section 2: Composition/Information on Ingredients**

Contains: Sodium chloride [CAS# 7647-14-5] <5% and proprietary salts/solution, believed to be non-hazardous.

## **Section 3: Hazards Identification**

Label precautionary statements. May be Corrosive. May be Harmful. Irritating to eyes, respiratory system and skin.

## **Section 4: First-Aid Measures**

**After eye contact:** Immediately flush eyes with copious amounts of water for at least 15 minutes. Call a physician.

**After skin contact:** Immediately wash skin with soap and copious amounts of water.

**After Inhalation:** Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, call a physician.

**After swallowing:** Wash out mouth with water provided person is conscious. Call a physician.

## **Section 5: Fire Fighting Measures**

**Extinguishing Agents:** Water spray, carbon dioxide, dry chemical powder or appropriate foam.

**Special fire fighting procedures:** None needed.

**Unusual fire and explosions hazards:** None needed.

## **Section 6: Accidental Release Measures**

**Human Safety Precautions:** Wear chemical safety goggles, rubber boots and heavy rubber gloves.

**Cleaning/Collecting Measures:** Mop up, place in a closed container and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete.

## **Section 7: Handling and Storage**

Refer to section 8.

## **Section 8: Exposure Controls/Personal Protection**

**Personal protective equipment:** Chemical safety goggles, compatible chemical-respirator, NIOSH/MSHA-approved respirator, and safety shower and eye bath.

**General Protective and Hygiene Measures:** Mechanical exhaust required.

Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep tightly closed. Store in cool dry place.

## **Section 9: Physical and Chemical Properties**

**Form:** Liquid

**Color:** None

**Odor:** None

## **Section 10: Stability and Reactivity**

**Thermal Decomposition/Conditions to be Avoided:** No decomposition if used according to specifications.

**Dangerous Reactions:** No dangerous reactions known.

**Dangerous Products of Decomposition:** No known dangerous decomposition products.

## **Section 11: Toxicological Information**

**On the skin:** May be harmful if absorbed through the skin. May cause skin irritation.

**On the eye:** May cause eye irritation.

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

**Ingestion:** May be harmful if swallowed.

## **Section 12: Ecological Information**

Data not yet available

## **Section 13: Disposal Considerations**

### **Recommendation:**

Observe all federal, state and local environmental regulations.

## **Section 14: Transport Information**

Not dangerous goods. Safe for all transport.

## **Section 15: Regulatory information**

Irritating to eyes, respiratory system and skin. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

## **Section 16: Other Information**

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# **Material Safety Data Sheet**

## **Section 1: Chemical Identification**

**Name:** GST Elution Buffer

**Catalog #:** a component of product Cat # 786-643 as indicated above

## **Section 2: Composition/Information on Ingredients**

Contains: Sodium chloride [CAS# 7647-14-5] <5% and proprietary salts/solution, believed to be non-hazardous.

## **Section 3: Hazards Identification**

Label precautionary statements. May be Corrosive. May be Harmful. Irritating to eyes, respiratory system and skin.

## **Section 4: First-Aid Measures**

**After eye contact:** Immediately flush eyes with copious amounts of water for at least 15 minutes. Call a physician.

**After skin contact:** Immediately wash skin with soap and copious amounts of water.

**After Inhalation:** Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, call a physician.

**After swallowing:** Wash out mouth with water provided person is conscious. Call a physician.

## **Section 5: Fire Fighting Measures**

**Extinguishing Agents:** Water spray, carbon dioxide, dry chemical powder or appropriate foam.

**Special fire fighting procedures:** None needed.

**Unusual fire and explosions hazards:** None needed.

## **Section 6: Accidental Release Measures**

**Human Safety Precautions:** Wear chemical safety goggles, rubber boots and heavy rubber gloves.

**Cleaning/Collecting Measures:** Mop up, place in a closed container and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete.

## **Section 7: Handling and Storage**

Refer to section 8.

## **Section 8: Exposure Controls/Personal Protection**

**Personal protective equipment:** Chemical safety goggles, compatible chemical-respirator, NIOSH/MSHA-approved respirator, and safety shower and eye bath.

**General Protective and Hygiene Measures:** Mechanical exhaust required.

Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep tightly closed. Store in cool dry place.

## **Section 9: Physical and Chemical Properties**

**Form:** Liquid

**Color:** None

**Odor:** None

## **Section 10: Stability and Reactivity**

**Thermal Decomposition/Conditions to be Avoided:** No decomposition if used according to specifications.

**Dangerous Reactions:** No dangerous reactions known.

**Dangerous Products of Decomposition:** No known dangerous decomposition products.

## **Section 11: Toxicological Information**

**On the skin:** May be harmful if absorbed through the skin. May cause skin irritation.

**On the eye:** May cause eye irritation.

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

**Ingestion:** May be harmful if swallowed.

## **Section 12: Ecological Information**

Data not yet available

## **Section 13: Disposal Considerations**

### **Recommendation:**

Observe all federal, state and local environmental regulations.

## **Section 14: Transport Information**

Not dangerous goods. Safe for all transport.

## **Section 15: Regulatory information**

Irritating to eyes, respiratory system and skin. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

## **Section 16: Other Information**

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