Material Safety Datasheet (MSDS)

Column-Pure RNA Miniprep Kit (Cat. No. G4002)

Kit Components
RTL Lysis Buffer
RNA Binding Buffer
Buffer RW1
Buffer RW2

Applied Biological Materials Inc.
1-3671 Viking Way, Richmond
BC, CANADA, V6V 2J5
www.abmgood.com

Updated: 24/07/2024
Version2.2

Material Safety Datasheet (MSDS)

Updated: 26/03/2025
Version 2.2
www.abmgood.com

Applied Biological Materials Inc.
1-3671 Viking Way,
Richmond, BC, CANADA
V6V 2J5

Section 1 – Product and Company Information

Product Name	RTL Lysis Buffer
Catalog # From Manufacturer	G4002
Original Manufacturer	Applied Biological Materials, Inc
Address	#1-3671 Viking Way Richmond BC V6V 2J5 CA
Technical Phone	604-247-2416

Company	Applied Biological Materials Inc.
Address	#1-3671 Viking Way Richmond BC V6V 2J5 CA
Fax	604-247-2414
Emergency Phone	866-757-2414

Section 2 – Composition/Information on Ingredient

Substance Name	Guanidine thiocyanate
CAS Number	593-84-0
Concentration	30-50%
Other Components	Components not listed here are not hazardous or their concentrations do not exceed the limits specified in the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Section 3 – Hazards Identification

HMIS Classification	• Health Hazard: 2 • Flammability: 0 • Reactivity: 0

NFPA Rating	• Health Hazard: 2 • Flammability: 0 • Reactivity: 0

Section 4 – First Aid Measures

Eye Contact	Small amounts splashed into eyes can cause irreversible tissue damage and blindness. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Remove contact lenses. Protect unharmed eye.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.
Inhalation	If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician
Ingestion	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5 – Fire Fighting Measures

Suitable Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Specific Hazards	Do not allow run-off from fire fighting to enter drains or water courses. Exposure to decomposition products may be a hazard to health.

Section 6 – Accidental Release Measures

Personal Precautions	Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust. Ensure adequate ventilation.
Methods for Cleaning Up	Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 – Handling and Storage

Handling	Do not breathe vapors/dust. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations.
Storage	Keep container tightly closed in a dry and well-ventilated area. Store at room

	temperature.

Section 8 – Exposure Controls/ PPE

Engineering Controls	Safety shower and eye bath. Mechanical exhaust required.
Personal Protective Equipment	• Hand: Protective gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). • Eye: Chemical safety goggles. Tightly fitting safety goggles. Wear face-shield and protective suit for abnormal processing problems. Do not wear contact lenses. Ensure that eyewash stations and safety showers are close to the workstation location.
General Hygiene Measures	Avoid contact with the skin and eyes. Wash thoroughly after handling.

Section 9 – Physical and Chemical Properties

Odour	No data available.
Melting Point	No data available.
Boiling Temperature (°C)	No data available.
Density	No data available.
Vapour Pressure	No data available.
Solubility in Water	Soluble.
Flash Point	No data available.
Explosion Limits	No data available.
Ignition Temperature	No data available.

Section 10 – Stability and Reactivity

Stability	• Stable under recommended storage conditions. • Materials to Avoid: No dangerous reaction known under normal conditions.
Hazardous Decomposition Products	• Hazardous decomposition products formed under fire conditions. Keep away from oxidizing agents, and acidic or alkaline products.

Section 11 – Toxicological Information

Route of Exposure	• Acute oral toxicity: LD50 Oral (Rat, female): 593mg/kg. Method: OECD Test Guideline 401. • Acute toxicity (other routes of administration): LD50 (Mouse): 300mg/kg.
Signs and Symptoms of Exposure	Extremely corrosive and destructive to tissue. Causes skin burns and eye damage.

Section 12 – Ecological Information

Component: guanidine thiocyanate
•Toxicity to fish : LC50 (Poecilia reticulata (guppy)): 89.1 mg/l Exposure time: 96 h
•Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia): 42.4 mg/l Exposure time: 48 h
•Toxicity to fish (Chronic toxicity) : NOEC (Poecilia reticulata (guppy)): 25 mg/l Exposure time: 96 d

Section 13 – Disposal Considerations

The product should not be allowed to enter drains, water courses or the soil. Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state, and local environmental regulations.

Section 14 – Transportation Information

DOT	• This substance is considered to be non-hazardous for transport.
IATA	• Non-hazardous for air transport.

Section 15 – Regulatory Information

- WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
- DSL: No
- NDSL: No

Section 16 – Other Information

The information contained in this Material Safety Datasheet is believed to be accurate but it is the responsibility of the user or supplier to determine the applicability of these data to the formulation of necessary safety precautions.

Applied Biological Materials Inc. shall not be held responsible for any damage resulting from the use of the above product or the information contained in this Material Safety Datasheet.

Material Safety Datasheet (MSDS)

Updated: 26/03/2025
Version 2.2
www.abmgood.com

Applied Biological Materials Inc.
1-3671 Viking Way,
Richmond, BC, CANADA
V6V 2J5

Section 1 – Product and Company Information

Product Name	RNA Binding Buffer
Catalog # From Manufacturer	G4002
Original Manufacturer	Applied Biological Materials, Inc
Address	#1-3671 Viking Way Richmond BC V6V 2J5 CA
Technical Phone	604-247-2416

Company	Applied Biological Materials Inc.
Address	#1-3671 Viking Way Richmond BC V6V 2J5 CA
Fax	604-247-2414
Emergency Phone	866-757-2414

Section 2 – Composition/Information on Ingredient

Other Components	Components not listed here are not hazardous or their concentrations do not exceed the limits specified in the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Section 3 – Hazards Identification

HMIS Classification	• Health Hazard: 0 • Flammability: 0 • Reactivity: 0
NFPA Rating	• Health: 0 • Flammability: 0 • Reactivity: 0

Section 4 – First Aid Measures

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin Contact	Generally the product does not irritate the skin. Wash off with soap and plenty of water.
Inhalation	If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.
Ingestion	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician if symptoms persist.

Section 5 – Fire Fighting Measures

Suitable Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Specific Hazards	No special measures required.

Section 6 – Accidental Release Measures

Personal Precautions	Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust. Ensure adequate ventilation.
Methods for Cleaning Up	Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 – Handling and Storage

Handling	User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.
Storage	Keep container tightly closed in a dry and well-ventilated area. Store at room temperature.

Section 8 – Exposure Controls/ PPE

Engineering Controls	Safety shower and eye bath. Mechanical exhaust required.
Personal Protective Equipment	• Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. • Hand: Protective gloves.

	• Eye: Chemical safety goggles.
General Hygiene Measures	Wash thoroughly after handling.

Section 9 – Physical and Chemical Properties

Odour	Characteristic
Melting Point	No data available.
Boiling Temperature (°C)	No data available.
Density	No data available.
Vapour Pressure	No data available.
Solubility in Water	Soluble.
Flash Point	No data available.
Explosion Limits	No data available.
Ignition Temperature	No data available.

Section 10 – Stability and Reactivity

Stability	• Stable under recommended storage conditions. • Materials to Avoid: No dangerous reaction known under normal conditions.
Hazardous Decomposition Products	• None under normal conditions.
Hazardous Polymerization	• Will not occur.

Section 11 – Toxicological Information

Route of Exposure	• Skin Contact: May cause skin irritation. • Skin Absorption: May be harmful if absorbed through the skin. • Eye Contact: May cause eye irritation. • Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled. • Ingestion: May be harmful if swallowed.
Signs and Symptoms of Exposure	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12 – Ecological Information

N/A

Section 13 – Disposal Considerations

Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state, and local environmental regulations.

Section 14 – Transportation Information

DOT	• This substance is considered to be non-hazardous for transport.
IATA	• Non-hazardous for air transport.

Section 15 – Regulatory Information

- WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
- DSL: No
- NDSL: No

Section 16 – Other Information

The information contained in this Material Safety Datasheet is believed to be accurate but it is the responsibility of the user or supplier to determine the applicability of these data to the formulation of necessary safety precautions.

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Material Safety Datasheet (MSDS)

Updated: 26/03/2025
Version 2.2
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Applied Biological Materials Inc.
1-3671 Viking Way,
Richmond, BC, CANADA
V6V 2J5

Section 1 – Product and Company Information

Product Name	Buffer RW1
Catalog # From Manufacturer	G4002
Original Manufacturer	Applied Biological Materials, Inc
Address	#1-3671 Viking Way Richmond BC V6V 2J5 CA
Technical Phone	604-247-2416

Company	Applied Biological Materials Inc.
Address	#1-3671 Viking Way Richmond BC V6V 2J5 CA
Fax	604-247-2414
Emergency Phone	866-757-2414

Section 2 – Composition/Information on Ingredient

Substance Name	Guanidine thiocyanate
CAS Number	593-84-0
Concentration	10-20%
Substance Name	Ethanol
CAS Number	64-17-5
Concentration	1-20%
Other Components	Components not listed here are not hazardous or their concentrations do not exceed the limits specified in the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Section 3 – Hazards Identification

HMIS Classification	• Health Hazard: 3 • Flammability: 2 • Reactivity: 0
NFPA Rating	• Health Hazard: 3 • Flammability: 2 • Reactivity: 0

Section 4 – First Aid Measures

Eye Contact	Small amounts splashed into eyes can cause irreversible tissue damage and blindness. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Remove contact lenses. Protect unharmed eye.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.
Inhalation	If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician
Ingestion	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5 – Fire Fighting Measures

Suitable Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Specific Hazards	Do not allow run-off from fire fighting to enter drains or water courses. Exposure to decomposition products may be a hazard to health.

Section 6 – Accidental Release Measures

Personal Precautions	Exercise appropriate precautions to minimize direct contact with skin or eyes. Use personal protective equipment. Remove all sources of ignition. Ensure adequate ventilation.
Methods for Cleaning Up	Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 – Handling and Storage

Handling	Do not breathe vapors/dust. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations.
Storage	Keep container tightly closed in a dry and well-ventilated area. Store at room temperature.

Section 8 – Exposure Controls/ PPE

Engineering Controls	Safety shower and eye bath. Mechanical exhaust required.
Personal Protective Equipment	• Hand: Protective gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). • Eye: Chemical safety goggles. Tightly fitting safety goggles. Wear face-shield and protective suit for abnormal processing problems. Do not wear contact lenses. Ensure that eyewash stations and safety showers are close to the workstation location.
General Hygiene Measures	Avoid contact with the skin and eyes. Wash thoroughly after handling.

Section 9 – Physical and Chemical Properties

Odour	Characteristic
Melting Point	No data available.
Boiling Temperature (°C)	100°C
Density	50°C
Vapour Pressure	No data available.
Solubility in Water	Soluble.
Flash Point	No data available.
Explosion Limits	No data available.
Ignition Temperature	No data available.

Section 10 – Stability and Reactivity

Stability	• Stable under recommended storage conditions. • Materials to Avoid: No dangerous reaction known under normal conditions.
Hazardous Decomposition Products	• Hazardous decomposition products formed under fire conditions. Keep away from heat, flames, sparks, oxidizing agents, acidic or alkaline products.

Section 11 – Toxicological Information

Route of Exposure	<u>Guanidine thiocyanate</u> • Acute oral toxicity: LD50 Oral (Rat, female): 593mg/kg. Method: OECD Test Guideline 401. • Acute toxicity (other routes of administration): LD50 (Mouse): 300mg/kg. <u>Ethanol</u> • Acute oral toxicity: LD50 Oral (Rat): 10470mg/kg. • Acute inhalation toxicity: LD50 (Rat): 20000ppm. Exposure time: 10h.
Signs and Symptoms of Exposure	Extremely corrosive and destructive to tissue. Causes skin burns and eye damage.

Section 12 – Ecological Information

<u>Component: guanidine thiocyanate</u>
•Toxicity to fish : LC50 (Poecilia reticulata (guppy)): 89.1 mg/l Exposure time: 96 h
•Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia): 42.4 mg/l Exposure time: 48 h
•Toxicity to fish (Chronic toxicity) : NOEC (Poecilia reticulata (guppy)): 25 mg/l Exposure time: 96 d

Section 13 – Disposal Considerations

The product should not be allowed to enter drains, water courses or the soil. Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state, and local environmental regulations.

Section 14 – Transportation Information

DOT	• This substance is considered to be non-hazardous for transport.
IATA	• Non-hazardous for air transport.

Section 15 – Regulatory Information

- WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
- DSL: No
- NDSL: No

Section 16 – Other Information

The information contained in this Material Safety Datasheet is believed to be accurate but it is the responsibility of the user or supplier to determine the applicability of these data to the formulation of necessary safety precautions.

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Material Safety Datasheet (MSDS)

Updated: 26/03/2025
Version 2.2
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Applied Biological Materials Inc.
1-3671 Viking Way,
Richmond, BC, CANADA
V6V 2J5

Section 1 – Product and Company Information

Product Name	Buffer RW2
Catalog # From Manufacturer	G4002
Original Manufacturer	Applied Biological Materials, Inc
Address	#1-3671 Viking Way Richmond BC V6V 2J5 CA
Technical Phone	604-247-2416

Company	Applied Biological Materials Inc.
Address	#1-3671 Viking Way Richmond BC V6V 2J5 CA
Fax	604-247-2414
Emergency Phone	866-757-2414

Section 2 – Composition/Information on Ingredient

Other Components	Components not listed here are not hazardous or their concentrations do not exceed the limits specified in the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Section 3 – Hazards Identification

HMIS Classification	• Health Hazard: 0 • Flammability: 0 • Reactivity: 0
NFPA Rating	• Health: 0 • Flammability: 0 • Reactivity: 0

Section 4 – First Aid Measures

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin Contact	Generally the product does not irritate the skin. Wash off with soap and plenty of water.
Inhalation	If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.
Ingestion	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician if symptoms persist.

Section 5 – Fire Fighting Measures

Suitable Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Specific Hazards	No special measures required.

Section 6 – Accidental Release Measures

Personal Precautions	Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust. Ensure adequate ventilation.
Methods for Cleaning Up	Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 – Handling and Storage

Handling	User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.
Storage	Keep container tightly closed in a dry and well-ventilated area. Store at room temperature.

Section 8 – Exposure Controls/ PPE

Engineering Controls	Safety shower and eye bath. Mechanical exhaust required.
Personal Protective Equipment	• Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. • Hand: Protective gloves.

	• Eye: Chemical safety goggles.
General Hygiene Measures	Wash thoroughly after handling.

Section 9 – Physical and Chemical Properties

Odour	Characteristic
Melting Point	No data available.
Boiling Temperature (°C)	No data available.
Density	No data available.
Vapour Pressure	No data available.
Solubility in Water	Soluble.
Flash Point	No data available.
Explosion Limits	No data available.
Ignition Temperature	No data available.

Section 10 – Stability and Reactivity

Stability	• Stable under recommended storage conditions. • Materials to Avoid: No dangerous reaction known under normal conditions.
Hazardous Decomposition Products	• None under normal conditions.
Hazardous Polymerization	• Will not occur.

Section 11 – Toxicological Information

Route of Exposure	• Skin Contact: May cause skin irritation. • Skin Absorption: May be harmful if absorbed through the skin. • Eye Contact: May cause eye irritation. • Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled. • Ingestion: May be harmful if swallowed.
Signs and Symptoms of Exposure	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12 – Ecological Information

N/A

Section 13 – Disposal Considerations

Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state, and local environmental regulations.

Section 14 – Transportation Information

DOT	• This substance is considered to be non-hazardous for transport.
IATA	• Non-hazardous for air transport.

Section 15 – Regulatory Information

- WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
- DSL: No
- NDSL: No

Section 16 – Other Information

The information contained in this Material Safety Datasheet is believed to be accurate but it is the responsibility of the user or supplier to determine the applicability of these data to the formulation of necessary safety precautions.

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