

1. PRODUCT AND COMPANY IDENTIFICATION

Product name Viral/Pathogen RNA/DNA Isolation Kit

Product Number GD03
Brand Bioland Scientific LLC

Company Bioland Scientific LLC
14925 Paramount Blvd., Suite C
Paramount, CA 90723
USA

Telephone 1-562-377-2668
Fax 1-562-733-6008
Emergency Phone # 1-562-377-2668

2. COMPOSITION/INFORMATION ON INGREDIENTS

Substance or Mixture: Mixture of the substances listed below with non-hazardous additions.

Components	Chemical Name	CAS No.	Concentration(%)
Magnetic Beads	N/A	N/A	N/A
VDR Buffer	Guanidine Thiocyanate	593-84-0	50-80%
DRW1 Buffer	Guanidine Thiocyanate	593-84-0	10-25%
DRW2 Buffer	N/A	N/A	N/A
RNA Elution Buffer	N/A	N/A	N/A
Proteinase K solution	Proteinase K	39450-01-6	10-40mg/ml
	Glycerol	56-81-5	30-50 %

LEM-1	Lysozyme, from chicken egg white	12650-88-3	1-20mg/ml
	Glycerol	56-81-5	30-50 %
	Stabilizer	CBI*	0.001-0.1 %

*CBI = Confidential Business Information. The specific chemical identity and/or exact percentage of composition (concentration) has been withheld as a trade secret.

3. HAZARDS IDENTIFICATION

3.1 Classification of the substance or mixture

Not a hazardous substance or mixture

3.2 GHS Label elements, including precautionary statements

Guanidine Thiocyanate

Pictogram



Signal Word

Danger

Hazard Statements

H302

H315

H319

H331

Precautionary Statements

P261

P305+P351+P338

P311

Harmful if swallowed.

Causes skin irritation.

Causes serious eye irritation.

Toxic if inhaled.

Avoid breathing dust/ fume/ gas/ mist/
vapors/ spray

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

Proteinase K solution

Pictogram



Signal Word

Danger

Hazard Statements

H317

H315

H319

H334

H335

Precautionary Statements

P280

P261

P305+P351+P338

P342+P311

May cause an allergic skin reaction

Causes skin irritation.

Causes serious eye irritation.

May cause allergy or asthma symptoms or
breathing difficulties if inhaled

May cause respiratory irritation.

Wear protective gloves/protective
clothing/eye protection/face protection
Avoid breathing dust/ fume/ gas/ mist/
vapors/ spray.

IF IN EYES: Rinse cautiously with water for
several minutes. Remove contact lenses, if
present and easy to do. Continue rinsing
If experiencing respiratory symptoms: Call a
POISON CENTER or doctor/ physician.

LEM 1

Pictogram



Signal Word

Danger

Hazard Statements

H334

May cause allergy or asthma symptoms or breathing difficulties if inhaled

Precautionary Statements

P261

Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

P285

In case of inadequate ventilation wear respiratory protection.

P342 + P341

If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

P501

Dispose of contents/ container to an approved waste disposal plant.

3.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Guanidine Thiocyanate

HMIS Classification (0-4)

Health hazard: 2

Flammability: 0

Physical hazards: 0

NFPA Rating (0-4)

Health hazard: 2

Fire: 0

Reactivity Hazard: 0

Other hazards No data available

Proteinase K Solution

HMIS Classification (0-4)

Health hazard: 2

Flammability: 0

Physical hazards: 0

NFPA Rating (0-4)

Health hazard: 2

Fire: 0

Reactivity Hazard: 0

Potential Health Effects

Inhalation: May cause respiratory tract irritation

Protein K solution

HMIS Classification (0-4)

Health hazard: 0

Flammability: 0

Physical hazards: 0

NFPA Rating (0-4)

Health hazard: 0

Fire: 0

Reactivity Hazard: 0

Potential Health Effects

Inhalation: May be harmful if inhaled

Skin: May be harmful if absorbed through skin. Causes skin irritation.

Eyes: Causes eye irritation.

Ingestion: May be harmful if swallowed.

4. FIRST AID MEASURES

General Advice:

Exit to a safe area. Consult a physician. Seek medical attention.

If Inhaled:

Move to fresh air. If not breathing, give artificial respiration. Seek medical attention.

In Case of Skin Contact:

Exit to safe area. Wash thoroughly with soap and water. Seek medical attention.

In Case of Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open.

If Swallowed:

Rinse mouth with water. Never give anything by mouth to an unconscious person. Seek medical attention.

5. FIRE-FIGHTING MEASURES

Conditions of Flammability:

Not flammable or combustible

Suitable Extinguishing Media:

Dry powder, CO₂, water spray or regular foam.

Special Protective Equipment for firefighters:

Wear self-contained breathing apparatus, if necessary.

Hazardous Combustion Products:

Magnetic Beads

No data available

Guanidine Thiocyanate

Carbon oxides (CO, CO₂), Sulfur Oxides (SOX), Nitrogen oxides (NO_x).

RNA Elution Buffer

No data available

Proteinase K Solution

No data available

LEM-1

No data available

6. ACCIDENTAL RELEASE MEASURES

Person-related safety precautions:

Use personal protective equipment. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental protection:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and Materials for Containment and Cleaning UP:

Soak up inert absorbent material and dispose of it as hazardous waste. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for Safe Handling:

Handle in accordance with good chemical hygiene and safety practices. Protect from moisture. Avoid contact with eyes. Avoid inhalation of vapors or mist.

Conditions for Safe Storage:

Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture.

8.EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Magnetic Beads

Contains no substances with occupational exposure limit values.

VDR Buffer

Contains no substances with occupational exposure limit values.

DRW1 Buffer

Contains no substances with occupational exposure limit values.

DRW2 Buffer

Contains no substances with occupational exposure limit values.

RNA Elution Buffer

Contains no substances with occupational exposure limit values.

Protein K Solution

Components	CAS-No	Value	Control Parameters	Basis
Glycerol	56-81-5	TWA	10mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000

LEM-1

Components	CAS-No	Value	Control Parameters	Basis
Glycerol	56-81-5	TWA	10mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000

Individual Protection

Hand Protection:

Use gloves when handling this product. Inspect gloves prior to use for any visible damage. Use proper glove removal technique to prevent contact with skin. Dispose of gloves in accordance with applicable laws. Wash and dry hands after use.

Eye/Face Protection:

Use a face shield and/or safety goggles when handling this product. Use eyewear that has been approved by NIOSH.

Skin Protection:

Wear appropriate laboratory attire when handling this product, such as gloves, long pants, closed-toe shoes and a laboratory coat.

Respiratory Protection:

In case of insufficient ventilation wear suitable respiratory equipment. Use respirators that have been approved by NIOSH.

Hygiene Measures:

Avoid contact with eyes, skin and clothing. Wash hands thoroughly after using this product.

LEM-1**Control of environmental exposure**

Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES**Basic Physical and Chemical Properties****Magnetic Beads****Appearance:**

Form: Liquid
Color: Clear, with brown precipitate

Odor: Odorless

Odor Threshold: No data available

pH: 6-8

Melting Point/Freezing Point: No data available

Initial Boiling Point/Boiling Range: No data available

Flash Point: No data available

Evaporation Rate: No data available

Flammability (Solid, Gas): No data available

Upper/Lower Limits on Flammability and Explosive Limits:

Flammability Limit (Upper): No data available

Flammability Limit (Lower): No data available

Explosive Limit (Upper): No data available

Explosive Limit (Lower): No data available

Vapor Pressure: No data available

Vapor Density: No data available

Relative Density: No data available

Solubility:

Solubility in Water: No data available

Solubility (Other): No data available

Partition Coefficient (n-octanol /water): No data available

Auto-Ignition Temperature: No data available

Decomposition Temperature: No data available

Viscosity: No data available

VDR Buffer

Appearance:

Form:

Liquid

Color:

Colorless

Odor:

Odorless

Odor Threshold:

No data available

pH:

<5

Melting Point/Freezing Point:

No data available

Initial Boiling Point/Boiling Range:

No data available

Flash Point:

No data available

Evaporation Rate:

No data available

Flammability (Solid, Gas):

No data available

Upper/Lower Limits on Flammability and Explosive Limits:

Flammability Limit (Upper):

No data available

Flammability Limit (Lower):

No data available

Explosive Limit (Upper):

No data available

Explosive Limit (Lower):

No data available

Vapor Pressure:

No data available

Vapor Density:

No data available

Relative Density:

No data available

Solubility:

Solubility in Water:

No data available

Solubility (Other):

No data available

Partition Coefficient (n-octanol
/water):

No data available

Auto-Ignition Temperature:

No data available

Decomposition Temperature:

No data available

Viscosity:

No data available

DRW1 Buffer

Appearance:

Form:

Liquid

Color:

Colorless

Odor:

Odorless

Odor Threshold:

No data available

pH:

6-8

Melting Point/Freezing Point:

No data available

Initial Boiling Point/Boiling Range:

No data available

Flash Point:

No data available

Evaporation Rate:

No data available

Flammability (Solid, Gas):

No data available

Upper/Lower Limits on Flammability and Explosive Limits:

Flammability Limit (Upper):

No data available

Flammability Limit (Lower):

No data available

Explosive Limit (Upper):

No data available

Explosive Limit (Lower):

No data available

Vapor Pressure:

No data available

Vapor Density:

No data available

Relative Density:

No data available

Solubility:

Solubility in Water:

No data available

Solubility (Other):

No data available

Partition Coefficient (n-octanol
/water):

No data available

Auto-Ignition Temperature:

No data available

Decomposition Temperature:

No data available

Viscosity:

No data available

DRW2 Buffer

Appearance:

Form:

Liquid

Color:

Colorless

Odor:

Odorless

Odor Threshold:

No data available

pH:

6-8

Melting Point/Freezing Point:

No data available

Initial Boiling Point/Boiling Range:

No data available

Flash Point:

No data available

Evaporation Rate:

No data available

Flammability (Solid, Gas):

No data available

Upper/Lower Limits on Flammability and Explosive Limits:

Flammability Limit (Upper):

No data available

Flammability Limit (Lower):

No data available

Explosive Limit (Upper):

No data available

Explosive Limit (Lower):

No data available

Vapor Pressure:

No data available

Vapor Density:

No data available

Relative Density:

No data available

Solubility:

Solubility in Water:

No data available

Solubility (Other):

No data available

Partition Coefficient (n-octanol
/water):

No data available

Auto-Ignition Temperature:

No data available

Decomposition Temperature:

No data available

Viscosity:

No data available

RNA Elution Buffer

Appearance:

Form:

Liquid

Color:

Colorless

Odor:

Odorless

Odor Threshold:

No data available

pH:

6-8

Melting Point/Freezing Point:

No data available

Initial Boiling Point/Boiling Range:

No data available

Flash Point:

No data available

Evaporation Rate:

No data available

Flammability (Solid, Gas):

No data available

Upper/Lower Limits on Flammability and Explosive Limits:

Flammability Limit (Upper):

No data available

Flammability Limit (Lower):

No data available

Explosive Limit (Upper):

No data available

Explosive Limit (Lower):

No data available

Vapor Pressure:

No data available

Vapor Density:

No data available

Relative Density:

No data available

Solubility:

Solubility in Water:

No data available

Solubility (Other):

No data available

Partition Coefficient (n-octanol
/water):

No data available

Auto-Ignition Temperature:

No data available

Decomposition Temperature:

No data available

Viscosity:

No data available

Proteinase K

Appearance:

Form:

Liquid

Color:

Clear/Slight yellow

Odor:

Odorless

Odor Threshold:

No data available

pH:

No data available

Melting Point/Freezing Point:

No data available

Initial Boiling Point/Boiling Range:

No data available

Flash Point:

No data available

Evaporation Rate:

No data available

Flammability (Solid, Gas):

No data available

Upper/Lower Limits on Flammability and Explosive Limits:

Flammability Limit (Upper):

No data available

Flammability Limit (Lower):

No data available

Explosive Limit (Upper):

No data available

Explosive Limit (Lower):

No data available

Vapor Pressure:

No data available

Vapor Density:

No data available

Relative Density:

No data available

Solubility:

Solubility in Water:

No data available

Solubility (Other):

No data available

Partition Coefficient (n-octanol
/water):

No data available

Auto-Ignition Temperature:

No data available

Decomposition Temperature:

No data available

Viscosity:

No data available

10.STABILITY AND REACTIVITY**Magnetic Beads****Reactivity:**

Not reactive under normal conditions of use

Chemical Stability:

Stable under recommended storage conditions.

Possibility of Hazardous Reaction:

No data available

Condition to Avoid:

No data available

Materials to Avoid:

No data available

Hazardous Decomposition Products:

No data available

VDR Buffer**Reactivity:**

Not reactive under normal conditions of use

Chemical Stability:

Stable under recommended storage conditions.

Possibility of Hazardous Reaction:

No data available

Condition to Avoid:

No data available

Materials to Avoid:

No data available

Hazardous Decomposition Products:

No data available

DRW1 Buffer**Reactivity:**

Not reactive under normal conditions of use

Chemical Stability:

Stable under recommended storage conditions.

Possibility of Hazardous Reaction:

No data available

Condition to Avoid:

No data available

Materials to Avoid:

No data available

Hazardous Decomposition Products:

No data available

DRW2 Buffer**Reactivity:**

Not reactive under normal conditions of use

Chemical Stability:

Stable under recommended storage conditions.

Possibility of Hazardous Reaction:

No data available

Condition to Avoid:

No data available

Materials to Avoid:

No data available

Hazardous Decomposition Products:

No data available

RNA Elution Buffer**Reactivity:**

Not reactive under normal conditions of use

Chemical Stability:

Stable under recommended storage conditions.

Possibility of Hazardous Reaction:

No data available

Condition to Avoid:

No data available

Materials to Avoid:

No data available

Hazardous Decomposition Products:

No data available

Proteinase K**Reactivity:**

Not reactive under normal conditions of use

Chemical Stability:

Stable under recommended storage conditions.

Possibility of Hazardous Reaction:

No data available

Condition to Avoid:

No data available

Materials to Avoid:

No data available

Hazardous Decomposition Products:

No data available

11.TOXICOLOGICAL INFORMATION

Magnetic Beads, VDR Buffer, DRW1 Buffer, DRW2 Buffer, RNA Elution Buffer

Respiratory or Skin Sensitization

Components of the product may be absorbed into the body through the skin. Irritating to skin and mucous membranes.

Potential Health Effects

Inhalation: Toxic if inhaled. May cause respiratory irritation.

Ingestion; Harmful if swallowed.

Skin: Harmful if absorbed through skin. May cause skin irritation.

Eyes: May cause eye irritation.

Proteinase K Solution

Acute Toxicity

LD50 Oral - Rat - male and female - > 5,050 mg/kg (US-EPA)

LC50 Inhalation - Rat - male and female - 4 h - > 2.51 mg/l (US-EPA)

LD50 Dermal - Rabbit - male and female - > 5,050 mg/kg (US-EPA)

Respiratory or Skin Sensitization

Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

Potential Health Effects

Inhalation: Toxic if inhaled. May cause respiratory irritation.

Ingestion; Harmful if swallowed.

Skin: Harmful if absorbed through skin. May cause skin irritation.

Eyes: May cause eye irritation.

12.ECOLOGICAL INFORMATION

Magnetic Beads, VDR Buffer, DRW1 Buffer, DRW2 Buffer, RNA Elution Buffer

Toxicity:	No data available.
Persistence and Degradability:	No data available.
Bioaccumulative Potential:	No data available.
Mobility in Soil:	No data available.
PBT and vPvB Assessment:	No data available.
Other Adverse Effects:	No data available. Harmful to aquatic life.

Proteinase K Solution

Toxicity:	To Fish >5,000 mg/L Carassius Auratus (Goldfish) 44,000 mg/L Pimephales Promelas (Fathead Minnow) >100,100 mg/L other fish 67,500 mg/L Oncorhynchus Mykiss (Rainbow Trout)
Persistence and Degradability:	No data available.
Bioaccumulative Potential:	No data available.
Mobility in Soil:	No data available.
PBT and vPvB Assessment:	No data available.
Other Adverse Effects:	No data available. Harmful to aquatic life.

13.DISPOSAL CONSIDERATIONS

Product:

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: Handling and Storage and Section 8: Exposure Control/ Personal Protection for additional handling information and protection of employees.

Contaminated Packaging:

Disposal must be made according to official regulations.

14.TRANSPORTATION INFORMATION

DOT: Not regulated.

IMDG: Not regulated.

IATA: Not regulated.

15.REGULATORY INFORMATION**Magnetic Beads**

US Federal Regulations:

SARA 302 Components:

SARA 313 Components:

SARA 311/312 Hazards:

None present or none present in regulated quantities.

None present or none present in regulated quantities.

Acute health hazard

US State Regulations:

California Prop. 65:

This product does not contain any chemicals listed by the State of California's Proposition 65.

Right to Know Components	Components	CAS No.
Massachusetts	Water	7732-18-5
Pennsylvania	Water	7732-18-5
New Jersey	Water	7732-18-5

VDR Buffer

US Federal Regulations:

SARA 302 Components:

SARA 313 Components:

SARA 311/312 Hazards:

None present or none present in regulated quantities.

None present or none present in regulated quantities.

Acute health hazard

US State Regulations:

California Prop. 65:

This product does not contain any chemicals listed by the State of California's Proposition 65.

Right to Know Components	Components	CAS No.
Massachusetts	Water	7732-18-5
Pennsylvania	Water	7732-18-5
	Guanidine thiocyanate	593-84-0
New Jersey	Water	7732-18-5
	Guanidine thiocyanate	593-84-0

DRW1 Buffer

US Federal Regulations:

SARA 302 Components:

SARA 313 Components:

SARA 311/312 Hazards:

None present or none present in regulated quantities.

None present or none present in regulated quantities.

Acute health hazard

US State Regulations:

California Prop. 65:

This product does not contain any chemicals listed by the State of California's Proposition 65.

Right to Know Components	Components	CAS No.
Massachusetts	Water	7732-18-5

Pennsylvania	Water Guanidine thiocyanate	7732-18-5 593-84-0
New Jersey	Water Guanidine thiocyanate	7732-18-5 593-84-0

DRW2 Buffer

US Federal Regulations:

SARA 302 Components:

None present or none present in regulated quantities.

SARA 313 Components:

None present or none present in regulated quantities.

SARA 311/312 Hazards:

Acute health hazard

US State Regulations:

California Prop. 65:

This product does not contain any chemicals listed by the State of California's Proposition 65.

Right to Know Components	Components	CAS No.
Massachusetts	Water	7732-18-5
Pennsylvania	Water	7732-18-5
New Jersey	Water	7732-18-5

RNA Elution Buffer

US Federal Regulations:

SARA 302 Components:

None present or none present in regulated quantities.

SARA 313 Components:

None present or none present in regulated quantities.

SARA 311/312 Hazards:

Acute health hazard

US State Regulations:

California Prop. 65:

This product does not contain any chemicals listed by the State of California's Proposition 65.

Right to Know Components	Components	CAS No.
Massachusetts	Water	7732-18-5
Pennsylvania	Water Guanidine thiocyanate	7732-18-5 593-84-0
New Jersey	Water Guanidine thiocyanate	7732-18-5 593-84-0

Proteinase K solution

US Federal Regulations:

SARA 302 Components:

None present or none present in regulated quantities.

SARA 313 Components:

None present or none present in regulated quantities.

SARA 311/312 Hazards:

Acute health hazard

US State Regulations:

California Prop. 65:

This product does not contain any chemicals listed by the State of California's Proposition 65.

Right to Know Components	Components	CAS No.
Massachusetts	Glycerol Proteinase K	56-81-5 34950-01-6
Pennsylvania	Water Glycerol Proteinase K	7732-18-5 56-81-5 34950-01-6
New Jersey	Water Glycerol Proteinase K	7732-18-5 56-81-5 34950-01-6

16.OTHER INFORMATION

Disclaimer:

Bioland Scientific LLC provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. BIOLAND SCIENTIFIC LLC MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, BIOLAND SCIENTIFIC LLC WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.