

Material Safety Data Sheet

E.Z.N.A.[®] Poly-Gel DNA Extraction Kit



Omega Bio-Tek, Inc.
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Material Safety Data Sheet

Trade Name: DNA Wash Buffer Concentrate

Date of Issue: 4/12/1997

1. Product and manufacturer information

Product Information:

Trade Name: DNA Wash Buffer Concentrate

Manufacturer: Omega Bio-Tek, Inc.

1850-E Beaver Ridge Circle, Norcross, GA 30071

Tel: (770) 931.8400. Fax: (770) 931.0230.

2. Composition:

Chemical Characteristics: Aqueous solution of Tris (hydroxymethyl) amino methane/Hydrochloric acid and sodium chloride.

Hazardous Components: According to OSHR 29 CFR & 1910.1200, any mixture that contains less than 1% by weight or volume of a non-carcinogenic hazardous component is not considered hazardous, unless there is evidence to the contrary. We do not consider PNP to be hazardous. However gloves, lab coats and protective eyewear are recommended when using any chemical reagents.

3. Hazardous Identification:

May be harmful if swallowed. May be irritating to eyes and skin.

4. First Aid: remove contaminated clothing and call physician.

In case of eye contact: Immediately flush eyes with large amounts of water for at least 20 minutes adequate flushing is achieved by separating eyelids with clean fingers.

In case of skin contact: Immediately wash skin with soap and copious amounts of water.

If inhaled: Remove to an area with fresh air. Give artificial respiration if not Breathing and call medical emergency services. Oxygen may be required if respiration is difficult.

If swallowed: Wash out mouth with water only if conscious.

5. Fire-Fighting Measures

Extinguishing media: Use appropriate, non-combustible extinguishing media.

Special Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with eyes and skin.

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6. Accidental Release Measures:

Precautionary Measures: Wear self-contained breathing apparatus, protective eyewear/goggles, rubber boots and thick rubber gloves.

Clean-up Procedure: Absorb on vermiculite or sand. Place in closed containers for disposal. Finally ventilate area and wash spills when pick-up is complete.

7. Handling and Storage:

Storage: Store tightly closed at 22-25°C.

8. Exposure Controls:

Rubber gloves, protective eyewear, NIOSH/MSH A-approved respirator, Safety shower and eye wash bottle. Mechanical exhaust required. Keep tightly closed. Wash hands thoroughly after handling. Do not get into eyes, on skin or on clothing. Do not breathe vapor. Severe eye irritant

9. Physical and Chemical Properties:

Physical State:	liquid	
Color:	colorless	
Odor:	odorless	
pH:	(25°C)	7.5
Viscosity:	(25°C)	N/A
Melting Point:		N/A
Boiling Point:		N/A
Ignition Temp:		N/A
Flashpoint:		N/A
Explosion Level:	Lower:	N/A
	Upper:	N/A
Vapor Pressure:	(25°C)	N/A
Specific Gravity:	(25°C)	1.010 g/cm ³
Water Solubility:	(25°C)	Soluble

10. Stability and Reactivity:

Substances to avoid: N/A

Hazardous combustion or Decomposition products: Nature of decomposition products not known.

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11. Toxicological Data:

Toxicity Data	N/A
Acute Effects of:	
Inhalation:	May be harmful by inhalation.
Eye Contact:	May cause irritation.
Skin Contact:	May cause irritation.
Ingestion:	May be harmful if swallowed.
Prolonged exposure:	N/A
Chronic Effects:	N/A
RTECS Numbers:	N/A

12. Ecological Data:

This product presents no specific danger to the environment.

13. Disposal:

For small quantizes flush down sink with water. Make sure to observe all federal, state and local laws and requirements.

14. Transport Data:

N/A

15. Regulatory Data:

N/A

16. Other Data:

The above information is believed to be correct but does not purport to be all-inclusive and should be used only as a guide. Omega Bio-Tek shall not be held liable for consequences resulting from handling or from contact with the above product.

Material Safety Data Sheet

Trade Name: Equilibration Buffer

Date of Issue: 1/12/2008

1. Product and manufacturer information

Product Information:

Trade Name: Equilibration Buffer
Manufacturer: Omega Bio-Tek, Inc.
1850-E Beaver Ridge Circle, Norcross, GA 30071
Tel: (770) 931.8400. Fax: (770) 931.0230.

2. Composition:

Chemical Characteristics: Aqueous mix solution of Sodium Hydroxide (5-10%).
Hazardous Components: 1310-73-2 Sodium Hydroxide (<1%)
Warning: Corrosive

3. Hazardous Identification:

DANGER! CORROSIVE. HARMFUL IF SWALLOWED OR INHALED. CAUSES BURNS TO ANY AREA OF CONTACT. REACTS WITH WATER, ACIDS AND OTHER MATERIALS.

4. First Aid: remove contaminated clothing and call physician.

In case of eye contact: Immediately flush eyes with large amounts of water for at least 15 minutes lifting and lower and upper eyelids occasionally. Get medical attention immediately.

In case of skin contact: Immediately flush skin with soap and copious amounts of water for at least 15 Minutes while removing contaminated clothing and shoes. Call a physician immediately. Wash clothing before reusing them.

If inhaled: Remove to an area with fresh air. Give artificial respiration if not Breathing and call medical emergency services. Oxygen may be required if respiration is difficult.

If swallowed: DO NOT INDUCE VOMITING! Give large quantities of water or milk if available. Never give anything to an unconscious person. Get medical attention Immediately.

5. Fire-Fighting Measures

Fire: Not considered to be a fire hazard. Hot or molten material can react violently with water. It can also react with certain metals such as aluminum to generate flammable hydrogen gas.

Explosion: May cause fire and explosions when in contact with incompatible Materials.

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Extinguishing media: Use any means suitable for extinguishing surrounding fire. Adding water to Caustic solution generates large amounts of heat.

Special Procedure: In the event of a fire, wear full protective clothing and NIOSH approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures: Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment as specified in section 8. Contain and recover liquid when possible. Do not flush caustic residues to the sewer. Residues from the spills can be diluted with water, neutralized with dilute acid such as acetic, hydrochloric or sulfuric. Absorb neutralized caustic residue on clay, vermiculite or other inert substance and a package in a suitable container for disposal.

Precautionary Measures: Wear self-contained breathing apparatus, protective eyewear/goggles, rubber boots and thick rubber gloves.

Clean-up Procedure: Absorb on vermiculite or sand. Place in closed containers for disposal. Finally ventilate area and wash spills when pick-up is complete.

7. Handling and Storage:

Storage: Keep in a tightly closed container. Protect from physical damage. Store in a Cool, dry, ventilated area away from sources of heat, moisture and incompatibilities. Store above 16°C (60°F) to prevent freezing. Always add the caustic to water while stirring; never the reverse. Containers of this material may be hazardous when emptied since they retain product residues (vapors, liquid); observe all warning and precautions listed for the product. Do not store with aluminum or magnesium. Do not mix with acids or organic materials.

8. Exposure Controls:

Airborne Exposure Limits:

- OSHA Permissible Exposure Limite (PEL): 2mg/m³ Ceiling
- ACGIH Threshold Limit Value (TLV): 2mg/m³ Ceiling

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee

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exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH approved):

If the exposure limit is exceeded and engineering controls are not feasible, a half face piece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplied, whichever is the lowest. If oil particles (e.g. lubricants, cutting fluids, glycerin, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air supplied respirator. **WARNING:** Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection:

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties:

Physical State:	liquid	
Color:	colorless	
Odor:	odorless	
pH:	(25°C)	14
Viscosity:	(25°C)	N/A

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Melting Point:		-10°C
Boiling Point:		105°C
Ignition Temp:		N/A
Flashpoint:		N/A
Explosion Level:	Lower:	N/A
	Upper:	N/A
Vapor Pressure:	(25°C)	N/A
Specific Gravity:	(25°C)	0.992 g/cm ³
Water Solubility:	(25°C)	Soluble

10. Stability and Reactivity:

Substances to avoid:

Stable under ordinary conditions of use and storage.

Sodium Hydroxide in contact with acids and organic halogen compounds Especially trichloroethylene, may cause violent reactions. Contact with Nitro methane and other similar nitro compounds causes formation of shock-sensitive salts. Contact with metals such as aluminum magnesium, tin and zinc cause formation of flammable hydrogen gas. Sodium hydroxide, even in fairly dilute solution, reacts readily with various sugars to produce carbon monoxide. Precautions should be taken including monitoring the tank atmosphere for carbon monoxide to ensure safety or personnel before vessel entry.

Hazardous combustion or decomposition products:

Sodium Oxide. Decomposition by reaction with certain metals releases flammable and explosive hydrogen gas.

11. Toxicological Data:

Toxicity Data	N/A
Acute Effects of	
Inhalation:	May be harmful by inhalation.
Eye Contact:	Causes irritation.
Skin Contact:	Causes irritation.
Ingestion:	May be harmful if swallowed.
Prolonged exposure:	N/A
Chronic Effects:	N/A
RTECS Numbers:	N/A

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Date of Issue: 1/12/2008

12. Ecological Data:

This product has no specific danger to the environment.

13. Disposal:

For small quantities flush down sink with water. Make sure to observe all Federal, State and Local laws and requirements.

14. Transport Data:

N/A

15. Regulatory Data:

Labeling: XI irritating, R36/38

16. Other Data:

The above information is believed to be correct but does not purport to be all-inclusive and should be used only as a guide. Omega Bio-Tek shall not be held liable for consequences resulting from handling or from contact with the above product.

Material Safety Data Sheet

Trade Name: HB Buffer
Date of Issue: 7/18/2008

1. Product and manufacturer information

Product Information:

Trade Name: HB Buffer
Manufacturer: Omega Bio-Tek, Inc.
1850-E Beaver Ridge Circle, Norcross, GA 30071
Tel: (770) 931.8400. Fax: (770) 931.0230.

2. Composition:

Chemical Characteristics: Aqueous mix of substances listed below with non-hazardous additions.
Hazardous Components: 50-01-1 Guanidinium Chloride (<50%)
67-63-0 Propan-2-ol (<50%)

3. Hazardous Identification:

Hazard description: Harmful
NFPA Ratings: (Scale: 0-4) Health = 3; Fire = 3; Reactivity = 0
WHMIS Ratings: (Scale: 0-3) Health = 3; Fire = 3; Reactivity = 0

4. First Aid:

In case of eye contact: Immediately flush eyes with large amounts of water for at least 20 minutes.
Adequate flushing is achieved by separating eyelids with clean fingers. Call Physician.
In case of skin contact: Immediately wash skin with soap and copious amounts of water.
If inhaled: Remove to an area with fresh air, consult doctor in case of complaints
If swallowed: Call a physician immediately.

5. Fire-Fighting Measures

Extinguishing media: CO₂, extinguishing power or water spray. Fight larger fires with water spray or alcohol resistant foam.
Special Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with eyes and skin.

6. Accidental Release Measures:

Precautionary Measures: Wear self-contained breathing apparatus, protective eyewear/goggles, rubber boots and thick rubber gloves.

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Trade Name: HB Buffer
Date of Issue: 7/18/2008

Clean-up Procedure: Absorb on vermiculite or sand. Place in closed containers for disposal.
Finally ventilate area and wash spills when pick-up is complete.

7. Handling and Storage:

Storage: Store tightly closed at 22-25°C.

8. Exposure Controls:

Rubber gloves, protective eyewear, NIOSH/MSH A-approved respirator, Safety shower and eye wash bottle. Wash hands thoroughly after handling. Do not get into eyes, on skin or on clothing.

9. Physical and Chemical Properties:

Physical State:	liquid	
Color:	colorless	
Odor:	characteristic	
pH:	(25°C)	7.0
Viscosity:	(25°C)	N/A
Melting Point:		N/A
Boiling Point:		100°C
Ignition Temp:		425°C
Flashpoint:		21-55°C
Explosion Level:	Lower:	2%
	Upper:	12%
Vapor Pressure:	(25°C)	43hPa
Specific Gravity:	(25°C)	1.05 g/cm ³
Water Solubility:	(25°C)	Soluble

10. Stability and Reactivity:

Substances to avoid:	N/A
Dangerous Reaction:	Strong exothermic reaction with acids, reacts with alcohol, amines, aqueous acids and alkalis
Hazardous combustion or Decomposition products:	Danger of toxic pyrolysis products.

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11. Toxicological Data:

Toxicity Data

Acute Effects of:	N/A
Inhalation:	Harmful by inhalation.
Eye Contact:	May cause irritation.
Skin Contact:	May cause irritation.
Ingestion:	Harmful if swallowed.
Prolonged exposure:	N/A
Chronic Effects:	N/A
RTECS Numbers:	N/A

12. Ecological Data:

Water hazardous I: Slight hazardous to water, do not allow undiluted product or large quantity of it to reach ground water course or sewage system..

13. Disposal:

Must not be disposed of together with household garbage. DO NOT allow product to reach sewage system. Make sure to observe all federal, state and local laws and requirements.

14. Transport Data:

N/A

15. Regulatory Data:

N/A

16. Other Data:

The above information is believed to be correct but does not purport to be all-inclusive and should be used only as a guide. Omega Bio-Tek shall not be held liable for consequences resulting from handling or from contact with the above product.

Material Safety Data Sheet

Trade Name: Poly-Gel Elution Buffer

Date of Issue: 4/12/2005

1. Product and manufacturer information

Product Information:

Trade Name: Poly-Gel Elution Buffer
Manufacturer: Omega Bio-Tek, Inc.
1850-E Beaver Ridge Circle, Norcross, GA 30071
Tel: (770) 931.8400. Fax: (770) 931.0230.

2. Composition:

Chemical Characteristics: Aqueous solution of proprietary compounds mixture.
Hazardous Components: 151-21-3 Sodium Dodecyl Sulphate (<2%).

3. Hazardous Identification:

Hazardous description: N/A
Classification System: The classification was made according to the latest edition of international substances list, and depend upon from the company and literature data.
NFPA Ratings: (Scale: 0-4) Health = 0; Fire = 0; Reactivity = 0
WHMIS Ratings: (Scale: 0-4) Health = 0; Fire = 0; Reactivity = 0

4. First Aid: Remove contaminated clothing and call physician.

In case of eye contact: Immediately flush eyes with large amounts of water for at least 20 minutes adequate flushing is achieved by separating eyelids, clean fingers.
In case of skin contact: Immediately wash skin with soap and copious amounts of water.
If inhaled: Remove to an area with fresh air. Consult a doctor
If swallowed: Immediately call a doctor.

5. Fire-Fighting Measures

Extinguishing media: Carbon Dioxide, dry chemical powder or appropriate foam.
Special Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with eyes and skin.

6. Accidental Release Measures:

Precautionary Measures: Wear self-contained breathing apparatus, protective eyewear/goggles, rubber boots and thick rubber gloves.

Material Safety Data Sheet

Trade Name: Poly-Gel Elution Buffer

Date of Issue: 4/12/2005

Clean-up Procedure: Absorb on vermiculite or sand. Place in closed containers for disposal.
Finally ventilate area and wash spills when pick-up is complete.

7. Handling and Storage:

Storage: Store tightly closed at 22-25°C.

8. Exposure Controls:

Rubber gloves, protective eyewear, NIOSH/MSH A-approved respirator, Safety shower and eye wash bottle. Wash hands thoroughly after handling. Do not get into eyes, on skin or on clothing.

9. Physical and Chemical Properties:

Physical State:	liquid	
Color:	amber	
Odor:	odorless	
pH:	(25°C)	N/A
Viscosity:	(25°C)	N/A
Melting Point:		N/A
Boiling Point:		N/A
Ignition Temp:		N/A
Flashpoint:		>70°C
Explosion Level:	Lower:	N/A
	Upper:	N/A
Vapor Pressure:	(25°C)	N/A
Specific Gravity:	(25°C)	1.050 g/cm ³
Water Solubility:	(25°C)	Soluble

10. Stability and Reactivity:

Substances to avoid: Strong acids and strong oxidants.
Hazardous combustion or decomposition products: Danger of toxic pyrolysis products.

11. Toxicological Data:

Toxicity Data: N/A
Acute Effects of:

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Trade Name: Poly-Gel Elution Buffer

Date of Issue: 4/12/2005

Inhalation:	May be harmful by inhalation. Material is sensitive to mucous membranes and upper respiratory tract.
Eye Contact:	Causes irritation.
Skin Contact:	Causes skin irritation. Harmful by skin absorption
Ingestion:	Harmful if swallowed.
Prolonged exposure:	N/A
Chronic Effects:	N/A
RTECS Numbers:	N/A
Additional Information:	Handle with normal caution accorded to chemicals. Other harmful properties cannot be ruled out.

12. Ecological Data:

Water hazardous class 2 (Self assessment): Hazardous to water, do not allow product to reach ground water course or sewage system. Dangerous for drink water even if small quantities leak to the ground.

13. Disposal:

Contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste. Contaminated packaging should be handled in the same manner as the substance itself. Unless specified directly, non-contaminated packing may be treated as household waste.

14. Transport Data:

N/A

15. Regulatory Data:

N/A

16. Other Data:

The above information is believed to be correct but does not purport to be all-inclusive and should be used only as a guide. Omega Bio-Tek shall not be held liable for consequences resulting from handling or from contact with the above product.