

G-Biosciences/Genotech, 92 Weldon Parkway, St. Louis, MO, 63043-3202, USA, Tel. 1-314-991-6034
Web: www.GBiosciences.com, Email: technical@GBiosciences.com
Emergency Contact: Chemtrec 800-424-9300

[Rev 09.02.10/IA-JK]

Product: HOOK™ GST Protein Purification (Yeast)

Catalog #: 786-642

ITEMS SUPPLIED 786-642

Yeast Suspension Buffer	15ml
Yeast PE-LB™	100ml
LongLife™ Zymolyase®	2 x 0.5ml
Glutathione Resin*	12.5ml
GST Binding/Wash Buffer	100ml
GST Elution Buffer	100ml
Spin Column	25
Collection Tubes	50

Material Safety Data Sheet

Section 1: Chemical Identification

Name: Yeast Suspension Buffer

Catalog #: a component of product Cat# 786-642 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# 786-642 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 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: Longlife™ - Zymolyase

Catalog #: a component of product Cat# 786-642 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

Catalog #: a component of product Cat # 786-642 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 # 786-642 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 # 786-642 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

Chemical Identification

Name: Spin Columns

Catalog #: a component of product Cat # 786-642 indicated above

Composition/Information on Ingredients Spin columns made of plastic, believed to be non-hazardous.

Other Information

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Material Safety Data Sheet

Chemical Identification

Name: Collection Tubes

Catalog #: a component of product Cat # 786-642 indicated above

Composition/Information on Ingredients Collection Tubes are made of plastic, believed to be non-hazardous.

Other Information

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