

## Material Safety Data Sheet

### Kit

Product Name	Cat.#
Bacterial DNA Extraction Kit (Magnetic Beads)	50013
Genomic DNA Extraction Kit for Cells (HMW, Magnetic Beads)	50014
Genomic DNA Extraction Kit for Blood (HMW, Magnetic Beads)	50015
Genomic DNA Extraction Kit for Tissues (HMW, Magnetic Beads)	50016
Genomic DNA Extraction Kit for Plants (HMW, Magnetic Beads)	50021

### Kit component

Cat. #	50013	50014	50015	50016	50021
	Lysis Buffer	TR Buffer	TR Buffer	Tissue Buffer	TE Buffer
	BG Beads	Lysis Buffer	Lysis Buffer	Lysis Buffer	Lysis Buffer
	Elution Buffer	gDNA Beads	gDNA Beads	gDNA Beads	Plant Beads
	RNase	RS Buffer	RS Buffer	RS Buffer	GIS Buffer
		MB Buffer	MB Buffer	MB Buffer	ISP Buffer
		Elution Buffer	Elution Buffer	Elution Buffer	Elution Buffer
			RBC Buffer	Proteinase K	Proteinase K
				RNase	RNase

## Lysis Buffer and Tissue buffer

### SECTION 1 - IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Lysis Buffer  
Tissue buffer

**Use of The Substance:** For R&D/experimental use only

**Company Identification:** BioDynami

Address: 601 Genome Way, Huntsville, AL 35806, USA

E-mail: [support@BioDynami.com](mailto:support@BioDynami.com)

### SECTION 2 - HAZARDS IDENTIFICATION

#### **Classification of the substance or mixture**

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS):**

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Inhalation (Category 4), H332

Acute toxicity, Dermal (Category 4), H312

Skin corrosion (Category 1C), H314

Serious eye damage (Category 1), H318

Short-term (acute) aquatic hazard (Category 3), H402

Long-term (chronic) aquatic hazard (Category 3), H412

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### **GHS Label elements, including precautionary statements**

##### **Pictogram**



GHS05



GHS07

**Signal word** Danger

##### **Hazard statements**

H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled.

H314 Causes severe skin burns and eye damage.

H412 Harmful to aquatic life with long lasting effects.

##### **Precautionary statement(s)**

P260 Do not breathe dust.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Immediately call a POISON CENTER/ doctor.

P305 + P351 + P338 + P310

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

P363 Wash contaminated clothing before reuse.

P405 Store locked up.  
P501 Dispose of contents/ container to an approved waste disposal plant.  
**Hazards not otherwise classified (HNOC) or not covered by GHS - none**

### **SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS**

#### **Hazard description:**

<b>Chemical Name</b>	<b>EC No.</b>	<b>CAS-No</b>
Guanidinium thiocyanate	209-812-1	593-84-0
Sodium Lauroyl Sarcosine	205-281-5	137-16-6

### **SECTION 4 - FIRST AID MEASURES**

**Inhalation:** Remove to fresh air. Get medical attention immediately.

**Skin:** Wash off immediately with plenty of soap and water. Get medical attention immediately.

**Eye:** Flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

**Ingestion:** If swallowed, contact a Poison Control Center or seek medical attention immediately. Never give anything by mouth to an unconscious person.

### **SECTION 5 - FIRE FIGHTING MEASURES**

**Extinguishing Media:** Water, foam, carbon dioxide or dry chemical as suitable for surrounding materials.

**Special Exposure Hazards:** Not applicable.

**Special Protective Equipment:** Wear approved pressure-demand self-contained breathing apparatus and full protective gear.

**Hazardous Decomposition:** Not applicable.

### **SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**Personal Precautions:** Prevent skin/eye contact. Use personal protective equipment as needed.

**Environmental Methods for Cleaning Up:** Cover with absorbent material and sweep up being careful not to create dust. Place into suitable waste container for later disposal.

**Environmental precautions:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### **SECTION 7 - HANDLING AND STORAGE**

**Handling:** Avoid contact with skin and eyes.

**Storage:** Keep container tightly closed.

### **SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### **Control parameters**

#### **Personal protective equipment**

**Respiratory protection:** Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection:** Protective gloves.

**Eye protection:** Protective goggles.

**Skin and body protection:** Appropriate protective clothing.

**Hygiene measures:** Do not eat, drink or smoke when handling this product. Wash thoroughly after handling.

### **SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance:** aqueous solution

**Odor:** None

**Flash point:** Not available

**Solubility:** Aqueous solution

**Density (water = 1):** Not available.

**Boiling point:** Approximately 100°C

**Melting point:** Not applicable

**pH:** 8

#### **SECTION 10 - STABILITY AND REACTIVITY**

**Stability:** Stable.

**Possibility of hazardous reactions:** No data available

**Conditions to avoid:** Contact with acids liberates very toxic gas.

**Materials to avoid:** Strong acids, Strong oxidizing agents, Cyanides

**Hazardous decomposition products:** Hazardous decomposition products formed under fire conditions.

- Carbon oxides, Nitrogen oxides (NO<sub>x</sub>), Sulphur oxides

#### **SECTION 11 - TOXICOLOGICAL INFORMATION**

**Skin Contact:** No Data Available

**Skin Absorption:** No Data Available

**Inhalation:** No Data Available

**Ingestion:** No Data Available

**Eye Contact:** No Data Available

**Acute Effects from Overexposure:** No Data Available

**Chronic Effects from Overexposure:** No Data available

#### **SECTION 12 - ECOLOGICAL INFORMATION**

**Ecotoxicity:** No Data Available

**Mobility:** Not available

**Persistence and Degradability:** Not available

**Bioaccumulative Potential:** Not available

#### **SECTION 13 - DISPOSAL CONSIDERATIONS**

Dispose of unused product, residues, and containers according to local, regional, state, and national regulations.

#### **SECTION 14 - TRANSPORT INFORMATION**

Not regulated as hazardous for transportation.

#### **SECTION 15 - REGULATORY INFORMATION**

**US Regulations:** Components of this product are listed on the TSCA inventory. No components are listed on U.S. SARA Title III. This product does not contain any chemicals currently on the California list of known carcinogens and reproductive toxins.

**EU Regulations:** This preparation does not meet the dangerous preparations classification criteria under 1999/45/EC. Not all components of this product are listed on EINECS.

**Canadian Regulations:** This product is not considered hazardous based on WHMIS criteria.

#### **SECTION 16 - OTHER INFORMATION**

This information is based on our present knowledge and shall be used only as a guide. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. BioDynami is not held liable for any damage resulting from handling or from contact with the above mentioned products.

## TR Buffer, RS buffer, MB Buffer, Elution Buffer, RBC Buffer, and gDNA Beads

### **SECTION 1 - IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY**

TE Buffer, TR Buffer, RS buffer, MB Buffer, Elution Buffer, RBC Buffer, BG Buffer, GIS Buffer, ISP Buffer, Plant Beads, and gDNA Beads

**Use of The Substance:** For R&D/experimental use only

**Company Identification:** BioDynami

Address: 601 Genome Way, Huntsville, AL 35806, USA

E-mail: [support@BioDynami.com](mailto:support@BioDynami.com)

### **SECTION 2 - HAZARDS IDENTIFICATION**

**Emergency Overview:** Not expected to present an immediate, significant hazard if spilled.

**Health Effects:** No significant hazard expected.

### **SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS**

**Hazard description:** Not applicable.

**Human health hazards:** Not applicable.

**Environmental Hazards:** Not applicable.

### **SECTION 4 - FIRST AID MEASURES**

**Inhalation:** Remove to fresh air. If breathing becomes difficult, call a physician.

**Skin:** Wash off immediately with plenty of soap and water. If irritation develops, get medical attention.

**Eye:** Flush eyes with plenty of water for at least 15 minutes. If irritation persists, get medical attention.

**Ingestion:** If swallowed, contact a Poison Control Center or seek medical attention immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

### **SECTION 5 - FIRE FIGHTING MEASURES**

**Extinguishing Media:** Water, foam, carbon dioxide or dry chemical as suitable for surrounding materials.

**Special Exposure Hazards:** Not applicable.

**Special Protective Equipment:** Wear approved pressure-demand self-contained breathing apparatus and full protective gear.

**Hazardous Decomposition:** Not applicable.

### **SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**Personal Precautions:** Prevent skin/eye contact. Use personal protective equipment as needed.

**Environmental Methods For Cleaning Up:** Cover with absorbent material and sweep up being careful not to create dust. Place into suitable waste container for later disposal.

### **SECTION 7 - HANDLING AND STORAGE**

**Handling:** Avoid contact with skin and eyes.

**Storage:** Keep container tightly closed.

### **SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Exposure Limit Values:** Not available.

**Personal protective equipment**

**Respiratory protection:** Not applicable.

**Hand protection:** Protective gloves.

**Eye protection:** Protective goggles.

**Skin and body protection:** Appropriate protective clothing.

**Hygiene measures:** Do not eat, drink or smoke when handling this product. Wash thoroughly after handling.

## **SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance:** aqueous solution

**Odor:** None

**Flash point:** Not available

**Solubility:** Aqueous solution

**Density** (water = 1): Not available.

**Boiling point:** Approximately 100°C

**Melting point:** Not applicable

**pH:** around 7

## **SECTION 10 - STABILITY AND REACTIVITY**

**Stability:** Stable.

**Hazardous Decomposition Products:** No dangerous decomposition products known.

## **SECTION 11 - TOXICOLOGICAL INFORMATION**

**Skin Contact:** No Data Available

**Skin Absorption:** No Data Available

**Inhalation:** No Data Available

**Ingestion:** No Data Available

**Eye Contact:** No Data Available

**Acute Effects from Overexposure:** No Data Available

**Chronic Effects from Overexposure:** No Data available

## **SECTION 12 - ECOLOGICAL INFORMATION**

**Ecotoxicity:** No Data Available

**Mobility:** Not available

**Persistence and Degradability:** Not available

**Bioaccumulative Potential:** Not available

## **SECTION 13 - DISPOSAL CONSIDERATIONS**

Dispose of unused product, residues, and containers according to local, regional, state, and national regulations.

## **SECTION 14 - TRANSPORT INFORMATION**

Not regulated as hazardous for transportation.

## **SECTION 15 - REGULATORY INFORMATION**

**US Regulations:** Components of this product are listed on the TSCA inventory. No components are listed on U.S. SARA Title III. This product does not contain any chemicals currently on the California list of known carcinogens and reproductive toxins.

**EU Regulations:** This preparation does not meet the dangerous preparations classification criteria under 1999/45/EC. Not all components of this product are listed on EINECS.

**Canadian Regulations:** This product is not considered hazardous based on WHMIS criteria.

## **SECTION 16 - OTHER INFORMATION**

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## Proteinase K and RNase

### SECTION 1 - IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Proteinase K; RNase

**Use of The Substance:** For R&D/experimental use only

**Company Identification:** BioDynami

Address: 601 Genome Way, Huntsville, AL 35806, USA

E-mail: [support@BioDynami.com](mailto:support@BioDynami.com)

### SECTION 2 - HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Repr. 1B H360 May damage fertility or the unborn child.

#### Pictogram



GHS08

**Signal word** Danger

**Hazard-determining components of labeling:**

Proteinase K; RNase

**Hazard statements**

May cause damage to organs.

Precautionary statements

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

IF exposed or concerned: Call a poison center/doctor.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

### SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

**Hazard description:** Proteinase K  
RNase

### SECTION 4 - FIRST AID MEASURES

**Inhalation:** Remove to fresh air. Get medical attention immediately.

**Skin:** Wash off immediately with plenty of soap and water. Get medical attention immediately.

**Eye:** Flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

**Ingestion:** If swallowed, contact a Poison Control Center or seek medical attention immediately. Never give anything by mouth to an unconscious person.

### SECTION 5 - FIRE FIGHTING MEASURES

**Extinguishing Media:** Water, foam, carbon dioxide or dry chemical as suitable for surrounding materials.

**Special Exposure Hazards:** Not applicable.

**Special Protective Equipment:** Wear approved pressure-demand self-contained breathing apparatus and full protective gear.

**Hazardous Decomposition:** Not applicable.

#### **SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**Personal Precautions:** Prevent skin/eye contact. Use personal protective equipment as needed.

**Environmental Methods For Cleaning Up:** Cover with absorbent material and sweep up being careful not to create dust. Place into suitable waste container for later disposal.

#### **SECTION 7 - HANDLING AND STORAGE**

**Handling:** Avoid contact with skin and eyes.

**Storage:** Keep container tightly closed.

#### **SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Respiratory protection:** Not applicable.

**Hand protection:** Protective gloves.

**Eye protection:** Protective goggles.

**Skin and body protection:** Appropriate protective clothing.

**Hygiene measures:** Do not eat, drink or smoke when handling this product. Wash thoroughly after handling.

#### **SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance:** aqueous solution

**Odor:** None

**Flash point:** Not available

**Solubility:** Aqueous solution

**Density (water = 1):** Not available.

**Boiling point:** Approximately 100°C

**Melting point:** Not applicable

**pH:** 7.5

#### **SECTION 10 - STABILITY AND REACTIVITY**

**Stability:** Stable.

**Hazardous Decomposition Products:** No dangerous decomposition products known.

#### **SECTION 11 - TOXICOLOGICAL INFORMATION**

To the best of our knowledge, the chemical, physical, and toxicological properties of this product have not been thoroughly investigated.

##### **Product Toxicity Data:**

The following are calculated estimates for the product:

Proteinase K:

Acute Toxicity Estimate (Oral) > 2000 mg/kg

Acute Toxicity Estimate (Dermal) > 2000 mg/kg

Acute Toxicity Estimate (Inhalation) > 10 mg/L

**Degree of Irritation:** The product is not reported to cause skin or eye irritation.

**Sensitization:** This product contains a reported respiratory sensitizer.

**Review of Acute Symptoms:** See Section 2 (Hazards Information) and Section 4 (First-Aid Measures) for additional details.

**Carcinogenicity Status:** No component of this product is listed as a carcinogen according to the NTP (National Toxicology Program), IARC (International Agency for Research on Cancer), or OSHA (US Occupational Safety and Health Administration).

**Reproductive Toxicity Information:** The components of this product are not reported to cause reproductive effects under typical circumstances of exposure.

**Mutagenic Effects:** The components of this product are not reported to cause mutagenic effects under typical circumstances of exposure.



**Specific Target Organ Toxicity - Single Exposure:** Not applicable.  
**Specific Target Organ Toxicity – Repeated Exposure:** Not applicable.  
**Aspiration Hazard:** Not applicable.  
**Toxicologically Synergistic Products:** None known.  
**Additional Toxicology Information:** Not applicable.

#### **SECTION 12 - ECOLOGICAL INFORMATION**

**Ecotoxicity:** No Data Available

**Mobility:** This product is anticipated to be mobile in soil.

**Persistence and Degradability:** When released into the soil, the components of this product are expected to biodegrade, dissipate in soils via oxidation, or otherwise chemically degrade or photo-decompose via solar radiation.

**Bioaccumulative Potential:** The components of this product are not anticipated to bioaccumulate in any significant quantities.

#### **SECTION 13 - DISPOSAL CONSIDERATIONS**

Dispose of unused product, residues, and containers according to local, regional, state, and national regulations.

#### **SECTION 14 - TRANSPORT INFORMATION**

Not regulated as hazardous for transportation.

#### **SECTION 15 - REGULATORY INFORMATION**

**US Regulations:** Components of this product are listed on the TSCA inventory. No components are listed on U.S. SARA Title III. This product does not contain any chemicals currently on the California list of known carcinogens and reproductive toxins.

**EU Regulations:** This preparation does not meet the dangerous preparations classification criteria under 1999/45/EC. Not all components of this product are listed on EINECS.

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**BioDynami**  
Feb. 15, 2024