# Material Safety Data Sheet - RNA

BioinGentech Biotechnology

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### Identification of the substance or mixture

**Product name:** Universal qPCR Master Mix
**Kit Name:** Prunus Necrotic Ringspot Virus

### Company/undertaking identification

**Manufacturer/Supplier:** Bioingentech Ltd. **Address:** Bernardo O'Higgins 1213. Concepción, Chile. **Phone:** (56)-41-2790435

## SECTION 2: Hazards identification

| | |
|---|---|
| **GHS - Classification** | |
| **Signal Word** | None |
| **Health hazards** | Not classified |
| **Physical hazards** | Not classified |
| **Hazard Statements** | Not Applicable |
| **Precautionary Statements** | Not Applicable |

### Principle Routes of Exposure

### Potential Health Effects

| | |
|---|---|
| **eyes:** | May cause eye irritation with susceptible persons. |
| **Skin:** | May cause skin irritation in susceptible persons. |
| **Inhalation:** | May be harmful by inhalation. |
| **Ingestion:** | May be harmful if swallowed. |

### Specific effects

| | |
|---|---|
| **Carcinogenic effects** | None. |
| **Mutagenic effects** | None. |
| **Reproductive toxicity** | None. |
| **Sensitization** | None. |
| **Target Organ Effects** | None under normal use conditions. |

### HMIS

| | |
|---|---|
| **Health** | 0 |
| **Flammability** | 0 |
| **Reactivity** | 0 |

## SECTION 3: Composition/information on ingredients

| Component | CAS-No | EINECS-No | Weight % |
|---|---|---|---|
| Glycerol 56-81-5 ( 10-30 ) | 56-81-5 | 200-289-5 | 10-30 |

The product contains no substances which at their given concentration, are considered to be hazardous to health.

## SECTION 4: First aid measures

**Skin contact** Rinse cautiously with water for several minutes. If symptoms occur, obtain medical advice.
**Eye contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
**Ingestion** Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice.
**inhalation** Remove to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.

**Most important symptoms and effects, both acute and delayed** Not Applicable
**Notes to Physician** Treat symptomatically.

## SECTION 5: Firefighting measures

**Suitable extinguishing media** Water spray. Carbon dioxide (CO2). Foam. Dry chemical.
**Special protective equipment for firefighters** Wear self-contained breathing apparatus and protective suit.
**Specific hazards arising from the chemical** Not known

## SECTION 6: Accidental release measures

**Personal precautions** Use personal protection equipment.
**Methods for cleaning up** Soak up with inert absorbent material.

### Environmental precautions

Prevent further leakage or spillage if safe to do so.
See Section 12 for more information.

## SECTION 7: Handling and storage

**Handling** Always wear reccommended Personal Protective Equipment. No special handling advices are necessary.
**Storage** Keep in a dry, cool and well-ventilated place.

## SECTION 8: Exposure controls/personal protection

### Exposure Limits

| Chemical Name | OSHA PEL | OSHA PEL (Ceiling) | ACGIH OEL (TWA) | ACGIH OEL (STEL) |
|---|---|---|---|---|
| Glycerol | 15 mg/m$^3$<br>5 mg/m$^3$ | None | None | None |

### Engineering measures

Ensure adequate ventilation, especially in confined areas.

### Personal Protective Equipment

Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to the risk assessment for each laboratory where this material may be used.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.
**Hand protection** Impervious gloves.
**Eye protection** Wear safety glasses with side shields (or goggles).
**Skin and Body Protection** Lightweight protective clothing.
**Hygiene measures** Handle in accordance with good industrial hygiene and safety practice.

### Environmental exposure controls

No special environmental precautions required.

## SECTION 9: Physical and chemical properties

### General information

| | | | |
|---|---|---|---|
| **Form** | Liquid | **Boiling point / boiling range** | °C >100 °F >212 |
| **Appearance** | No information available | **Melting point / melting range** | °C >0 °F >32 |
| **Odor** | No data available | **flash point** | °C >90 °F >160 |
| **Odor Threshold** | No data available | **Autoignition Temperature** | °C No data available °F No data available |

| | | | |
|---|---|---|---|
| **Evaporation rate** | No data available | **Partition coefficient n-octanol/water** | No data available |
| **Flammability (solid, gas)** | No data available | | |
| **Oxidizing properties** | No information available | **Vapor Pressure** | No data available |
| **Water solubility soluble** | soluble | **vapor density** | No data available |
| **Upper explosion limit** | No data available | **Viscosity** | No data available |
| **Lower explosion limit** | No data available | **pH value** | 6-8 |

## SECTION 10: Stability and reactivity

| | | | |
|---|---|---|---|
| **Stability** | Stable under normal conditions. | **Hazardous decomposition products** | Carbon oxides. |
| **Materials to avoid** | Strong acids and oxidizing agents. Acetic anhydride. Isocyanates. Ammonia. Bases. | **polymerization** | Hazardous polymerization does not occur. |
| **Possibility of hazardous reactions** | Hazardous reaction has not been reported | **Conditions to avoid** | None under normal processing. |

## SECTION 11: Toxicological information

### Acute Toxicity

| Chemical Name | LD50 (oral,rat/mouse) | LD50 (dermal,rat/rabbit) | LC50 (inhalation,rat/mouse) |
|---|---|---|---|
| Glycerol | = 12600 mg/kg Oral | No data available | >570mg/m$^3$ (Rat) |

### Principle Routes of Exposure Potential Health Effects

| | | | |
|---|---|---|---|
| **eyes** | May cause eye irritation with susceptible persons. | **Mutagenic effects** | None. |
| **Skin** | May cause skin irritation in susceptible persons. | **Reproductive toxicity** | None. |
| **Inhalation** | May be harmful by inhalation. | **Sensitization** | None. |
| **Ingestion** | May be harmful if swallowed. | **Target Organ Effects** | None under normal use conditions |
| **Carcinogenic effects** | None. | | |

## SECTION 12: Ecological information

| | | | |
|---|---|---|---|
| **Ecotoxicity** | Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants. | **Chronic aquatic toxicity** | Not classified chronic. |
| | | **Mobility** | Log Pow. |
| | | **Biodegradation** | Inherently biodegradable. |
| **Acute aquatic toxicity** | Not classified for acute. | **Bioaccumulation** | Material does not bioaccumulate. |

| Chemical Name | Freshwater Algae Data | Water Flea Data | Freshwater Fish Species Data | Microtox Data | log Pow |
|---|---|---|---|---|---|
| Glycerol | | Daphnia magna EC50>500 mg/L (24h) | | | logPow-1.76 |

## SECTION 13: Disposal considerations

Dispose of contents/containers in accordance with local regulations.

## SECTION 14: Transport information

### IATA

| | | | |
|---|---|---|---|
| **Proper Shipping Name** | No dangerous good in sense of these transport regulations | **Packing group** | None |
| **Hazard Class** | None | **UN-No** | None |
| **Subsidiary class** | None | **Environmental hazards** | None |

## SECTION 15: Regulatory information

| Component | US TSCA |
|---|---|
| Glycerol 56-81-5 ( 10-30 ) | Listed |

### US State Regulations

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

### US Federal Regulations

**SARA 313**

This product is not regulated by SARA.

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contains HAPs.

### WHMIS Hazard Class

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

## SECTION 16: Other information

**Reason for revision** SDS sections updated.

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

"The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since the Company cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS SDS DOES NOT CONSTITUTE A WARRENTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PUPOSE"

# Material Safety Data Sheet - RNA

BioinGentech Biotechnology

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### Identification of the substance or mixture

**Product name:** Primer, Probes and Internal Control Mix
**Kit Name:** Prunus Necrotic Ringspot Virus

### Company/undertaking identification

**Manufacturer/Supplier:** Bioingentech Ltd. **Address:** Bernardo O'Higgins 1213. Concepción, Chile. **Phone:** (56)-41-2790435

## SECTION 2: Hazards identification

| GHS - Classification | |
|---|---|
| **Signal Word** | None |
| **Health hazards** | Not classified |
| **Physical hazards** | Not classified |
| **Hazard Statements** | Not Applicable |
| **Precautionary Statements** | Not Applicable |

**Principle Routes of Exposure**

**Potential Health Effects**

| | |
|---|---|
| **eyes:** | May cause eye irritation with susceptible persons. |
| **Skin:** | May cause skin irritation in susceptible persons. |
| **Inhalation:** | May be harmful by inhalation. |
| **Ingestion:** | May be harmful if swallowed. |

**Specific effects**

| | |
|---|---|
| **Carcinogenic effects** | None. |
| **Mutagenic effects** | None. |
| **Reproductive toxicity** | None. |
| **Sensitization** | None. |
| **Target Organ Effects** | None under normal use conditions. |

**HMIS**

| | |
|---|---|
| **Health** | 0 |
| **Flammability** | 0 |
| **Reactivity** | 0 |

## SECTION 3: Composition/information on ingredients

| Component | CAS-No | EINECS-No | Weight % |
|---|---|---|---|
| Glycerol 56-81-5 ( 10-30 ) | 56-81-5 | 200-289-5 | 10-30 |

The product contains no substances which at their given concentration, are considered to be hazardous to health.

## SECTION 4: First aid measures

**Skin contact** Rinse cautiously with water for several minutes. If symptoms occur, obtain medical advice.
**Eye contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
**Ingestion** Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice.
**inhalation** Remove to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.

**Most important symptoms and effects, both acute and delayed** Not Applicable
**Notes to Physician** Treat symptomatically.

## SECTION 5: Firefighting measures

**Suitable extinguishing media** Water spray. Carbon dioxide (CO2). Foam. Dry chemical.
**Special protective equipment for firefighters** Wear self-contained breathing apparatus and protective suit.
**Specific hazards arising from the chemical** Not known

## SECTION 6: Accidental release measures

**Personal precautions** Use personal protection equipment.
**Methods for cleaning up** Soak up with inert absorbent material.

### Environmental precautions

Prevent further leakage or spillage if safe to do so.
See Section 12 for more information.

## SECTION 7: Handling and storage

**Handling** Always wear reccommended Personal Protective Equipment. No special handling advices are necessary.
**Storage** Keep in a dry, cool and well-ventilated place.

## SECTION 8: Exposure controls/personal protection

### Exposure Limits

| Chemical Name | OSHA PEL | OSHA PEL (Ceiling) | ACGIH OEL (TWA) | ACGIH OEL (STEL) |
|---|---|---|---|---|
| Glycerol | 15 mg/m$^3$<br>5 mg/m$^3$ | None | None | None |

### Engineering measures

Ensure adequate ventilation, especially in confined areas.

### Personal Protective Equipment

Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to the risk assessment for each laboratory where this material may be used.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.
**Hand protection** Impervious gloves.
**Eye protection** Wear safety glasses with side shields (or goggles).
**Skin and Body Protection** Lightweight protective clothing.
**Hygiene measures** Handle in accordance with good industrial hygiene and safety practice.

### Environmental exposure controls

No special environmental precautions required.

## SECTION 9: Physical and chemical properties

### General information

| | | | | | |
|---|---|---|---|---|---|
| **Form** | Liquid | | **Boiling point / boiling range** | °C >100 | °F >212 |
| **Appearance** | No information available | | **Melting point / melting range** | °C >0 | °F >32 |
| **Odor** | No data available | | **flash point** | °C >90 | °F >160 |
| **Odor Threshold** | No data available | | **Autoignition Temperature** | °C No data available | °F No data available |

| | | | |
|---|---|---|---|
| **Evaporation rate** | No data available | **Partition coefficient n-octanol/water** | No data available |
| **Flammability (solid, gas)** | No data available | | |
| **Oxidizing properties** | No information available | **Vapor Pressure** | No data available |
| **Water solubility soluble** | soluble | **vapor density** | No data available |
| **Upper explosion limit** | No data available | **Viscosity** | No data available |
| **Lower explosion limit** | No data available | **pH value** | 6-8 |

## SECTION 10: Stability and reactivity

| | | | |
|---|---|---|---|
| **Stability** | Stable under normal conditions. | **Hazardous decomposition products** | Carbon oxides. |
| **Materials to avoid** | Strong acids and oxidizing agents. Acetic anhydride. Isocyanates. Ammonia. Bases. | **polymerization** | Hazardous polymerization does not occur. |
| **Possibility of hazardous reactions** | Hazardous reaction has not been reported | **Conditions to avoid** | None under normal processing. |

## SECTION 11: Toxicological information

### Acute Toxicity

| Chemical Name | LD50 (oral,rat/mouse) | LD50 (dermal,rat/rabbit) | LC50 (inhalation,rat/mouse) |
|---|---|---|---|
| Glycerol | = 12600 mg/kg Oral | No data available | >570mg/m$^3$ (Rat) |

### Principle Routes of Exposure Potential Health Effects

| | | | |
|---|---|---|---|
| **eyes** | May cause eye irritation with susceptible persons. | **Mutagenic effects** | None. |
| **Skin** | May cause skin irritation in susceptible persons. | **Reproductive toxicity** | None. |
| **Inhalation** | May be harmful by inhalation. | **Sensitization** | None. |
| **Ingestion** | May be harmful if swallowed. | **Target Organ Effects** | None under normal use conditions |
| **Carcinogenic effects** | None. | | |

## SECTION 12: Ecological information

| | | | |
|---|---|---|---|
| **Ecotoxicity** | Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants. | **Chronic aquatic toxicity** | Not classified chronic. |
| | | **Mobility** | Log Pow. |
| | | **Biodegradation** | Inherently biodegradable. |
| **Acute aquatic toxicity** | Not classified for acute. | **Bioaccumulation** | Material does not bioaccumulate. |

| Chemical Name | Freshwater Algae Data | Water Flea Data | Freshwater Fish Species Data | Microtox Data | log Pow |
|---|---|---|---|---|---|
| Glycerol | | Daphnia magna EC50>500 mg/L (24h) | | | logPow-1.76 |

## SECTION 13: Disposal considerations

Dispose of contents/containers in accordance with local regulations.

## SECTION 14: Transport information

### IATA

| | | | |
|---|---|---|---|
| **Proper Shipping Name** | No dangerous good in sense of these transport regulations | **Packing group** | None |
| **Hazard Class** | None | **UN-No** | None |
| **Subsidiary class** | None | **Environmental hazards** | None |

## SECTION 15: Regulatory information

| Component | US TSCA |
|---|---|
| Glycerol 56-81-5 ( 10-30 ) | Listed |

### US Federal Regulations

**SARA 313**

This product is not regulated by SARA.

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contains HAPs.

### US State Regulations

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

### WHMIS Hazard Class

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

## SECTION 16: Other information

**Reason for revision** SDS sections updated.

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

"The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since the Company cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS SDS DOES NOT CONSTITUTE A WARRENTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PUPOSE"

# Material Safety Data Sheet - RNA

BioinGentech Biotechnology

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### Identification of the substance or mixture

**Product name:** One qRTPCR Enzyme Mix
**Kit Name:** Prunus Necrotic Ringspot Virus

### Company/undertaking identification

**Manufacturer/Supplier:** Bioingentech Ltd. **Address:** Bernardo O'Higgins 1213. Concepción, Chile. **Phone:** (56)-41-2790435

## SECTION 2: Hazards identification

| | |
|---|---|
| **GHS - Classification** | |
| **Signal Word** | None |
| **Health hazards** | Not classified |
| **Physical hazards** | Not classified |
| **Hazard Statements** | Not Applicable |
| **Precautionary Statements** | Not Applicable |

### Principle Routes of Exposure

### Potential Health Effects

| | |
|---|---|
| **eyes:** | May cause eye irritation with susceptible persons. |
| **Skin:** | May cause skin irritation in susceptible persons. |
| **Inhalation:** | May be harmful by inhalation. |
| **Ingestion:** | May be harmful if swallowed. |

### Specific effects

| | |
|---|---|
| **Carcinogenic effects** | None. |
| **Mutagenic effects** | None. |
| **Reproductive toxicity** | None. |
| **Sensitization** | None. |
| **Target Organ Effects** | None under normal use conditions. |

### HMIS

| | |
|---|---|
| **Health** | 0 |
| **Flammability** | 0 |
| **Reactivity** | 0 |

## SECTION 3: Composition/information on ingredients

| Component | CAS-No | EINECS-No | Weight % |
|---|---|---|---|
| Glycerol 56-81-5 ( 10-30 ) | 56-81-5 | 200-289-5 | 10-30 |

The product contains no substances which at their given concentration, are considered to be hazardous to health.

## SECTION 4: First aid measures

**Skin contact** Rinse cautiously with water for several minutes. If symptoms occur, obtain medical advice.
**Eye contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
**Ingestion** Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice.
**inhalation** Remove to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.

**Most important symptoms and effects, both acute and delayed** Not Applicable
**Notes to Physician** Treat symptomatically.

## SECTION 5: Firefighting measures

**Suitable extinguishing media** Water spray. Carbon dioxide (CO2). Foam. Dry chemical.
**Special protective equipment for firefighters** Wear self-contained breathing apparatus and protective suit.
**Specific hazards arising from the chemical** Not known

## SECTION 6: Accidental release measures

**Personal precautions** Use personal protection equipment.
**Methods for cleaning up** Soak up with inert absorbent material.

### Environmental precautions

Prevent further leakage or spillage if safe to do so.
See Section 12 for more information.

## SECTION 7: Handling and storage

**Handling** Always wear reccommended Personal Protective Equipment. No special handling advices are necessary.
**Storage** Keep in a dry, cool and well-ventilated place.

## SECTION 8: Exposure controls/personal protection

### Exposure Limits

| Chemical Name | OSHA PEL | OSHA PEL (Ceiling) | ACGIH OEL (TWA) | ACGIH OEL (STEL) |
|---|---|---|---|---|
| Glycerol | 15 mg/m$^3$<br>5 mg/m$^3$ | None | None | None |

### Engineering measures

Ensure adequate ventilation, especially in confined areas.

### Personal Protective Equipment

Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to the risk assessment for each laboratory where this material may be used.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.
**Hand protection** Impervious gloves.
**Eye protection** Wear safety glasses with side shields (or goggles).
**Skin and Body Protection** Lightweight protective clothing.
**Hygiene measures** Handle in accordance with good industrial hygiene and safety practice.

### Environmental exposure controls

No special environmental precautions required.

## SECTION 9: Physical and chemical properties

### General information

| | | | |
|---|---|---|---|
| **Form** | Liquid | **Boiling point / boiling range** | °C >100 °F >212 |
| **Appearance** | No information available | **Melting point / melting range** | °C >0 °F >32 |
| **Odor** | No data available | **flash point** | °C >90 °F >160 |
| **Odor Threshold** | No data available | **Autoignition Temperature** | °C No data available °F No data available |

| | | | |
|---|---|---|---|
| **Evaporation rate** | No data available | **Partition coefficient n-octanol/water** | No data available |
| **Flammability (solid, gas)** | No data available | | |
| **Oxidizing properties** | No information available | **Vapor Pressure** | No data available |
| **Water solubility soluble** | soluble | **vapor density** | No data available |
| **Upper explosion limit** | No data available | **Viscosity** | No data available |
| **Lower explosion limit** | No data available | **pH value** | 6-8 |

## SECTION 10: Stability and reactivity

| | | | |
|---|---|---|---|
| **Stability** | Stable under normal conditions. | **Hazardous decomposition products** | Carbon oxides. |
| **Materials to avoid** | Strong acids and oxidizing agents. Acetic anhydride. Isocyanates. Ammonia. Bases. | **polymerization** | Hazardous polymerization does not occur. |
| **Possibility of hazardous reactions** | Hazardous reaction has not been reported | **Conditions to avoid** | None under normal processing. |

## SECTION 11: Toxicological information

### Acute Toxicity

| Chemical Name | LD50 (oral,rat/mouse) | LD50 (dermal,rat/rabbit) | LC50 (inhalation,rat/mouse) |
|---|---|---|---|
| Glycerol | = 12600 mg/kg Oral | No data available | >570mg/m$^3$ (Rat) |

### Principle Routes of Exposure Potential Health Effects

| | | | |
|---|---|---|---|
| **eyes** | May cause eye irritation with susceptible persons. | **Mutagenic effects** | None. |
| **Skin** | May cause skin irritation in susceptible persons. | **Reproductive toxicity** | None. |
| **Inhalation** | May be harmful by inhalation. | **Sensitization** | None. |
| **Ingestion** | May be harmful if swallowed. | **Target Organ Effects** | None under normal use conditions |
| **Carcinogenic effects** | None. | | |

## SECTION 12: Ecological information

| | | | |
|---|---|---|---|
| **Ecotoxicity** | Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants. | **Chronic aquatic toxicity** | Not classified chronic. |
| | | **Mobility** | Log Pow. |
| | | **Biodegradation** | Inherently biodegradable. |
| **Acute aquatic toxicity** | Not classified for acute. | **Bioaccumulation** | Material does not bioaccumulate. |

| Chemical Name | Freshwater Algae Data | Water Flea Data | Freshwater Fish Species Data | Microtox Data | log Pow |
|---|---|---|---|---|---|
| Glycerol | | Daphnia magna EC50>500 mg/L (24h) | | | logPow-1.76 |

## SECTION 13: Disposal considerations

Dispose of contents/containers in accordance with local regulations.

## SECTION 14: Transport information

### IATA

| | | | |
|---|---|---|---|
| **Proper Shipping Name** | No dangerous good in sense of these transport regulations | **Packing group** | None |
| **Hazard Class** | None | **UN-No** | None |
| **Subsidiary class** | None | **Environmental hazards** | None |

## SECTION 15: Regulatory information

| Component | US TSCA |
|---|---|
| Glycerol 56-81-5 ( 10-30 ) | Listed |

### US Federal Regulations

**SARA 313**

This product is not regulated by SARA.

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contains HAPs.

### US State Regulations

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

### WHMIS Hazard Class

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

## SECTION 16: Other information

**Reason for revision** SDS sections updated.

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

"The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since the Company cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS SDS DOES NOT CONSTITUTE A WARRENTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PUPOSE"

# Material Safety Data Sheet - RNA

BioinGentech Biotechnology

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### Identification of the substance or mixture

**Product name:** PNRSV Positive Control
**Kit Name:** Prunus Necrotic Ringspot Virus

### Company/undertaking identification

**Manufacturer/Supplier:** Bioingentech Ltd. **Address:** Bernardo O'Higgins 1213. Concepción, Chile. **Phone:** (56)-41-2790435

## SECTION 2: Hazards identification

| GHS - Classification | |
|---|---|
| **Signal Word** | None |
| **Health hazards** | Not classified |
| **Physical hazards** | Not classified |
| **Hazard Statements** | Not Applicable |
| **Precautionary Statements** | Not Applicable |

### Principle Routes of Exposure

### Potential Health Effects

**eyes:** May cause eye irritation with susceptible persons.
**Skin:** May cause skin irritation in susceptible persons.
**Inhalation:** May be harmful by inhalation.
**Ingestion:** May be harmful if swallowed.

### Specific effects

| | |
|---|---|
| **Carcinogenic effects** | None. |
| **Mutagenic effects** | None. |
| **Reproductive toxicity** | None. |
| **Sensitization** | None. |
| **Target Organ Effects** | None under normal use conditions. |

### HMIS

| | |
|---|---|
| **Health** | 0 |
| **Flammability** | 0 |
| **Reactivity** | 0 |

## SECTION 3: Composition/information on ingredients

| Component | CAS-No | EINECS-No | Weight % |
|---|---|---|---|
| Glycerol 56-81-5 ( 10-30 ) | 56-81-5 | 200-289-5 | 10-30 |

The product contains no substances which at their given concentration, are considered to be hazardous to health.

## SECTION 4: First aid measures

**Skin contact** Rinse cautiously with water for several minutes. If symptoms occur, obtain medical advice.
**Eye contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
**Ingestion** Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice.
**inhalation** Remove to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.
**Most important symptoms and effects, both acute and delayed** Not Applicable
**Notes to Physician** Treat symptomatically.

## SECTION 5: Firefighting measures

**Suitable extinguishing media** Water spray. Carbon dioxide (CO2). Foam. Dry chemical.
**Special protective equipment for firefighters** Wear self-contained breathing apparatus and protective suit.
**Specific hazards arising from the chemical** Not known

## SECTION 6: Accidental release measures

**Personal precautions** Use personal protection equipment.
**Methods for cleaning up** Soak up with inert absorbent material.

### Environmental precautions

Prevent further leakage or spillage if safe to do so.
See Section 12 for more information.

## SECTION 7: Handling and storage

**Handling** Always wear reccommended Personal Protective Equipment. No special handling advices are necessary.
**Storage** Keep in a dry, cool and well-ventilated place.

## SECTION 8: Exposure controls/personal protection

### Exposure Limits

| Chemical Name | OSHA PEL | OSHA PEL (Ceiling) | ACGIH OEL (TWA) | ACGIH OEL (STEL) |
|---|---|---|---|---|
| Glycerol | 15 mg/m$^3$<br>5 mg/m$^3$ | None | None | None |

### Engineering measures

Ensure adequate ventilation, especially in confined areas.

### Personal Protective Equipment

Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to the risk assessment for each laboratory where this material may be used.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.
**Hand protection** Impervious gloves.
**Eye protection** Wear safety glasses with side shields (or goggles).
**Skin and Body Protection** Lightweight protective clothing.
**Hygiene measures** Handle in accordance with good industrial hygiene and safety practice.

### Environmental exposure controls

No special environmental precautions required.

## SECTION 9: Physical and chemical properties

### General information

| | | | | |
|---|---|---|---|---|
| **Form** | Liquid | **Boiling point / boiling range** | °C >100 | °F >212 |
| **Appearance** | No information available | **Melting point / melting range** | °C >0 | °F >32 |
| **Odor** | No data available | **flash point** | °C >90 | °F >160 |
| **Odor Threshold** | No data available | **Autoignition Temperature** | °C No data available | °F No data available |

| | | | |
|---|---|---|---|
| **Evaporation rate** | No data available | **Partition coefficient n-octanol/water** | No data available |
| **Flammability (solid, gas)** | No data available | | |
| **Oxidizing properties** | No information available | **Vapor Pressure** | No data available |
| **Water solubility soluble** | soluble | **vapor density** | No data available |
| **Upper explosion limit** | No data available | **Viscosity** | No data available |
| **Lower explosion limit** | No data available | **pH value** | 6-8 |

## SECTION 10: Stability and reactivity

| | | | |
|---|---|---|---|
| **Stability** | Stable under normal conditions. | **Hazardous decomposition products** | Carbon oxides. |
| **Materials to avoid** | Strong acids and oxidizing agents. Acetic anhydride. Isocyanates. Ammonia. Bases. | **polymerization** | Hazardous polymerization does not occur. |
| **Possibility of hazardous reactions** | Hazardous reaction has not been reported | **Conditions to avoid** | None under normal processing. |

## SECTION 11: Toxicological information

### Acute Toxicity

| Chemical Name | LD50 (oral,rat/mouse) | LD50 (dermal,rat/rabbit) | LC50 (inhalation,rat/mouse) |
|---|---|---|---|
| Glycerol | = 12600 mg/kg Oral | No data available | >570mg/m $^3$ (Rat) |

### Principle Routes of Exposure Potential Health Effects

| | | | |
|---|---|---|---|
| **eyes** | May cause eye irritation with susceptible persons. | **Mutagenic effects** | None. |
| **Skin** | May cause skin irritation in susceptible persons. | **Reproductive toxicity** | None. |
| **Inhalation** | May be harmful by inhalation. | **Sensitization** | None. |
| **Ingestion** | May be harmful if swallowed. | **Target Organ Effects** | None under normal use conditions |
| **Carcinogenic effects** | None. | | |

## SECTION 12: Ecological information

| | | | |
|---|---|---|---|
| **Ecotoxicity** | Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants. | **Chronic aquatic toxicity** | Not classified chronic. |
| | | **Mobility** | Log Pow. |
| | | **Biodegradation** | Inherently biodegradable. |
| **Acute aquatic toxicity** | Not classified for acute. | **Bioaccumulation** | Material does not bioaccumulate. |

| Chemical Name | Freshwater Algae Data | Water Flea Data | Freshwater Fish Species Data | Microtox Data | log Pow |
|---|---|---|---|---|---|
| Glycerol | | Daphnia magna EC50>500 mg/L (24h) | | | logPow-1.76 |

## SECTION 13: Disposal considerations

Dispose of contents/containers in accordance with local regulations.

## SECTION 14: Transport information

### IATA

| | | | |
|---|---|---|---|
| **Proper Shipping Name** | No dangerous good in sense of these transport regulations | **Packing group** | None |
| **Hazard Class** | None | **UN-No** | None |
| **Subsidiary class** | None | **Environmental hazards** | None |

## SECTION 15: Regulatory information

| Component | US TSCA |
|---|---|
| Glycerol 56-81-5 ( 10-30 ) | Listed |

### US Federal Regulations

**SARA 313**

This product is not regulated by SARA.

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contains HAPs.

### US State Regulations

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

### WHMIS Hazard Class

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

## SECTION 16: Other information

**Reason for revision** SDS sections updated.

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

"The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since the Company cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS SDS DOES NOT CONSTITUTE A WARRENTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PUPOSE"

# Material Safety Data Sheet - RNA

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### Identification of the substance or mixture

**Product name:** PNRSV Negative Control
**Kit Name:** Prunus Necrotic Ringspot Virus

### Company/undertaking identification

**Manufacturer/Supplier:** Bioingentech Ltd. **Address:** Bernardo O'Higgins 1213. Concepción, Chile. **Phone:** (56)-41-2790435

## SECTION 2: Hazards identification

| GHS - Classification | |
|---|---|
| **Signal Word** | None |
| **Health hazards** | Not classified |
| **Physical hazards** | Not classified |
| **Hazard Statements** | Not Applicable |
| **Precautionary Statements** | Not Applicable |

**Principle Routes of Exposure**
**Potential Health Effects**

| | |
|---|---|
| **eyes:** | May cause eye irritation with susceptible persons. |
| **Skin:** | May cause skin irritation in susceptible persons. |
| **Inhalation:** | May be harmful by inhalation. |
| **Ingestion:** | May be harmful if swallowed. |

**Specific effects**

| | |
|---|---|
| **Carcinogenic effects** | None. |
| **Mutagenic effects** | None. |
| **Reproductive toxicity** | None. |
| **Sensitization** | None. |
| **Target Organ Effects** | None under normal use conditions. |

**HMIS**

| | |
|---|---|
| **Health** | 0 |
| **Flammability** | 0 |
| **Reactivity** | 0 |

## SECTION 3: Composition/information on ingredients

| Component | CAS-No | EINECS-No | Weight % |
|---|---|---|---|
| Glycerol 56-81-5 ( 10-30 ) | 56-81-5 | 200-289-5 | 10-30 |

The product contains no substances which at their given concentration, are considered to be hazardous to health.

## SECTION 4: First aid measures

**Skin contact** Rinse cautiously with water for several minutes. If symptoms occur, obtain medical advice.
**Eye contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
**Ingestion** Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice.
**inhalation** Remove to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.
**Most important symptoms and effects, both acute and delayed** Not Applicable
**Notes to Physician** Treat symptomatically.

## SECTION 5: Firefighting measures

**Suitable extinguishing media** Water spray. Carbon dioxide (CO2). Foam. Dry chemical.
**Special protective equipment for firefighters** Wear self-contained breathing apparatus and protective suit.
**Specific hazards arising from the chemical** Not known

## SECTION 6: Accidental release measures

**Personal precautions** Use personal protection equipment.
**Methods for cleaning up** Soak up with inert absorbent material.

### Environmental precautions

Prevent further leakage or spillage if safe to do so.
See Section 12 for more information.

## SECTION 7: Handling and storage

**Handling** Always wear reccommended Personal Protective Equipment. No special handling advices are necessary.
**Storage** Keep in a dry, cool and well-ventilated place.

## SECTION 8: Exposure controls/personal protection

### Exposure Limits

| Chemical Name | OSHA PEL | OSHA PEL (Ceiling) | ACGIH OEL (TWA) | ACGIH OEL (STEL) |
|---|---|---|---|---|
| Glycerol | 15 mg/m$^3$<br>5 mg/m$^3$ | None | None | None |

### Engineering measures

Ensure adequate ventilation, especially in confined areas.

### Personal Protective Equipment

Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to the risk assessment for each laboratory where this material may be used.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.
**Hand protection** Impervious gloves.
**Eye protection** Wear safety glasses with side shields (or goggles).
**Skin and Body Protection** Lightweight protective clothing.
**Hygiene measures** Handle in accordance with good industrial hygiene and safety practice.

### Environmental exposure controls

No special environmental precautions required.

## SECTION 9: Physical and chemical properties

### General information

| | | | |
|---|---|---|---|
| **Form** | Liquid | **Boiling point / boiling range** | °C >100 °F >212 |
| **Appearance** | No information available | **Melting point / melting range** | °C >0 °F >32 |
| **Odor** | No data available | **flash point** | °C >90 °F >160 |
| **Odor Threshold** | No data available | **Autoignition Temperature** | °C No data available °F No data available |

| | | | |
|---|---|---|---|
| **Evaporation rate** | No data available | **Partition coefficient n-octanol/water** | No data available |
| **Flammability (solid, gas)** | No data available | | |
| **Oxidizing properties** | No information available | **Vapor Pressure** | No data available |
| **Water solubility soluble** | soluble | **vapor density** | No data available |
| **Upper explosion limit** | No data available | **Viscosity** | No data available |
| **Lower explosion limit** | No data available | **pH value** | 6-8 |

## SECTION 10: Stability and reactivity

| | | | |
|---|---|---|---|
| **Stability** | Stable under normal conditions. | **Hazardous decomposition products** | Carbon oxides. |
| **Materials to avoid** | Strong acids and oxidizing agents. Acetic anhydride. Isocyanates. Ammonia. Bases. | **polymerization** | Hazardous polymerization does not occur. |
| **Possibility of hazardous reactions** | Hazardous reaction has not been reported | **Conditions to avoid** | None under normal processing. |

## SECTION 11: Toxicological information

### Acute Toxicity

| Chemical Name | LD50 (oral,rat/mouse) | LD50 (dermal,rat/rabbit) | LC50 (inhalation,rat/mouse) |
|---|---|---|---|
| Glycerol | = 12600 mg/kg Oral | No data available | >570mg/m$^3$ (Rat) |

### Principle Routes of Exposure Potential Health Effects

| | | | |
|---|---|---|---|
| **eyes** | May cause eye irritation with susceptible persons. | **Mutagenic effects** | None. |
| **Skin** | May cause skin irritation in susceptible persons. | **Reproductive toxicity** | None. |
| **Inhalation** | May be harmful by inhalation. | **Sensitization** | None. |
| **Ingestion** | May be harmful if swallowed. | **Target Organ Effects** | None under normal use conditions |
| **Carcinogenic effects** | None. | | |

## SECTION 12: Ecological information

| | | | |
|---|---|---|---|
| **Ecotoxicity** | Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants. | **Chronic aquatic toxicity** | Not classified chronic. |
| | | **Mobility** | Log Pow. |
| | | **Biodegradation** | Inherently biodegradable. |
| **Acute aquatic toxicity** | Not classified for acute. | **Bioaccumulation** | Material does not bioaccumulate. |

| Chemical Name | Freshwater Algae Data | Water Flea Data | Freshwater Fish Species Data | Microtox Data | log Pow |
|---|---|---|---|---|---|
| Glycerol | | Daphnia magna EC50>500 mg/L (24h) | | | logPow-1.76 |

## SECTION 13: Disposal considerations

Dispose of contents/containers in accordance with local regulations.

## SECTION 14: Transport information

### IATA

| | | | |
|---|---|---|---|
| **Proper Shipping Name** | No dangerous good in sense of these transport regulations | **Packing group** | None |
| **Hazard Class** | None | **UN-No** | None |
| **Subsidiary class** | None | **Environmental hazards** | None |

## SECTION 15: Regulatory information

| Component | US TSCA |
|---|---|
| Glycerol 56-81-5 ( 10-30 ) | Listed |

### US State Regulations

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

### US Federal Regulations

**SARA 313**

This product is not regulated by SARA.

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contains HAPs.

### WHMIS Hazard Class

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

## SECTION 16: Other information

**Reason for revision** SDS sections updated.

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

"The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since the Company cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS SDS DOES NOT CONSTITUTE A WARRENTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PUPOSE"

# Material Safety Data Sheet - RNA

BioinGentech Biotechnology

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### Identification of the substance or mixture

**Product name:** PCR grade Water
**Kit Name:** Prunus Necrotic Ringspot Virus

### Company/undertaking identification

**Manufacturer/Supplier:** Bioingentech Ltd. **Address:** Bernardo O'Higgins 1213. Concepción, Chile. **Phone:** (56)-41-2790435

## SECTION 2: Hazards identification

| | |
|---|---|
| **GHS - Classification** | |
| **Signal Word** | None |
| **Health hazards** | Not classified |
| **Physical hazards** | Not classified |
| **Hazard Statements** | Not Applicable |
| **Precautionary Statements** | Not Applicable |

### Principle Routes of Exposure

### Potential Health Effects

| | |
|---|---|
| **eyes:** | May cause eye irritation with susceptible persons. |
| **Skin:** | May cause skin irritation in susceptible persons. |
| **Inhalation:** | May be harmful by inhalation. |
| **Ingestion:** | May be harmful if swallowed. |

### Specific effects

| | |
|---|---|
| **Carcinogenic effects** | None. |
| **Mutagenic effects** | None. |
| **Reproductive toxicity** | None. |
| **Sensitization** | None. |
| **Target Organ Effects** | None under normal use conditions. |

### HMIS

| | |
|---|---|
| **Health** | 0 |
| **Flammability** | 0 |
| **Reactivity** | 0 |

## SECTION 3: Composition/information on ingredients

| Component | CAS-No | EINECS-No | Weight % |
|---|---|---|---|
| Glycerol 56-81-5 ( 10-30 ) | 56-81-5 | 200-289-5 | 10-30 |

The product contains no substances which at their given concentration, are considered to be hazardous to health.

## SECTION 4: First aid measures

**Skin contact** Rinse cautiously with water for several minutes. If symptoms occur, obtain medical advice.
**Eye contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
**Ingestion** Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice.
**inhalation** Remove to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.
**Most important symptoms and effects, both acute and delayed** Not Applicable
**Notes to Physician** Treat symptomatically.

## SECTION 5: Firefighting measures

**Suitable extinguishing media** Water spray. Carbon dioxide (CO2). Foam. Dry chemical.
**Special protective equipment for firefighters** Wear self-contained breathing apparatus and protective suit.
**Specific hazards arising from the chemical** Not known

## SECTION 6: Accidental release measures

**Personal precautions** Use personal protection equipment.
**Methods for cleaning up** Soak up with inert absorbent material.

### Environmental precautions

Prevent further leakage or spillage if safe to do so.
See Section 12 for more information.

## SECTION 7: Handling and storage

**Handling** Always wear reccommended Personal Protective Equipment. No special handling advices are necessary.
**Storage** Keep in a dry, cool and well-ventilated place.

## SECTION 8: Exposure controls/personal protection

### Exposure Limits

| Chemical Name | OSHA PEL | OSHA PEL (Ceiling) | ACGIH OEL (TWA) | ACGIH OEL (STEL) |
|---|---|---|---|---|
| Glycerol | 15 mg/m$^3$<br>5 mg/m$^3$ | None | None | None |

### Engineering measures

Ensure adequate ventilation, especially in confined areas.

### Personal Protective Equipment

Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to the risk assessment for each laboratory where this material may be used.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.
**Hand protection** Impervious gloves.
**Eye protection** Wear safety glasses with side shields (or goggles).
**Skin and Body Protection** Lightweight protective clothing.
**Hygiene measures** Handle in accordance with good industrial hygiene and safety practice.

### Environmental exposure controls

No special environmental precautions required.

## SECTION 9: Physical and chemical properties

### General information

| | | | |
|---|---|---|---|
| **Form** | Liquid | **Boiling point / boiling range** | °C >100 °F >212 |
| **Appearance** | No information available | **Melting point / melting range** | °C >0 °F >32 |
| **Odor** | No data available | **flash point** | °C >90 °F >160 |
| **Odor Threshold** | No data available | **Autoignition Temperature** | °C No data available °F No data available |

| | | | |
|---|---|---|---|
| **Evaporation rate** | No data available | **Partition coefficient n-octanol/water** | No data available |
| **Flammability (solid, gas)** | No data available | | |
| **Oxidizing properties** | No information available | **Vapor Pressure** | No data available |
| **Water solubility soluble** | soluble | **vapor density** | No data available |
| **Upper explosion limit** | No data available | **Viscosity** | No data available |
| **Lower explosion limit** | No data available | **pH value** | 6-8 |

## SECTION 10: Stability and reactivity

| | | | |
|---|---|---|---|
| **Stability** | Stable under normal conditions. | **Hazardous decomposition products** | Carbon oxides. |
| **Materials to avoid** | Strong acids and oxidizing agents. Acetic anhydride. Isocyanates. Ammonia. Bases. | **polymerization** | Hazardous polymerization does not occur. |
| **Possibility of hazardous reactions** | Hazardous reaction has not been reported | **Conditions to avoid** | None under normal processing. |

## SECTION 11: Toxicological information

### Acute Toxicity

| Chemical Name | LD50 (oral,rat/mouse) | LD50 (dermal,rat/rabbit) | LC50 (inhalation,rat/mouse) |
|---|---|---|---|
| Glycerol | = 12600 mg/kg Oral | No data available | >570mg/m$^3$ (Rat) |

### Principle Routes of Exposure Potential Health Effects

| | | | |
|---|---|---|---|
| **eyes** | May cause eye irritation with susceptible persons. | **Mutagenic effects** | None. |
| **Skin** | May cause skin irritation in susceptible persons. | **Reproductive toxicity** | None. |
| **Inhalation** | May be harmful by inhalation. | **Sensitization** | None. |
| **Ingestion** | May be harmful if swallowed. | **Target Organ Effects** | None under normal use conditions |
| **Carcinogenic effects** | None. | | |

## SECTION 12: Ecological information

| | | | |
|---|---|---|---|
| **Ecotoxicity** | Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants. | **Chronic aquatic toxicity** | Not classified chronic. |
| | | **Mobility** | Log Pow. |
| | | **Biodegradation** | Inherently biodegradable. |
| **Acute aquatic toxicity** | Not classified for acute. | **Bioaccumulation** | Material does not bioaccumulate. |

| Chemical Name | Freshwater Algae Data | Water Flea Data | Freshwater Fish Species Data | Microtox Data | log Pow |
|---|---|---|---|---|---|
| Glycerol | | Daphnia magna EC50>500 mg/L (24h) | | | logPow-1.76 |

## SECTION 13: Disposal considerations

Dispose of contents/containers in accordance with local regulations.

## SECTION 14: Transport information

### IATA

| | | | |
|---|---|---|---|
| **Proper Shipping Name** | No dangerous good in sense of these transport regulations | **Packing group** | None |
| **Hazard Class** | None | **UN-No** | None |
| **Subsidiary class** | None | **Environmental hazards** | None |

## SECTION 15: Regulatory information

| Component | US TSCA |
|---|---|
| Glycerol 56-81-5 ( 10-30 ) | Listed |

### US State Regulations

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

### US Federal Regulations

**SARA 313**

This product is not regulated by SARA.

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contains HAPs.

### WHMIS Hazard Class

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

## SECTION 16: Other information

**Reason for revision** SDS sections updated.

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

"The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since the Company cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS SDS DOES NOT CONSTITUTE A WARRENTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PUPOSE"

# Material Safety Data Sheet - RNA

BioinGentech Biotechnology

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### Identification of the substance or mixture

**Product name:** Exogenous RNA control
**Kit Name:** Prunus Necrotic Ringspot Virus

### Company/undertaking identification

**Manufacturer/Supplier:** Bioingentech Ltd. **Address:** Bernardo O'Higgins 1213. Concepción, Chile. **Phone:** (56)-41-2790435

## SECTION 2: Hazards identification

| GHS - Classification | |
|---|---|
| **Signal Word** | None |
| **Health hazards** | Not classified |
| **Physical hazards** | Not classified |
| **Hazard Statements** | Not Applicable |
| **Precautionary Statements** | Not Applicable |

### Principle Routes of Exposure

### Potential Health Effects

**eyes:** May cause eye irritation with susceptible persons.
**Skin:** May cause skin irritation in susceptible persons.
**Inhalation:** May be harmful by inhalation.
**Ingestion:** May be harmful if swallowed.

### Specific effects

| | |
|---|---|
| **Carcinogenic effects** | None. |
| **Mutagenic effects** | None. |
| **Reproductive toxicity** | None. |
| **Sensitization** | None. |
| **Target Organ Effects** | None under normal use conditions. |

### HMIS

| | |
|---|---|
| **Health** | 0 |
| **Flammability** | 0 |
| **Reactivity** | 0 |

## SECTION 3: Composition/information on ingredients

| Component | CAS-No | EINECS-No | Weight % |
|---|---|---|---|
| Glycerol 56-81-5 ( 10-30 ) | 56-81-5 | 200-289-5 | 10-30 |

The product contains no substances which at their given concentration, are considered to be hazardous to health.

## SECTION 4: First aid measures

**Skin contact** Rinse cautiously with water for several minutes. If symptoms occur, obtain medical advice.
**Eye contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
**Ingestion** Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice.
**inhalation** Remove to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.

**Most important symptoms and effects, both acute and delayed** Not Applicable
**Notes to Physician** Treat symptomatically.

## SECTION 5: Firefighting measures

**Suitable extinguishing media** Water spray. Carbon dioxide (CO2). Foam. Dry chemical.
**Special protective equipment for firefighters** Wear self-contained breathing apparatus and protective suit.
**Specific hazards arising from the chemical** Not known

## SECTION 6: Accidental release measures

**Personal precautions** Use personal protection equipment.
**Methods for cleaning up** Soak up with inert absorbent material.

### Environmental precautions

Prevent further leakage or spillage if safe to do so.
See Section 12 for more information.

## SECTION 7: Handling and storage

**Handling** Always wear reccommended Personal Protective Equipment. No special handling advices are necessary.
**Storage** Keep in a dry, cool and well-ventilated place.

## SECTION 8: Exposure controls/personal protection

### Exposure Limits

| Chemical Name | OSHA PEL | OSHA PEL (Ceiling) | ACGIH OEL (TWA) | ACGIH OEL (STEL) |
|---|---|---|---|---|
| Glycerol | 15 mg/m$^3$<br>5 mg/m$^3$ | None | None | None |

### Engineering measures

Ensure adequate ventilation, especially in confined areas.

### Personal Protective Equipment

Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to the risk assessment for each laboratory where this material may be used.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.
**Hand protection** Impervious gloves.
**Eye protection** Wear safety glasses with side shields (or goggles).
**Skin and Body Protection** Lightweight protective clothing.
**Hygiene measures** Handle in accordance with good industrial hygiene and safety practice.

### Environmental exposure controls

No special environmental precautions required.

## SECTION 9: Physical and chemical properties

### General information

| | | | | |
|---|---|---|---|---|
| **Form** | Liquid | **Boiling point / boiling range** | °C >100 | °F >212 |
| **Appearance** | No information available | **Melting point / melting range** | °C >0 | °F >32 |
| **Odor** | No data available | **flash point** | °C >90 | °F >160 |
| **Odor Threshold** | No data available | **Autoignition Temperature** | °C No data available | °F No data available |

| | | | |
|---|---|---|---|
| **Evaporation rate** | No data available | **Partition coefficient n-octanol/water** | No data available |
| **Flammability (solid, gas)** | No data available | | |
| **Oxidizing properties** | No information available | **Vapor Pressure** | No data available |
| **Water solubility soluble** | soluble | **vapor density** | No data available |
| **Upper explosion limit** | No data available | **Viscosity** | No data available |
| **Lower explosion limit** | No data available | **pH value** | 6-8 |

## SECTION 10: Stability and reactivity

| | | | |
|---|---|---|---|
| **Stability** | Stable under normal conditions. | **Hazardous decomposition products** | Carbon oxides. |
| **Materials to avoid** | Strong acids and oxidizing agents. Acetic anhydride. Isocyanates. Ammonia. Bases. | **polymerization** | Hazardous polymerization does not occur. |
| **Possibility of hazardous reactions** | Hazardous reaction has not been reported | **Conditions to avoid** | None under normal processing. |

## SECTION 11: Toxicological information

### Acute Toxicity

| Chemical Name | LD50 (oral,rat/mouse) | LD50 (dermal,rat/rabbit) | LC50 (inhalation,rat/mouse) |
|---|---|---|---|
| Glycerol | = 12600 mg/kg Oral | No data available | >570mg/m $^3$ (Rat) |

### Principle Routes of Exposure Potential Health Effects

| | | | |
|---|---|---|---|
| **eyes** | May cause eye irritation with susceptible persons. | **Mutagenic effects** | None. |
| **Skin** | May cause skin irritation in susceptible persons. | **Reproductive toxicity** | None. |
| **Inhalation** | May be harmful by inhalation. | **Sensitization** | None. |
| **Ingestion** | May be harmful if swallowed. | **Target Organ Effects** | None under normal use conditions |
| **Carcinogenic effects** | None. | | |

## SECTION 12: Ecological information

| | | | |
|---|---|---|---|
| **Ecotoxicity** | Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants. | **Chronic aquatic toxicity** | Not classified chronic. |
| | | **Mobility** | Log Pow. |
| | | **Biodegradation** | Inherently biodegradable. |
| **Acute aquatic toxicity** | Not classified for acute. | **Bioaccumulation** | Material does not bioaccumulate. |

| Chemical Name | Freshwater Algae Data | Water Flea Data | Freshwater Fish Species Data | Microtox Data | log Pow |
|---|---|---|---|---|---|
| Glycerol | | Daphnia magna EC50>500 mg/L (24h) | | | logPow-1.76 |

## SECTION 13: Disposal considerations

Dispose of contents/containers in accordance with local regulations.

## SECTION 14: Transport information

### IATA

| | | | |
|---|---|---|---|
| **Proper Shipping Name** | No dangerous good in sense of these transport regulations | **Packing group** | None |
| **Hazard Class** | None | **UN-No** | None |
| **Subsidiary class** | None | **Environmental hazards** | None |

## SECTION 15: Regulatory information

| Component | US TSCA |
|---|---|
| Glycerol 56-81-5 ( 10-30 ) | Listed |

### US State Regulations

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

### US Federal Regulations

**SARA 313**

This product is not regulated by SARA.

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contains HAPs.

### WHMIS Hazard Class

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

## SECTION 16: Other information

**Reason for revision** SDS sections updated.

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

"The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since the Company cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS SDS DOES NOT CONSTITUTE A WARRENTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PUPOSE"

# Material Safety Data Sheet - RNA

BioinGentech Biotechnology

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### Identification of the substance or mixture

**Product name:** Exogenous RNA control Primer and Probes Mix
**Kit Name:** Prunus Necrotic Ringspot Virus

### Company/undertaking identification

**Manufacturer/Supplier:** Bioingentech Ltd. **Address:** Bernardo O'Higgins 1213. Concepción, Chile. **Phone:** (56)-41-2790435

## SECTION 2: Hazards identification

| | |
|---|---|
| **GHS - Classification** | |
| **Signal Word** | None |
| **Health hazards** | Not classified |
| **Physical hazards** | Not classified |
| **Hazard Statements** | Not Applicable |
| **Precautionary Statements** | Not Applicable |

**Principle Routes of Exposure**

**Potential Health Effects**

| | |
|---|---|
| **eyes:** | May cause eye irritation with susceptible persons. |
| **Skin:** | May cause skin irritation in susceptible persons. |
| **Inhalation:** | May be harmful by inhalation. |
| **Ingestion:** | May be harmful if swallowed. |

**Specific effects**

| | |
|---|---|
| **Carcinogenic effects** | None. |
| **Mutagenic effects** | None. |
| **Reproductive toxicity** | None. |
| **Sensitization** | None. |
| **Target Organ Effects** | None under normal use conditions. |

**HMIS**

| | |
|---|---|
| **Health** | 0 |
| **Flammability** | 0 |
| **Reactivity** | 0 |

## SECTION 3: Composition/information on ingredients

| Component | CAS-No | EINECS-No | Weight % |
|---|---|---|---|
| Glycerol 56-81-5 ( 10-30 ) | 56-81-5 | 200-289-5 | 10-30 |

The product contains no substances which at their given concentration, are considered to be hazardous to health.

## SECTION 4: First aid measures

**Skin contact** Rinse cautiously with water for several minutes. If symptoms occur, obtain medical advice.
**Eye contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
**Ingestion** Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice.
**inhalation** Remove to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.

**Most important symptoms and effects, both acute and delayed** Not Applicable
**Notes to Physician** Treat symptomatically.

## SECTION 5: Firefighting measures

**Suitable extinguishing media** Water spray. Carbon dioxide (CO2). Foam. Dry chemical.
**Special protective equipment for firefighters** Wear self-contained breathing apparatus and protective suit.
**Specific hazards arising from the chemical** Not known

## SECTION 6: Accidental release measures

**Personal precautions** Use personal protection equipment.
**Methods for cleaning up** Soak up with inert absorbent material.

### Environmental precautions

Prevent further leakage or spillage if safe to do so.
See Section 12 for more information.

## SECTION 7: Handling and storage

**Handling** Always wear reccommended Personal Protective Equipment. No special handling advices are necessary.
**Storage** Keep in a dry, cool and well-ventilated place.

## SECTION 8: Exposure controls/personal protection

### Exposure Limits

| Chemical Name | OSHA PEL | OSHA PEL (Ceiling) | ACGIH OEL (TWA) | ACGIH OEL (STEL) |
|---|---|---|---|---|
| Glycerol | 15 mg/m$^3$<br>5 mg/m$^3$ | None | None | None |

### Engineering measures

Ensure adequate ventilation, especially in confined areas.

### Personal Protective Equipment

Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to the risk assessment for each laboratory where this material may be used.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.
**Hand protection** Impervious gloves.
**Eye protection** Wear safety glasses with side shields (or goggles).
**Skin and Body Protection** Lightweight protective clothing.
**Hygiene measures** Handle in accordance with good industrial hygiene and safety practice.

### Environmental exposure controls

No special environmental precautions required.

## SECTION 9: Physical and chemical properties

### General information

| | | | |
|---|---|---|---|
| **Form** | Liquid | **Boiling point / boiling range** | °C >100 °F >212 |
| **Appearance** | No information available | **Melting point / melting range** | °C >0 °F >32 |
| **Odor** | No data available | **flash point** | °C >90 °F >160 |
| **Odor Threshold** | No data available | **Autoignition Temperature** | °C No data available °F No data available |

| | | | |
|---|---|---|---|
| **Evaporation rate** | No data available | **Partition coefficient n-octanol/water** | No data available |
| **Flammability (solid, gas)** | No data available | | |
| **Oxidizing properties** | No information available | **Vapor Pressure** | No data available |
| **Water solubility soluble** | soluble | **vapor density** | No data available |
| **Upper explosion limit** | No data available | **Viscosity** | No data available |
| **Lower explosion limit** | No data available | **pH value** | 6-8 |

## SECTION 10: Stability and reactivity

| | | | |
|---|---|---|---|
| **Stability** | Stable under normal conditions. | **Hazardous decomposition products** | Carbon oxides. |
| **Materials to avoid** | Strong acids and oxidizing agents. Acetic anhydride. Isocyanates. Ammonia. Bases. | **polymerization** | Hazardous polymerization does not occur. |
| **Possibility of hazardous reactions** | Hazardous reaction has not been reported | **Conditions to avoid** | None under normal processing. |

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| | | | |
|---|---|---|---|
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| **Inhalation** | May be harmful by inhalation. | **Sensitization** | None. |
| **Ingestion** | May be harmful if swallowed. | **Target Organ Effects** | None under normal use conditions |
| **Carcinogenic effects** | None. | | |

## SECTION 12: Ecological information

| | | | |
|---|---|---|---|
| **Ecotoxicity** | Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants. | **Chronic aquatic toxicity** | Not classified chronic. |
| | | **Mobility** | Log Pow. |
| | | **Biodegradation** | Inherently biodegradable. |
| **Acute aquatic toxicity** | Not classified for acute. | **Bioaccumulation** | Material does not bioaccumulate. |

| Chemical Name | Freshwater Algae Data | Water Flea Data | Freshwater Fish Species Data | Microtox Data | log Pow |
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Dispose of contents/containers in accordance with local regulations.

## SECTION 14: Transport information

### IATA

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| **Hazard Class** | None | **UN-No** | None |
| **Subsidiary class** | None | **Environmental hazards** | None |

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| Component | US TSCA |
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