

RNA KIT ASSY (P/N 292-27913-91, 292-27913-10, 292-27913-30) includes RNA Separation Buffer and RNA Marker solution.

Safety Data Sheet

Section 1: Identification of the substance or mixture and of the supplier

Product name: RNA Separation Buffer
 Name of supplier: Shimadzu Corporation
 Address: 1 Nishinokyo-Kuwabaracho, Nakagyo-ku, Kyoto 604-8511, Japan
 Section in charge: Clinical & Biotechnology Business Unit, Life Science Business Department
 Telephone: +81-75-823-1351
 FAX: +81-75-823-1364
 Use of the product: This product is for analytical research use only.
 Not applicable for clinical and/or diagnostic purposes.

Section 2: Hazard identification

GHS classification: Not Applicable for classification / Not classified
 GHS label elements: Not Applicable
 Signal word: None
 Hazard statements: -
 Prevention: -
 Response: -
 Storage: -
 Disposal: -

Section 3: Composition/information on ingredients

Substance/ mixture: Mixture
 General description: Buffer solution including tris(hydroxymethyl)aminomethane.

Component	CAS No.	Concentration (weight %)
water	7732-18-5	< 97
N-tris (hydroxymethyl)methyl-3-aminopropanesulfonic Acid	29915-38-6	< 2.0
tris(hydroxymethyl)aminomethane	77-86-1	< 1.0
hydroxyethyl cellulose	9004-62-0	< 0.5
EDTA-disodium salt dihydrate	6381-92-6	< 0.2

Section 4: First-aid measures

Inhalation: Remove to uncontaminated area and supply fresh air. Promptly consult doctor, if needed.
 Skin contact: Take off contaminated clothing and wash skin with plenty of water.
 Eye contact: Flush eyes with plenty of water for at least 15 minutes and obtain medical attention.
 Ingestion: Drink plenty of water to induce vomiting and obtain medical attention.

Section 5: Fire-fighting measures

Suitable extinguishing media: Use water mist, foam, powder, carbon dioxide, dry sand.
 Specific hazards arising from fire-fighting: Gases will form upon combustion of carbon monoxide, nitrogen oxides.
 Special fire-fighting measures: In case of fire in the surrounding area, promptly move the container to a safe place.

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures: Wear appropriate protective equipment.
 Environmental precautions: Absorb as much of the material as possible with paper towel or sand.
 Methods and materials for containment and cleaning up: Prevent leakage and soak up completely with absorbent material.

Section 7: Handling and storage

Handling:	Wear personal protective equipment to prevent inhalation and the product from conducting eyes or skin.
Storage:	Keep tightly closed in dark cool and well-ventilated place.

Section 8: Exposure controls/personal protection

Exposure limits:	No occupational exposure limit values and/or biological limit values are established.
Permitted concentration:	Japan Society for Occupational Health: Not established ACGIH: Not established
Equipment measures:	Eyewash equipment
Respiratory protection:	Not required
Hand protection:	Wear impervious glove.
Eye protection:	Wear tightly sealed goggles.
Skin and body protection:	Wear laboratory coat.

Section 9: Physical and chemical properties

Physical state, color:	Colorless, transparent liquid
Odor	Odorless
Melting/ Freezing point:	No data available
Boiling point/ boiling range:	No data available
Flammability:	Not applicable
Lower/Upper explosion limit:	Not classified as explosive.
Flash point:	No data available
Auto-ignition temperature:	The product does not combust spontaneously.
Decomposition temperature:	No data available
pH:	8.4 at 20°C
Kinematic viscosity:	No data available
Solubility:	Readily soluble
Vapor pressure:	No data available
Density and/or relative density:	No data available
Relative vapor density:	No data available
Particle characteristics:	Not applicable

Section 10: Stability and reactivity

Reactivity:	No information available
Chemical stability:	Stable under standard ambient conditions.
Possibility of hazardous reactions:	Hazardous reaction has not been reported.
Conditions to avoid:	Avoid physical stress e.g., direct sunlight, excess heat, or electrostatic discharge.
Incompatible materials:	No information available
Hazardous decomposition products:	No information available

Section 11: Toxicological information

No data available for the mixture.

Acute toxicity:	Not classified (Unknown toxic components in the mixture: $\geq 0.1\%$)
Skin corrosion/irritation:	Not classified due to insufficient data
Serious eye damage/eye irritation:	Not classified (Unknown toxic components in the mixture: $\geq 0.1\%$)
Reproductive or skin sensitization:	Not classified due to insufficient data.
Germ cell mutagenicity:	Not classified due to insufficient data.
Carcinogenicity:	Not classified due to insufficient data.
Reproductive toxicity:	Not classified due to insufficient data.
Specific target organ toxicity (single exposure):	Not classified due to insufficient data.
Specific target organ toxicity (repeated exposure):	Not classified due to insufficient data.
Aspiration hazard:	Not classified (No kinematic viscosity data available.)

Section 12: Ecological information

No data available for the mixture.

Toxicity	Hazardous to the aquatic environment (acute): Not applicable for classification. Hazardous to the aquatic environment (chronic): Not applicable for classification.
Persistence and degradability:	No information available
Bioaccumulative potential:	No information available
Mobility in soil:	No information available
Other adverse effects:	Ozone depletion potential, photochemical ozone creation potential and/or global Warming potential: Not classified (Not listed in Annexes of Montreal Protocol.)

Section 13: Disposal considerations

Residual waste:	Dispose of contents/ container according to all federal, state, and local environmental regulations.
Contaminated container:	After removing the contents, dispose of contents/ container according to all federal, state, and local environmental regulations.

Section 14: Transport information

US DOT, IMDG (sea), ADR/RID (land), ICAO/IATA (air): No classification assigned.
Prior to transport, make sure no leakage is observed from the bottle and stow a cargo without dropping and turning over.

Section 15: Regulatory information

The composition/ information of ingredients is disclosed according to GHS. Comply with all countries, national and local regulation.

Section 16: Other information

References

- 1) National Institute of Technology and Evaluation: GHS; http://www.safe.nite.go.jp/ghs/ghs_index.html
- 2) National Institute of Technology and Evaluation: CHRIP; http://www.nite.go.jp/chem/chrip/chrip_search/systemTop
- 3) Ministry of Economy, Trade and Industry: GHS Mixture Classification System ver. 6.0 (According to GHS, sixth revised edition, 2015)

Information included in this document may be changed according to revision of laws and regulations or new discoveries, information, or test results. Although descriptions are based on reference materials, literature, and other information currently available, any values such as quantity and physical/chemical properties or evaluation described in this document are not guaranteed. Notes are provided assuming regular use. When using the material under special conditions, implement safety measures that are suitable for the intended purpose and use.

RNA KIT ASSY (P/N 292-27913-91, 292-27913-10, 292-27913-30) includes
RNA Separation Buffer and RNA Marker solution.

Safety Data Sheet

Section 1: Identification of the substance or mixture and of the supplier

Product name: RNA Marker solution
 Name of supplier: Shimadzu Corporation
 Address: 1 Nishinokyo-Kuwabaracho, Nakagyo-ku, Kyoto 604-8511, Japan
 Section in charge: Clinical & Biotechnology Business Unit, Life Science Business Department
 Telephone: +81-75-823-1351
 FAX: +81-75-823-1364
 Use of the product: This product is for analytical research use only.
 Not applicable for clinical and/or diagnostic purposes.

Section 2: Hazard identification

GHS classification: Not Applicable for classification / Not classified
 GHS label elements: Not Applicable
 Signal word: None
 Hazard statements: -
 Prevention: -
 Response: -
 Storage: -
 Disposal: -

Section 3: Composition/information on ingredients

Substance/ mixture: Mixture
 General description: Buffer solution including tris(hydroxymethyl)aminomethane.

Component	CAS No.	Concentration (weight %)
water	7732-18-5	< 97
N-tris (hydroxymethyl)methyl-3-aminopropanesulfonic Acid	29915-38-6	< 2.0
tris(hydroxymethyl)aminomethane	77-86-1	< 1.0
5-carboxyfluorescein	76823-03-5	< 0.3
EDTA-disodium salt dihydrate	6381-92-6	< 0.2

Section 4: First-aid measures

Inhalation: Remove to uncontaminated area and supply fresh air. Promptly consult doctor, if needed.
 Skin contact: Take off contaminated clothing and wash skin with plenty of water.
 Eye contact: Flush eyes with plenty of water for at least 15 minutes, and obtain medical attention.
 Ingestion: Drink plenty of water to induce vomiting, and obtain medical attention.

Section 5: Fire-fighting measures

Suitable extinguishing media: Use water mist, foam, powder, carbon dioxide, dry sand.
 Specific hazards arising from fire-fighting:
 Gases will form upon combustion of carbon monoxide, nitrogen oxides.
 Special fire-fighting measures: In case of fire in the surrounding area, promptly move the container to a safe place.

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures: Wear appropriate protective equipment.
 Environmental precautions: Absorb as much of the material as possible with paper towel or sand.
 Methods and materials for containment and cleaning up: Prevent leakage and soak up completely with absorbent material.

Section 7: Handling and storage

Handling:	Wear personal protective equipment to prevent inhalation and the product from conducting eyes or skin.
Storage:	Keep tightly closed in dark cool and well-ventilated place.

Section 8: Exposure controls/personal protection

Exposure limits:	No occupational exposure limit values and/or biological limit values are established.
Permitted concentration:	Japan Society for Occupational Health: Not established ACGIH: Not established
Equipment measures:	Eyewash equipment
Respiratory protection:	Not required
Hand protection:	Wear impervious glove.
Eye protection:	Wear tightly sealed goggles.
Skin and body protection:	Wear white coat.

Section 9: Physical and chemical properties

Physical state, color:	Colorless, transparent liquid
Odor	Odorless
Melting/ Freezing point:	No data available
Boiling point/ boiling range:	No data available
Flammability:	Not applicable
Lower/Upper explosion limit:	Not classified as explosive.
Flash point:	No data available
Auto-ignition temperature:	The product does not combust spontaneously.
Decomposition temperature:	No data available
pH:	8.4 at 20°C
Kinematic viscosity:	No data available
Solubility:	Readily soluble
Vapor pressure:	No data available
Density and/or relative density:	No data available
Relative vapor density:	No data available
Particle characteristics:	Not applicable

Section 10: Stability and reactivity

Reactivity:	No information available
Chemical stability:	Stable under standard ambient conditions.
Possibility of hazardous reactions:	Hazardous reaction has not been reported.
Conditions to avoid:	Avoid physical stress e.g., direct sunlight, excess heat, or electrostatic discharge.
Incompatible materials:	No information available
Hazardous decomposition products:	No information available

Section 11: Toxicological information

No data available for the mixture.

Acute toxicity:	Not classified (Unknown toxic components in the mixture: $\geq 0.1\%$)
Skin corrosion/irritation:	Not classified due to insufficient data
Serious eye damage/eye irritation:	Not classified (Unknown toxic components in the mixture: $\geq 0.1\%$)
Reproductive or skin sensitization:	Not classified due to insufficient data.
Germ cell mutagenicity:	Not classified due to insufficient data.
Carcinogenicity:	Not classified due to insufficient data.
Reproductive toxicity:	Not classified due to insufficient data.
Specific target organ toxicity (single exposure):	Not classified due to insufficient data.
Specific target organ toxicity (repeated exposure):	Not classified due to insufficient data.
Aspiration hazard:	Not classified (No kinematic viscosity data available.)

Section 12: Ecological information

No data available for the mixture.

Toxicity	Hazardous to the aquatic environment (acute): Not applicable for classification. Hazardous to the aquatic environment (chronic): Not applicable for classification.
Persistence and degradability:	No information available
Bioaccumulative potential:	No information available
Mobility in soil:	No information available
Other adverse effects:	Ozone depletion potential, photochemical ozone creation potential and/or global Warming potential: Not classified (Not listed in Annexes of Montreal Protocol.)

Section 13: Disposal considerations

Residual waste:	Dispose of contents/ container according to all federal, state, and local environmental regulations.
Contaminated container:	After removing the contents, dispose of contents/ container according to all federal, state, and local environmental regulations.

Section 14: Transport information

US DOT, IMDG (sea), ADR/RID (land), ICAO/IATA (air): No classification assigned.
Prior to transport, make sure no leakage is observed from the bottle and stow a cargo without dropping and turning over.

Section 15: Regulatory information

The composition/ information of ingredients is disclosed according to GHS. Comply with all countries, national and local regulation.

Section 16: Other information

References

- 1) National Institute of Technology and Evaluation: GHS; http://www.safe.nite.go.jp/ghs/ghs_index.html
- 2) National Institute of Technology and Evaluation: CHRIP; http://www.nite.go.jp/chem/chrip/chrip_search/systemTop
- 3) Ministry of Economy, Trade and Industry: GHS Mixture Classification System ver. 6.0 (According to GHS, sixth revised edition, 2015)

Information included in this document may be changed according to revision of laws and regulations or new discoveries, information, or test results. Although descriptions are based on reference materials, literature, and other information currently available, any values such as quantity and physical/chemical properties or evaluation described in this document are not guaranteed. Notes are provided assuming regular use. When using the material under special conditions, implement safety measures that are suitable for the intended purpose and use.