

MATERIAL SAFETY DATA SHEET

**VIVANTIS TECHNOLOGIES SDN BHD
REVONGEN CORPORATION CENTER**

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SECTION 1: CHEMICAL IDENTIFICATION

Catalogue Number: GF-MT-005; GF-GP-025; GF-MT-050; GF-MT-100

Product Name: GF-1 microTotal RNA Extraction Kit with 5 preps, 25 preps, 50 preps, and 100 preps

Description: MicroTotal RNA extraction kit for variety of sources such as animal tissues, blood, serum, plasma and cell cultures.

Intended Use:

For research use and laboratory use only.

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SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

All concentrations are below the acceptable limits specific to each chemical.

Component(s)	Hazardous Ingredient(s)
TS Buffer	No hazardous substance or mixture in the ingredients
Wash Buffer	No hazardous substance or mixture in the ingredients
Elution Buffer	No hazardous substance or mixture in the ingredients

Acute Effects

The ingredients in this diagnostic kit are irritants to skin, eyes and respiratory system. They are harmful if it comes into contact with the skin and toxic if ingested.

Chronic Effects

Hazardous in case of ingestion.

SECTION 3: HAZARDS IDENTIFICATION

GHS Classification

The extraction kit consists of individual ingredients for different components of kit.

Component(s)	Hazardous Ingredient(s)
TS Buffer	No hazardous substance or mixture in the ingredients
Classification (Regulation (EC) No. 1272/2008) Not a hazardous substance or mixture.	
Classification (67/548/EEC) Not a hazardous substance or mixture.	

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Component(s)	Hazardous Ingredient(s)
Wash Buffer	No hazardous substance or mixture in the ingredients
Classification (Regulation (EC) No. 1272/2008) Not a hazardous substance or mixture.	
Classification (67/548/EEC) Not a hazardous substance or mixture.	

Component(s)	Hazardous Ingredient(s)
Elution Buffer	No hazardous substance or mixture in the ingredients
Classification (Regulation (EC) No. 1272/2008) Not a hazardous substance or mixture.	
Classification (67/548/EEC) Not a hazardous substance or mixture.	

GHS Classification

Not a hazardous substance or mixture according to Singapore Standard SS 586 Part 2.

GHS label elements

Not a hazardous substance or mixture according to Singapore Standard SS 586 Part 2.

OSHA Regulatory Status

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.122).

Hazards not otherwise classified (HNOC)

Not regulated

Other Information

0% of the mixture consists of ingredient(s) of unknown toxicity

Potential health effects:

In case of eyes contact, can cause moderate irritation, tearing and redeeming, but not likely to permanently inure eye tissue.

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In case of skin contact, can cause moderate skin irritation, defeating and dermatitis. Not likely to cause permanent damage.

In case of inhalation, can cause moderate respiratory irritating, dizziness, weakness, fatigue. No toxicity expected from inhalation.

In case of ingestion, can cause irritating to mouth, throat and stomach, abdominal discomfort, nausea, vomiting and diarrhea.

SECTION 4: FIRST-AID MEASURES

In case of contact with eyes, immediately flush with copious amounts of water for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do.

In case of contact with skin, immediately wash with soap and copious amounts of water for several minutes. Take off immediately all contaminated clothing.

In case of ingestion, wash out mouth with water provided the person is conscious. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician immediately.

Notes to physician are that the first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

SECTION 5: FIRE FIGHTING MEASURES

Extinguishing Media

Not flammable.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Use water spray / fog.

Care should be taken as to not aerosolize the powder, where it could become an inhalation risk.

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and fully protective gear.

Explosion data – sensitivity to mechanical impact:

No data available.

Explosion data – sensitivity to static discharge:

No data available.

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SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions

Wear the protective clothing, rubber gloves and mask. Wear self-contained breathing apparatus, rubber boots and goggles if necessary.

Environmental Precautions

Do not let product enter drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

Measures for Cleaning / Collecting

Soak up with inert absorbent material: sand, silica gel, acid binder, universal binder, sawdust. Collect spilled liquid with liquid-binding material or inert absorbent and place in closed container for disposal.

Dispose of in accordance with federal, state and local environmental regulations. Wash spill site after material pickup is complete.

SECTION 7: HANDLING AND STORAGE

Handling

Good laboratory techniques should be used when handling. Do not eat, drink, smoke or apply cosmetics in laboratory areas. Do not pipette reagents or samples by mouth. Use reagents according to the product insert.

Work under hood or open-air space. Do not inhale substance / mixture. Avoid generation of vapors / aerosols.

Storage

Store all components as directed in the product insert. Keep tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Wear appropriate personal protective equipment when working with components or samples, including laboratory coats, disposable gloves and eye protection. Avoid hand and mouth contact. Wash hands as soon as possible after handling components or samples. Handle in accordance with good industrial hygiene and safety practice.

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Exposure Controls

Respiratory Protection	In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.
Hand Protection	Wear suitable protective gloves. Gloves material: compatible chemical-resistant gloves; nitrile rubber gloves.
Eye & Face Protection	Eye wash bottle with pure water. Tightly fitting safety goggles.
Skin & Body Protection	Wear suitable protective clothing and impervious clothing. Choose body protection according to the amount and concentration of the dangerous substance at the workplace.

Environmental Exposure Controls

Do not let product enter drains.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information for TS Buffer, Wash Buffer, Elution Buffer

Appearance:	Liquid, Colorless
Odor:	No odor
Melting Point:	No information available
Boiling Point:	No information available
Flash Point:	No information available
Autoignition Temperature:	No information available
Decomposition Temperature:	No information available
Evaporation rate:	No information available
Flammability:	No information available
Upper Explosion Limit:	No information available
Lower Explosion Limit:	No information available
Vapor Pressure:	No information available
Relative Density:	No information available
Specific Gravity:	No information available
Water Solubility:	No information available
Partition coefficient: n-octanol/water:	No information available
Explosive Properties:	Not classified as explosive
Oxidizing Properties:	Not classified as oxidizing
Other information:	No information available

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SECTION 10: STABILITY AND REACTIVITY

The contents of the kit are stable under normal handling and storage conditions as stated in the product insert until the expiration date indicated on the corresponding label.

Reactivity:	No data available.
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	No data available.
Incompatible materials:	No data available.
Polymerization:	No data available.
Hazardous decomposition products:	No data available.

SECTION 11: TOXICOLOGICAL INFORMATION

Information for TS Buffer, Wash Buffer and Elution Buffer

Acute Toxicity:	Not classified based on available information
Skin corrosion / irritation:	Irritant to skin and mucous membrane.
Serious eye damage / eye irritation:	Irritating effect.
Respiratory or skin sensitization:	No sensitizing effects known.
Germ cell mutagenicity:	Not classified based on available information
Carcinogenicity effects:	Not classified based on available information
Reproductive toxicity:	Not classified based on available information
Aspiration toxicity:	Not classified based on available information
STOT – Single exposure:	Not classified based on available information
STOT – Repeated exposure:	Not classified based on available information

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SECTION 12: ECOLOGICAL INFORMATION

Toxicity

No data available for the extraction kit

Persistence and Degradability

No data available for the extraction kit

Bioaccumulative Potential

No data available for the extraction kit

Mobility in Soil

No data available for the extraction kit

Results of PBT and vPvB assessment

Not applicable for the extraction kit

Other adverse effects

No information available

SECTION 13: DISPOSAL CONSIDERATIONS

Do not contaminate ponds, waterways or drains with chemical or used container. Used components from this product should be disposed to a licensed waste management company.

Waste material must be disposed of in accordance with federal, state and local environmental regulations.

SECTION 14: TRANSPORT INFORMATION

DOT

Proper Shipping Name: None

Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA

Non-Hazardous for Air Transport: Non-hazardous for air transport.

SECTION 15: REGULATORY INFORMATION

Not applicable.

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SECTION 16: OTHER INFORMATION

The information contained in this MSDS relates only to the material(s) designed and does not relate to use(s) in combination with any other material, process(es) and /or chemical reaction(s). Vivantis Technologies Sdn. Bhd. provides this information in good faith, from sources believed to be accurate; however, Vivantis assumes no liability for its accuracy or completeness, and thus shall not be held liable for any damage resulting from handling or from contact with the above product.

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