

Section 2. Hazards identification

Hazard statements	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	No known significant effects or critical hazards. No known significant effects or critical hazards. H320 - Causes eye irritation.
Precautionary statements		
Prevention	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	Not applicable. Not applicable. Not applicable.
Response	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	Not applicable. Not applicable. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.
Storage	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	Not applicable. Not applicable. Not applicable.
Disposal	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	Not applicable. Not applicable. Not applicable.
Supplemental label elements	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	None known. None known. None known.
2.3 Other hazards		
Hazards not otherwise classified	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	None known. None known. None known.

Section 3. Composition/information on ingredients

Substance/mixture	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	Mixture Mixture Mixture
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Ingredient name	%	CAS number
10X AccuScript RT Buffer		
Potassium chloride	<10	7447-40-7
100 mM DTT		
(R*,R*)-1,4-Dimercaptobutane-2,3-diol	≤3	3483-12-3
AccuScript High Fidelity RT		
Glycerol	≥50 - ≤75	56-81-5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact	: 10X AccuScript RT Buffer	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	100 mM DTT	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	AccuScript High Fidelity RT	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.
Inhalation	: 10X AccuScript RT Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	100 mM DTT	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	AccuScript High Fidelity RT	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin contact	: 10X AccuScript RT Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	100 mM DTT	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	AccuScript High Fidelity RT	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	: 10X AccuScript RT Buffer	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	100 mM DTT	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Section 4. First aid measures

AccuScript High Fidelity RT

Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	No known significant effects or critical hazards. No known significant effects or critical hazards. Causes eye irritation.
Inhalation	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	No specific data. No specific data. Adverse symptoms may include the following: irritation watering redness
Inhalation	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	No specific data. No specific data. No specific data.
Skin contact	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	No specific data. No specific data. No specific data.
Ingestion	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	No specific data. No specific data. No specific data.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been
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Section 4. First aid measures

Specific treatments	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	ingested or inhaled. No specific treatment. No specific treatment. No specific treatment.
Protection of first-aiders	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	None known. None known. None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides Decomposition products may include the following materials: carbon dioxide carbon monoxide

5.3 Advice for firefighters

Section 5. Fire-fighting measures

Special protective actions for fire-fighters	: 10X AccuScript RT Buffer	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	100 mM DTT	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	AccuScript High Fidelity RT	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	: 10X AccuScript RT Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	100 mM DTT	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	AccuScript High Fidelity RT	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: 10X AccuScript RT Buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
	100 mM DTT	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
	AccuScript High Fidelity RT	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	: 10X AccuScript RT Buffer	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	100 mM DTT	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	AccuScript High Fidelity RT	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also

Section 6. Accidental release measures

6.2 Environmental precautions

: 10X AccuScript RT Buffer

the information in "For non-emergency personnel".

100 mM DTT

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

AccuScript High Fidelity RT

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : 10X AccuScript RT Buffer

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

100 mM DTT

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

AccuScript High Fidelity RT

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures : ~~10~~X AccuScript RT Buffer

Put on appropriate personal protective equipment (see Section 8).

100 mM DTT

Put on appropriate personal protective equipment (see Section 8).

AccuScript High Fidelity RT

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Section 7. Handling and storage

Advice on general occupational hygiene	: 10X AccuScript RT Buffer	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	100 mM DTT	
	AccuScript High Fidelity RT	
7.2 Conditions for safe storage, including any incompatibilities	: 10X AccuScript RT Buffer	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
	100 mM DTT	
	AccuScript High Fidelity RT	

7.3 Specific end use(s)

Section 7. Handling and storage

Recommendations	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications.
Industrial sector specific solutions	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	Not available. Not available. Not available.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
10X AccuScript RT Buffer Potassium chloride	None.
100 mM DTT (R*,R*)-1,4-Dimercaptobutane-2,3-diol	None.
AccuScript High Fidelity RT Glycerol	OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 10 mg/m ³ 8 hours. Form: Total dust OSHA PEL (United States, 5/2018). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 15 mg/m ³ 8 hours. Form: Total dust CAL OSHA PEL (United States, 5/2018). TWA: 5 mg/m ³ 8 hours. Form: respirable fraction TWA: 10 mg/m ³ 8 hours. Form: total dust

Biological exposure indices

No exposure indices known.

8.2 Exposure controls

Appropriate engineering controls	: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
Environmental exposure controls	: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures	: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection	: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Section 8. Exposure controls/personal protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : 10X AccuScript RT Buffer Liquid.
100 mM DTT Liquid.
AccuScript High Fidelity RT Liquid.
- Color** : 10X AccuScript RT Buffer Not available.
100 mM DTT Not available.
AccuScript High Fidelity RT Not available.
- Odor** : 10X AccuScript RT Buffer Not available.
100 mM DTT Not available.
AccuScript High Fidelity RT Not available.
- Odor threshold** : 10X AccuScript RT Buffer Not available.
100 mM DTT Not available.
AccuScript High Fidelity RT Not available.
- pH** : 10X AccuScript RT Buffer 8.3
100 mM DTT Not available.
AccuScript High Fidelity RT 8
- Melting point/freezing point** : 10X AccuScript RT Buffer Not available.
100 mM DTT 0°C (32°F)
AccuScript High Fidelity RT Not available.
- Boiling point, initial boiling point, and boiling range** : 10X AccuScript RT Buffer Not available.
100 mM DTT 100°C (212°F)
AccuScript High Fidelity RT Not available.

Flash point

Ingredient name	Closed cup			Open cup		
	°C	°F	Method	°C	°F	Method
100 mM DTT (R*,R*) -1,4-Dimercaptobutane- 2,3-diol	>110	>230	-	-	-	-
AccuScript High Fidelity RT						

Section 9. Physical and chemical properties and safety characteristics

	Glycerol	-	-	-	177	350.6	-
Evaporation rate	: 10X AccuScript RT Buffer	Not available.					
	100 mM DTT	Not available.					
	AccuScript High Fidelity RT	Not available.					
Flammability	: 10X AccuScript RT Buffer	Not applicable.					
	100 mM DTT	Not applicable.					
	AccuScript High Fidelity RT	Not applicable.					
Lower and upper explosion limit/flammability limit	: 10X AccuScript RT Buffer	Not available.					
	100 mM DTT	Not available.					
	AccuScript High Fidelity RT	Not available.					
Vapor pressure	:	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	Ingredient name	mm Hg	kPa	Method	mm Hg	kPa	Method
	10X AccuScript RT Buffer						
	water	17.5	2.3	-	92.258	12.3	-
	100 mM DTT						
	water	17.5	2.3	-	92.258	12.3	-
	AccuScript High Fidelity RT						
	water	17.5	2.3	-	92.258	12.3	-
	Glycerol	0.000075	0.00001	-	0.0025	0.00033	-
Relative vapor density	: 10X AccuScript RT Buffer	Not available.					
	100 mM DTT	Not available.					
	AccuScript High Fidelity RT	Not available.					
Relative density	: 10X AccuScript RT Buffer	Not available.					
	100 mM DTT	Not available.					
	AccuScript High Fidelity RT	Not available.					
Solubility(ies)	:	Media		Result			
	10X AccuScript RT Buffer			Soluble			
	water			Soluble			
	100 mM DTT			Soluble			
	water			Soluble			
	AccuScript High Fidelity RT			Soluble			
	water			Soluble			
Partition coefficient: n-octanol/water	: 10X AccuScript RT Buffer	Not applicable.					
	100 mM DTT	Not applicable.					
	AccuScript High Fidelity RT	Not applicable.					
Auto-ignition temperature	:	Ingredient name	°C	°F	Method		
	AccuScript High Fidelity RT						
	Glycerol	370	698	-			
Decomposition temperature	: 10X AccuScript RT Buffer	Not available.					
	100 mM DTT	Not available.					
	AccuScript High Fidelity RT	Not available.					

Section 9. Physical and chemical properties and safety characteristics

Viscosity : 10X AccuScript RT Buffer Not available.
 100 mM DTT Not available.
 AccuScript High Fidelity RT Not available.

Particle characteristics

Median particle size : 10X AccuScript RT Buffer Not applicable.
 100 mM DTT Not applicable.
 AccuScript High Fidelity RT Not applicable.

Section 10. Stability and reactivity

10.1 Reactivity : 10X AccuScript RT Buffer No specific test data related to reactivity available for this product or its ingredients.
 100 mM DTT No specific test data related to reactivity available for this product or its ingredients.
 AccuScript High Fidelity RT No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : 10X AccuScript RT Buffer The product is stable.
 100 mM DTT The product is stable.
 AccuScript High Fidelity RT The product is stable.

10.3 Possibility of hazardous reactions : 10X AccuScript RT Buffer Under normal conditions of storage and use, hazardous reactions will not occur.
 100 mM DTT Under normal conditions of storage and use, hazardous reactions will not occur.
 AccuScript High Fidelity RT Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : 10X AccuScript RT Buffer No specific data.
 100 mM DTT No specific data.
 AccuScript High Fidelity RT No specific data.

10.5 Incompatible materials : 10X AccuScript RT Buffer May react or be incompatible with oxidizing materials.
 100 mM DTT May react or be incompatible with oxidizing materials.
 AccuScript High Fidelity RT May react or be incompatible with oxidizing materials.

10.6 Hazardous decomposition products : 10X AccuScript RT Buffer Under normal conditions of storage and use, hazardous decomposition products should not be produced.
 100 mM DTT Under normal conditions of storage and use, hazardous decomposition products should not be produced.
 AccuScript High Fidelity RT Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Section 11. Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
10X AccuScript RT Buffer Potassium chloride	LD50 Oral	Rat	2600 mg/kg	-
AccuScript High Fidelity RT Glycerol	LD50 Oral	Rat	12600 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
10X AccuScript RT Buffer Potassium chloride	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
AccuScript High Fidelity RT Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
100 mM DTT (R*,R*)-1,4-Dimercaptobutane-2,3-diol	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

10X AccuScript RT Buffer
100 mM DTT
AccuScript High Fidelity RT

Not available.
Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact

10X AccuScript RT Buffer
100 mM DTT
AccuScript High Fidelity RT

No known significant effects or critical hazards.
No known significant effects or critical hazards.
Causes eye irritation.

Section 11. Toxicological information

Inhalation	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	No specific data. No specific data. Adverse symptoms may include the following: irritation watering redness
Inhalation	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	No specific data. No specific data. No specific data.
Skin contact	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	No specific data. No specific data. No specific data.
Ingestion	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	No specific data. No specific data. No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects	: Not available.
Potential delayed effects	: Not available.

Long term exposure

Potential immediate effects	: Not available.
Potential delayed effects	: Not available.

Potential chronic health effects

General	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Carcinogenicity	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Reproductive toxicity	: 10X AccuScript RT Buffer 100 mM DTT AccuScript High Fidelity RT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Section 11. Toxicological information

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
10X AccuScript RT Buffer 10X AccuScript RT Buffer Potassium chloride	46428.6 2600	N/A N/A	N/A N/A	N/A N/A	N/A N/A
100 mM DTT 100 mM DTT (R*,R*)-1,4-Dimercaptobutane-2,3-diol	33333.3 500	N/A N/A	N/A N/A	N/A N/A	N/A N/A
AccuScript High Fidelity RT Glycerol	12600	N/A	N/A	N/A	N/A

Other information : 100 mM DTT

Adverse symptoms may include the following: May cause sensitization by skin contact.

Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
10X AccuScript RT Buffer Potassium chloride	Acute EC50 9.24 g/L Fresh water	Algae - <i>Desmodesmus subspicatus</i>	72 hours
	Acute EC50 1337000 µg/l Fresh water	Algae - <i>Navicula seminulum</i>	96 hours
	Acute LC50 9.68 mg/l Fresh water	Crustaceans - <i>Pseudosida ramosa</i> - Neonate	48 hours
	Acute LC50 93000 µg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 509.65 mg/l Fresh water	Fish - <i>Danio rerio</i>	96 hours
100 mM DTT (R*,R*) -1,4-Dimercaptobutane-2,3-diol	Acute LC50 27000 µg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
AccuScript High Fidelity RT Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
AccuScript High Fidelity RT Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
10X AccuScript RT Buffer Potassium chloride	-	-	Readily

12.3 Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
10X AccuScript RT Buffer Potassium chloride	-0.46	-	Low
AccuScript High Fidelity RT Glycerol	-1.76	-	Low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

12.5 Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

DOT / TDG / Mexico / IMDG / IATA : Not regulated.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Federal regulations : TSCA 8(a) CDR Exempt/Partial exemption: Not determined
Clean Water Act (CWA) 311: Edetic acid

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed


SARA 302/304

Composition/information on ingredients

No products were found.


SARA 304 RQ : Not applicable.

SARA 311/312

Classification :  10X AccuScript RT Buffer
100 mM DTT
AccuScript High Fidelity RT

Not applicable.
Not applicable.
EYE IRRITATION - Category 2B

Composition/information on ingredients

Name	%	Classification
 10X AccuScript RT Buffer Potassium chloride	<10	EYE IRRITATION - Category 2B
100 mM DTT (R*,R*)-1,4-Dimercaptobutane-2,3-diol	≤3	ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
AccuScript High Fidelity RT Glycerol	≥50 - ≤75	EYE IRRITATION - Category 2B

State regulations

Massachusetts : The following components are listed: GLYCERINE MIST

New York : None of the components are listed.

New Jersey :  The following components are listed: GLYCERIN

Pennsylvania : The following components are listed: 1,2,3-PROPANETRIOL

California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Section 15. Regulatory information

[Stockholm Convention on Persistent Organic Pollutants](#)

Not listed.

[Rotterdam Convention on Prior Informed Consent \(PIC\)](#)

Not listed.

[UNECE Aarhus Protocol on POPs and Heavy Metals](#)


Not listed.

[Inventory list](#)

Australia	: All components are listed or exempted.
Canada	: All components are listed or exempted.
China	: All components are listed or exempted.
Japan	: Japan inventory (CSCL) : Not determined. Japan inventory (ISHL) : Not determined.
New Zealand	: All components are listed or exempted.
Philippines	: All components are listed or exempted.
Republic of Korea	: Not determined.
Taiwan	: All components are listed or exempted.
Thailand	: Not determined.
Turkey	: Not determined.
United States	: All components are active or exempted.
Viet Nam	: All components are listed or exempted.

Section 16. Other information

[Procedure used to derive the classification](#)

Classification	Justification
 AccuScript High Fidelity RT EYE IRRITATION - Category 2B	Calculation method

[History](#)

Date of issue/Date of revision	: 11/06/2023
Date of previous issue	: 08/02/2020
Version	: 8

Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available UN = United Nations
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 Indicates information that has changed from previously issued version.

[Notice to reader](#)

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