

SAFETY DATA SHEET

Low Input QuickAmp WT Labeling Kit - No Dye, Part Number 5190-2942

Section 1. Identification

Product identifier	: Low Input QuickAmp WT Labeling Kit - No Dye, Part Number 5190-2942																				
Part no. (chemical kit)	: 5190-2942																				
Part no.	: <table> <tr><td>☑ Nuclease-Free Water</td><td>5190-2328</td></tr> <tr><td>T7 Primer</td><td>5190-2320</td></tr> <tr><td>5X First Strand Buffer</td><td>5190-2321</td></tr> <tr><td>0.1 M DTT</td><td>5190-2322</td></tr> <tr><td>10 mM dNTP Mix</td><td>5190-2323</td></tr> <tr><td>AffinityScript RT RNase Block Mix</td><td>5190-2324</td></tr> <tr><td>5X Transcription Buffer</td><td>5190-2325</td></tr> <tr><td>NTP Mix</td><td>5190-2326</td></tr> <tr><td>T7 RNA Polymerase Blend</td><td>5190-2327</td></tr> <tr><td>WT Primer Mix</td><td>5190-2941</td></tr> </table>	☑ Nuclease-Free Water	5190-2328	T7 Primer	5190-2320	5X First Strand Buffer	5190-2321	0.1 M DTT	5190-2322	10 mM dNTP Mix	5190-2323	AffinityScript RT RNase Block Mix	5190-2324	5X Transcription Buffer	5190-2325	NTP Mix	5190-2326	T7 RNA Polymerase Blend	5190-2327	WT Primer Mix	5190-2941
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T7 RNA Polymerase Blend	5190-2327																				
WT Primer Mix	5190-2941																				
Material uses	: Analytical reagent. <table> <tr><td>Nuclease-Free Water</td><td>0.25 ml</td></tr> <tr><td>T7 Primer</td><td>0.024 ml</td></tr> <tr><td>5X First Strand Buffer</td><td>0.1 ml</td></tr> <tr><td>0.1 M DTT</td><td>0.07 ml</td></tr> <tr><td>10 mM dNTP Mix</td><td>0.02 ml</td></tr> <tr><td>AffinityScript RNase Block Mix</td><td>0.036 ml</td></tr> <tr><td>5X Transcription Buffer</td><td>0.16 ml</td></tr> <tr><td>NTP Mix</td><td>0.035 ml</td></tr> <tr><td>T7 RNA Polymerase Blend</td><td>0.01 ml</td></tr> <tr><td>WT Primer Mix</td><td>0.03 ml</td></tr> </table>	Nuclease-Free Water	0.25 ml	T7 Primer	0.024 ml	5X First Strand Buffer	0.1 ml	0.1 M DTT	0.07 ml	10 mM dNTP Mix	0.02 ml	AffinityScript RNase Block Mix	0.036 ml	5X Transcription Buffer	0.16 ml	NTP Mix	0.035 ml	T7 RNA Polymerase Blend	0.01 ml	WT Primer Mix	0.03 ml
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T7 RNA Polymerase Blend	0.01 ml																				
WT Primer Mix	0.03 ml																				
Supplier/Manufacturer	: Agilent Technologies, Inc. 5301 Stevens Creek Blvd Santa Clara, CA 95051, USA 800-227-9770																				
Emergency telephone number (with hours of operation)	: CHEMTREC®: 1-800-424-9300																				

Section 2. Hazard identification

Classification of the substance or mixture

☑ AffinityScript RT RNase Block Mix

H320 EYE IRRITATION - Category 2B

5X Transcription Buffer

H320 EYE IRRITATION - Category 2B

T7 RNA Polymerase Blend

H320 EYE IRRITATION - Category 2B

GHS label elements

Section 2. Hazard identification

Signal word	: Nuclease-Free Water T7 Primer 5X First Strand Buffer 0.1 M DTT 10 mM dNTP Mix AffinityScript RT RNase Block Mix 5X Transcription Buffer NTP Mix T7 RNA Polymerase Blend WT Primer Mix	No signal word. No signal word. No signal word. No signal word. No signal word. Warning Warning No signal word. Warning No signal word.
Hazard statements	: Nuclease-Free Water T7 Primer 5X First Strand Buffer 0.1 M DTT 10 mM dNTP Mix AffinityScript RT RNase Block Mix 5X Transcription Buffer NTP Mix T7 RNA Polymerase Blend WT Primer Mix	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. H320 - Causes eye irritation. H320 - Causes eye irritation. No known significant effects or critical hazards. H320 - Causes eye irritation. No known significant effects or critical hazards.
<u>Precautionary statements</u>		
Prevention	: Nuclease-Free Water T7 Primer 5X First Strand Buffer 0.1 M DTT 10 mM dNTP Mix AffinityScript RT RNase Block Mix 5X Transcription Buffer NTP Mix T7 RNA Polymerase Blend WT Primer Mix	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Response	: Nuclease-Free Water T7 Primer 5X First Strand Buffer 0.1 M DTT 10 mM dNTP Mix AffinityScript RT RNase Block Mix 5X Transcription Buffer NTP Mix T7 RNA Polymerase Blend WT Primer Mix	Not applicable. Not applicable. Not applicable. 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. 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. 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. Not applicable.

Section 2. Hazard identification

Storage	: <input checked="" type="checkbox"/> Nuclease-Free Water	Not applicable.	
	T7 Primer	Not applicable.	
	5X First Strand Buffer	Not applicable.	
	0.1 M DTT	Not applicable.	
	10 mM dNTP Mix	Not applicable.	
	AffinityScript RT RNase Block Mix	Not applicable.	
	5X Transcription Buffer	Not applicable.	
	NTP Mix	Not applicable.	
	T7 RNA Polymerase Blend	Not applicable.	
	WT Primer Mix	Not applicable.	
	Disposal	: <input checked="" type="checkbox"/> Nuclease-Free Water	Not applicable.
		T7 Primer	Not applicable.
		5X First Strand Buffer	Not applicable.
0.1 M DTT		Not applicable.	
10 mM dNTP Mix		Not applicable.	
AffinityScript RT RNase Block Mix		Not applicable.	
5X Transcription Buffer		Not applicable.	
NTP Mix		Not applicable.	
T7 RNA Polymerase Blend		Not applicable.	
WT Primer Mix		Not applicable.	
Supplemental label elements		: <input checked="" type="checkbox"/> Nuclease-Free Water	None known.
		T7 Primer	None known.
		5X First Strand Buffer	None known.
	0.1 M DTT	None known.	
	10 mM dNTP Mix	None known.	
	AffinityScript RT RNase Block Mix	None known.	
	5X Transcription Buffer	None known.	
	NTP Mix	None known.	
	T7 RNA Polymerase Blend	None known.	
	WT Primer Mix	None known.	
	<input checked="" type="checkbox"/> 5X First Strand Buffer	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 59%	
	NTP Mix	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 2.9%	
	Other hazards which do not result in classification	: <input checked="" type="checkbox"/> Nuclease-Free Water	None known.
T7 Primer		None known.	
5X First Strand Buffer		None known.	
0.1 M DTT		None known.	
10 mM dNTP Mix		None known.	
AffinityScript RT RNase Block Mix		None known.	
5X Transcription Buffer		None known.	
NTP Mix		None known.	
T7 RNA Polymerase Blend		None known.	
WT Primer Mix		None known.	

Section 3. Composition/information on ingredients

Substance/mixture	: <input checked="" type="checkbox"/> Nuclease-Free Water	Substance
	T7 Primer	Mixture
	5X First Strand Buffer	Mixture
	0.1 M DTT	Mixture
	10 mM dNTP Mix	Mixture
	AffinityScript RT RNase Block Mix	Mixture
	5X Transcription Buffer	Mixture

Section 3. Composition/information on ingredients

NTP Mix Mixture
 T7 RNA Polymerase Blend Mixture
 WT Primer Mix Mixture

Ingredient name	% (w/w)	CAS number
Nuclease-Free Water water	80 - 100	7732-18-5
5X First Strand Buffer Potassium chloride Magnesium chloride	1 - 5 0.1 - 1	7447-40-7 7786-30-3
AffinityScript RT RNase Block Mix Glycerol	30 - 60	56-81-5
5X Transcription Buffer Polyethylene glycol	7 - 13	25322-68-3
T7 RNA Polymerase Blend Glycerol	30 - 60	56-81-5

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

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

Section 4. First-aid measures

Description of necessary first aid measures

Eye contact	:	Nuclease-Free Water	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.
		T7 Primer	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.
		5X First Strand 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.
		0.1 M 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.
		10 mM dNTP Mix	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.
		AffinityScript RT RNase Block Mix	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.
		5X Transcription Buffer	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.
		NTP Mix	Immediately flush eyes with plenty of water,

Section 4. First-aid measures

Inhalation

		occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	T7 RNA Polymerase Blend	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.
	WT Primer Mix	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.
	: Nuclease-Free Water	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	T7 Primer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	5X First Strand Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	0.1 M DTT	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	10 mM dNTP Mix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	AffinityScript RT RNase Block Mix	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.
	5X Transcription Buffer	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. 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.
	NTP Mix	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.
	T7 RNA Polymerase Blend	Remove victim to fresh air and keep at rest in a

Section 4. First-aid measures

		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.
	WT Primer Mix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	: Nuclease-Free Water	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	T7 Primer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	5X First Strand Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	0.1 M DTT	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	10 mM dNTP Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	AffinityScript RT RNase Block Mix	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.
	5X Transcription Buffer	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.
	NTP Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	T7 RNA Polymerase Blend	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.
	WT Primer Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: Nuclease-Free Water	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.
	T7 Primer	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.
	5X First Strand 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

Section 4. First-aid measures

0.1 M DTT	personnel. Get medical attention if symptoms occur. 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.
10 mM dNTP Mix	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.
AffinityScript RT RNase Block Mix	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.
5X Transcription Buffer	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.
NTP Mix	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.
T7 RNA Polymerase Blend	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.
WT Primer Mix	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give

Section 4. First-aid measures

small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: Nuclease-Free Water T7 Primer 5X First Strand Buffer 0.1 M DTT 10 mM dNTP Mix AffinityScript RT RNase Block Mix 5X Transcription Buffer NTP Mix T7 RNA Polymerase Blend WT Primer Mix	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. Causes eye irritation. Causes eye irritation. No known significant effects or critical hazards. Causes eye irritation. No known significant effects or critical hazards.
Inhalation	: Nuclease-Free Water T7 Primer 5X First Strand Buffer 0.1 M DTT 10 mM dNTP Mix AffinityScript RT RNase Block Mix 5X Transcription Buffer NTP Mix T7 RNA Polymerase Blend WT Primer Mix	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: Nuclease-Free Water T7 Primer 5X First Strand Buffer 0.1 M DTT 10 mM dNTP Mix AffinityScript RT RNase Block Mix 5X Transcription Buffer NTP Mix T7 RNA Polymerase Blend WT Primer Mix	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	: Nuclease-Free Water T7 Primer 5X First Strand Buffer 0.1 M DTT 10 mM dNTP Mix AffinityScript RT RNase Block Mix 5X Transcription Buffer NTP Mix T7 RNA Polymerase Blend WT Primer Mix	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. 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

Section 4. First-aid measures

Eye contact	:	☑ Nuclease-Free Water	No specific data.
		T7 Primer	No specific data.
		5X First Strand Buffer	No specific data.
		0.1 M DTT	No specific data.
		10 mM dNTP Mix	No specific data.
		AffinityScript RT RNase Block Mix	Adverse symptoms may include the following: irritation watering redness
		5X Transcription Buffer	Adverse symptoms may include the following: irritation watering redness
		NTP Mix	No specific data.
		T7 RNA Polymerase Blend	Adverse symptoms may include the following: irritation watering redness
		WT Primer Mix	No specific data.
Inhalation	:	☑ Nuclease-Free Water	No specific data.
		T7 Primer	No specific data.
		5X First Strand Buffer	No specific data.
		0.1 M DTT	No specific data.
		10 mM dNTP Mix	No specific data.
		AffinityScript RT RNase Block Mix	No specific data.
		5X Transcription Buffer	No specific data.
		NTP Mix	No specific data.
		T7 RNA Polymerase Blend	No specific data.
		WT Primer Mix	No specific data.
Skin contact	:	☑ Nuclease-Free Water	No specific data.
		T7 Primer	No specific data.
		5X First Strand Buffer	No specific data.
		0.1 M DTT	No specific data.
		10 mM dNTP Mix	No specific data.
		AffinityScript RT RNase Block Mix	No specific data.
		5X Transcription Buffer	No specific data.
		NTP Mix	No specific data.
		T7 RNA Polymerase Blend	No specific data.
		WT Primer Mix	No specific data.
Ingestion	:	☑ Nuclease-Free Water	No specific data.
		T7 Primer	No specific data.
		5X First Strand Buffer	No specific data.
		0.1 M DTT	No specific data.
		10 mM dNTP Mix	No specific data.
		AffinityScript RT RNase Block Mix	No specific data.
		5X Transcription Buffer	No specific data.
		NTP Mix	No specific data.
		T7 RNA Polymerase Blend	No specific data.
		WT Primer Mix	No specific data.

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

Section 4. First-aid measures

Notes to physician	: Nuclease-Free Water	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	T7 Primer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	5X First Strand Buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	0.1 M DTT	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	10 mM dNTP Mix	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	AffinityScript RT RNase Block Mix	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	5X Transcription Buffer	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.
	NTP Mix	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.
	T7 RNA Polymerase Blend	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	WT Primer Mix	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: Nuclease-Free Water	No specific treatment.
	T7 Primer	No specific treatment.
	5X First Strand Buffer	No specific treatment.
	0.1 M DTT	No specific treatment.
	10 mM dNTP Mix	No specific treatment.
	AffinityScript RT RNase Block Mix	No specific treatment.
	5X Transcription Buffer	No specific treatment.
	NTP Mix	No specific treatment.
	T7 RNA Polymerase Blend	No specific treatment.
	WT Primer Mix	No specific treatment.
Protection of first-aiders	: Nuclease-Free Water	No action shall be taken involving any personal risk or without suitable training.
	T7 Primer	No action shall be taken involving any personal risk or without suitable training.
	5X First Strand Buffer	No action shall be taken involving any personal risk or without suitable training.
	0.1 M DTT	No action shall be taken involving any personal risk or without suitable training.
	10 mM dNTP Mix	No action shall be taken involving any personal risk or without suitable training.
	AffinityScript RT RNase Block Mix	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.
	5X Transcription Buffer	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

Section 4. First-aid measures

NTP Mix	resuscitation. No action shall be taken involving any personal risk or without suitable training.
T7 RNA Polymerase Blend	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.
WT Primer Mix	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

: Nuclease-Free Water	Use an extinguishing agent suitable for the surrounding fire.
T7 Primer	Use an extinguishing agent suitable for the surrounding fire.
5X First Strand Buffer	Use an extinguishing agent suitable for the surrounding fire.
0.1 M DTT	Use an extinguishing agent suitable for the surrounding fire.
10 mM dNTP Mix	Use an extinguishing agent suitable for the surrounding fire.
AffinityScript RT RNase Block Mix	Use an extinguishing agent suitable for the surrounding fire.
5X Transcription Buffer	Use an extinguishing agent suitable for the surrounding fire.
NTP Mix	Use an extinguishing agent suitable for the surrounding fire.
T7 RNA Polymerase Blend	Use an extinguishing agent suitable for the surrounding fire.
WT Primer Mix	Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media

: Nuclease-Free Water	None known.
T7 Primer	None known.
5X First Strand Buffer	None known.
0.1 M DTT	None known.
10 mM dNTP Mix	None known.
AffinityScript RT RNase Block Mix	None known.
5X Transcription Buffer	None known.
NTP Mix	None known.
T7 RNA Polymerase Blend	None known.
WT Primer Mix	None known.

Specific hazards arising from the chemical

: Nuclease-Free Water	In a fire or if heated, a pressure increase will occur and the container may burst.
T7 Primer	In a fire or if heated, a pressure increase will occur and the container may burst.
5X First Strand Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
0.1 M DTT	In a fire or if heated, a pressure increase will occur and the container may burst.
10 mM dNTP Mix	In a fire or if heated, a pressure increase will occur and the container may burst.
AffinityScript RT RNase Block Mix	In a fire or if heated, a pressure increase will occur and the container may burst.

Section 5. Fire-fighting measures

	5X Transcription Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	NTP Mix	In a fire or if heated, a pressure increase will occur and the container may burst.
	T7 RNA Polymerase Blend	In a fire or if heated, a pressure increase will occur and the container may burst.
	WT Primer Mix	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	RNAse-Free Water	No specific data.
	T7 Primer	No specific data.
	5X First Strand Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides
	0.1 M DTT	No specific data.
	10 mM dNTP Mix	No specific data.
	AffinityScript RT RNase Block Mix	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	5X Transcription Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds
	NTP Mix	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides metal oxide/oxides
	T7 RNA Polymerase Blend	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	WT Primer Mix	No specific data.
Special protective actions for fire-fighters	RNAse-Free Water	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.
	T7 Primer	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.
	5X First Strand 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.
	0.1 M 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.
	10 mM dNTP Mix	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No

Section 5. Fire-fighting measures

AffinityScript RT RNase Block Mix	action shall be taken involving any personal risk or without suitable training. 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.
5X Transcription 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.
NTP Mix	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.
T7 RNA Polymerase Blend	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.
WT Primer Mix	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	
: Nuclease-Free Water	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
T7 Primer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
5X First Strand Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
0.1 M DTT	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
10 mM dNTP Mix	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
AffinityScript RT RNase Block Mix	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
5X Transcription Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
NTP Mix	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
T7 RNA Polymerase Blend	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
WT Primer Mix	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus

Section 5. Fire-fighting measures

(SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: Nuclease-Free Water	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.
T7 Primer	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.
5X First Strand 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.
0.1 M 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.
10 mM dNTP Mix	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.
AffinityScript RT RNase Block Mix	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.
5X Transcription 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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
NTP Mix	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.
T7 RNA Polymerase Blend	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding

Section 6. Accidental release measures

WT Primer Mix	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. 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.
For emergency responders : Nuclease-Free Water	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".
T7 Primer	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".
5X First Strand 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".
0.1 M 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".
10 mM dNTP Mix	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".
AffinityScript RT RNase Block Mix	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".
5X Transcription 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".
NTP Mix	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".
T7 RNA Polymerase Blend	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".
WT Primer Mix	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".

Section 6. Accidental release measures

Environmental precautions	: Nuclease-Free Water	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).
	T7 Primer	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).
	5X First Strand Buffer	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).
	0.1 M 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).
	10 mM dNTP Mix	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).
	AffinityScript RT RNase Block Mix	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).
	5X Transcription Buffer	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).
	NTP Mix	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).
	T7 RNA Polymerase Blend	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).
	WT Primer Mix	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).

Methods and materials for containment and cleaning up

Methods for cleaning up	: Nuclease-Free Water	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.
	T7 Primer	Stop leak if without risk. Move containers from spill

Section 6. Accidental release measures

	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.
5X First Strand 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.
0.1 M 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.
10 mM dNTP Mix	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.
AffinityScript RT RNase Block Mix	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.
5X Transcription 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.
NTP Mix	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.
T7 RNA Polymerase Blend	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.
WT Primer Mix	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

Precautions for safe handling

Protective measures	:	☑ Nuclease-Free Water	Put on appropriate personal protective equipment (see Section 8).
		T7 Primer	Put on appropriate personal protective equipment (see Section 8).
		5X First Strand Buffer	Put on appropriate personal protective equipment (see Section 8).
		0.1 M DTT	Put on appropriate personal protective equipment (see Section 8).
		10 mM dNTP Mix	Put on appropriate personal protective equipment (see Section 8).
		AffinityScript RT RNase Block Mix	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.
		5X Transcription Buffer	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.
		NTP Mix	Put on appropriate personal protective equipment (see Section 8).
		T7 RNA Polymerase Blend	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.
		WT Primer Mix	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	:	☑ Nuclease-Free Water	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.
		T7 Primer	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.
		5X First Strand 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

Section 7. Handling and storage

0.1 M DTT	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.
10 mM dNTP Mix	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.
AffinityScript RT RNase Block Mix	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.
5X Transcription 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.
NTP Mix	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.
T7 RNA Polymerase Blend	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.
WT Primer Mix	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.

Conditions for safe storage, including any incompatibilities : Nuclease-Free Water

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

Section 7. Handling and storage

T7 Primer	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.
5X First Strand 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.
0.1 M DTT	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.
10 mM dNTP Mix	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.
AffinityScript RT RNase Block Mix	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.
5X Transcription 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

Section 7. Handling and storage

NTP Mix

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.

T7 RNA Polymerase Blend

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.

WT Primer Mix

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.

Section 8. Exposure controls/personal protection

[Control parameters](#)

[Occupational exposure limits](#)

Ingredient name	Exposure limits
AffinityScript RT RNase Block Mix Glycerol	<p>CA Alberta Provincial (Canada, 6/2018). 8 hrs OEL: 10 mg/m³ 8 hours. Form: Mist</p> <p>CA Quebec Provincial (Canada, 7/2019). TWAEV: 10 mg/m³ 8 hours. Form: mist</p> <p>CA Saskatchewan Provincial (Canada, 7/2013). STEL: 20 mg/m³ 15 minutes. Form: mist TWA: 10 mg/m³ 8 hours. Form: mist</p> <p>CA British Columbia Provincial (Canada, 1/2021).</p>

Section 8. Exposure controls/personal protection

<p>5X Transcription Buffer Polyethylene glycol</p> <p>T7 RNA Polymerase Blend Glycerol</p>	<p>TWA: 3 mg/m³ 8 hours. Form: respirable mist TWA: 10 mg/m³ 8 hours. Form: total mist</p> <p>OARS WEEL (United States, 1/2021). TWA: 10 mg/m³ 8 hours.</p> <p>CA Alberta Provincial (Canada, 6/2018). 8 hrs OEL: 10 mg/m³ 8 hours. Form: Mist CA Quebec Provincial (Canada, 7/2019). TWAEV: 10 mg/m³ 8 hours. Form: mist CA Saskatchewan Provincial (Canada, 7/2013). STEL: 20 mg/m³ 15 minutes. Form: mist TWA: 10 mg/m³ 8 hours. Form: mist CA British Columbia Provincial (Canada, 1/2021). TWA: 3 mg/m³ 8 hours. Form: respirable mist TWA: 10 mg/m³ 8 hours. Form: total mist</p>
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- 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**
- 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.

Section 8. Exposure controls/personal protection

- 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	:	☑ Nuclease-Free Water	Liquid.
		T7 Primer	Liquid.
		5X First Strand Buffer	Liquid.
		0.1 M DTT	Liquid.
		10 mM dNTP Mix	Liquid.
		AffinityScript RT RNase	Liquid.
		Block Mix	
		5X Transcription Buffer	Liquid.
		NTP Mix	Liquid.
		T7 RNA Polymerase Blend	Liquid.
WT Primer Mix	Liquid.		
Color	:	☑ Nuclease-Free Water	Colorless.
		T7 Primer	Not available.
		5X First Strand Buffer	Not available.
		0.1 M DTT	Not available.
		10 mM dNTP Mix	Not available.
		AffinityScript RT RNase	Not available.
		Block Mix	
		5X Transcription Buffer	Not available.
		NTP Mix	Not available.
		T7 RNA Polymerase Blend	Not available.
WT Primer Mix	Not available.		
Odor	:	☑ Nuclease-Free Water	Odorless.
		T7 Primer	Not available.
		5X First Strand Buffer	Not available.
		0.1 M DTT	Not available.
		10 mM dNTP Mix	Not available.
		AffinityScript RT RNase	Not available.
		Block Mix	
		5X Transcription Buffer	Not available.
		NTP Mix	Not available.
		T7 RNA Polymerase Blend	Not available.
WT Primer Mix	Not available.		
Odor threshold	:	☑ Nuclease-Free Water	Not available.
		T7 Primer	Not available.
		5X First Strand Buffer	Not available.
		0.1 M DTT	Not available.
		10 mM dNTP Mix	Not available.
		AffinityScript RT RNase	Not available.
		Block Mix	
		5X Transcription Buffer	Not available.
		NTP Mix	Not available.
		T7 RNA Polymerase Blend	Not available.
WT Primer Mix	Not available.		

Section 9. Physical and chemical properties and safety characteristics

pH :

Nuclease-Free Water	7
T7 Primer	Not available.
5X First Strand Buffer	Not available.
0.1 M DTT	Not available.
10 mM dNTP Mix	Not available.
AffinityScript RT RNase Block Mix	Not available.
5X Transcription Buffer	Not available.
NTP Mix	Not available.
T7 RNA Polymerase Blend	Not available.
WT Primer Mix	7.5 to 8

Melting point/freezing point :

Nuclease-Free Water	0°C (32°F)
T7 Primer	0°C (32°F)
5X First Strand Buffer	Not available.
0.1 M DTT	0°C (32°F)
10 mM dNTP Mix	0°C (32°F)
AffinityScript RT RNase Block Mix	Not available.
5X Transcription Buffer	Not available.
NTP Mix	0°C (32°F)
T7 RNA Polymerase Blend	Not available.
WT Primer Mix	0°C (32°F)

Boiling point, initial boiling point, and boiling range :

Nuclease-Free Water	100°C (212°F)
T7 Primer	100°C (212°F)
5X First Strand Buffer	Not available.
0.1 M DTT	100°C (212°F)
10 mM dNTP Mix	100°C (212°F)
AffinityScript RT RNase Block Mix	Not available.
5X Transcription Buffer	Not available.
NTP Mix	100°C (212°F)
T7 RNA Polymerase Blend	Not available.
WT Primer Mix	100°C (212°F)

Flash point :


Ingredient name	Closed cup			Open cup		
	°C	°F	Method	°C	°F	Method
T7 Primer						
Edetic acid	>100	>212	DIN 51758			
5X First Strand Buffer						
Polyoxyethylene octyl phenyl ether	>109.85	>229.7				
0.1 M DTT						
(R*,R*)-1,4-Dimercaptobutane-2,3-diol	>110	>230				
AffinityScript RT RNase Block Mix						
Edetic acid	>100	>212	DIN 51758			
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl) phenyl]-.omega.-hydroxy-	>109.85	>229.7				

Section 9. Physical and chemical properties and safety characteristics

	5X Transcription Buffer					
	Polyethylene glycol	171 to 235	339.8 to 455		199 to 238	390.2 to 460.4
	T7 RNA Polymerase Blend					
	Edetic acid	>100	>212	DIN 51758		
	(R*,R*) -1,4-Dimercaptobutane-2,3-diol	>110	>230			

Evaporation rate	:	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Nuclease-Free Water <input type="checkbox"/> T7 Primer <input type="checkbox"/> 5X First Strand Buffer <input type="checkbox"/> 0.1 M DTT <input type="checkbox"/> 10 mM dNTP Mix <input type="checkbox"/> AffinityScript RT RNase Block Mix <input type="checkbox"/> 5X Transcription Buffer <input type="checkbox"/> NTP Mix <input type="checkbox"/> T7 RNA Polymerase Blend <input type="checkbox"/> WT Primer Mix 	<ul style="list-style-type: none"> Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available.
Flammability	:	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Nuclease-Free Water <input type="checkbox"/> T7 Primer <input type="checkbox"/> 5X First Strand Buffer <input type="checkbox"/> 0.1 M DTT <input type="checkbox"/> 10 mM dNTP Mix <input type="checkbox"/> AffinityScript RT RNase Block Mix <input type="checkbox"/> 5X Transcription Buffer <input type="checkbox"/> NTP Mix <input type="checkbox"/> T7 RNA Polymerase Blend <input type="checkbox"/> WT Primer Mix 	<ul style="list-style-type: none"> Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Lower and upper explosion limit/flammability limit	:	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Nuclease-Free Water <input type="checkbox"/> T7 Primer <input type="checkbox"/> 5X First Strand Buffer <input type="checkbox"/> 0.1 M DTT <input type="checkbox"/> 10 mM dNTP Mix <input type="checkbox"/> AffinityScript RT RNase Block Mix <input type="checkbox"/> 5X Transcription Buffer <input type="checkbox"/> NTP Mix <input type="checkbox"/> T7 RNA Polymerase Blend <input type="checkbox"/> WT Primer Mix 	<ul style="list-style-type: none"> Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available.
Vapor pressure	:	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Nuclease-Free Water <input type="checkbox"/> T7 Primer <input type="checkbox"/> 5X First Strand Buffer <input type="checkbox"/> 0.1 M DTT <input type="checkbox"/> 10 mM dNTP Mix <input type="checkbox"/> AffinityScript RT RNase Block Mix <input type="checkbox"/> 5X Transcription Buffer <input type="checkbox"/> NTP Mix <input type="checkbox"/> T7 RNA Polymerase Blend <input type="checkbox"/> WT Primer Mix 	<ul style="list-style-type: none"> 3.2 kPa (23.8 mm Hg) [room temperature] 12.3 kPa (92.258 mm Hg) [50°C (122°F)] Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available.

Section 9. Physical and chemical properties and safety characteristics

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
 Primer						
water	23.8	3.2		92.258	12.3	
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001	
5X First Strand Buffer						
water	23.8	3.2		92.258	12.3	
Polyoxyethylene octyl phenyl ether	<1	<0.13				
0.1 M DTT						
water	23.8	3.2		92.258	12.3	
10 mM dNTP Mix						
water	23.8	3.2		92.258	12.3	
AffinityScript RT RNase Block Mix						
water	23.8	3.2		92.258	12.3	
Glycerol	0.000075	0.00001		0.0025	0.00033	
5X Transcription Buffer						
water	23.8	3.2		92.258	12.3	
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001	
NTP Mix						
water	23.8	3.2		92.258	12.3	
Adenosine 5'-(tetrahydrogen triphosphate), disodium salt	<0.00075006	<0.0001		<0.00075006	<0.0001	
T7 RNA Polymerase Blend						
water	23.8	3.2		92.258	12.3	
Glycerol	0.000075	0.00001		0.0025	0.00033	
WT Primer Mix						
water	23.8	3.2		92.258	12.3	

Section 9. Physical and chemical properties and safety characteristics

Relative vapor density	:	☑ Nuclease-Free Water	0.62 [Air = 1]
		T7 Primer	Not available.
		5X First Strand Buffer	Not available.
		0.1 M DTT	Not available.
		10 mM dNTP Mix	Not available.
		AffinityScript RT RNase Block Mix	Not available.
		5X Transcription Buffer	Not available.
		NTP Mix	Not available.
		T7 RNA Polymerase Blend	Not available.
		WT Primer Mix	Not available.
		Relative density	:
T7 Primer	Not available.		
5X First Strand Buffer	Not available.		
0.1 M DTT	Not available.		
10 mM dNTP Mix	Not available.		
AffinityScript RT RNase Block Mix	Not available.		
5X Transcription Buffer	Not available.		
NTP Mix	Not available.		
T7 RNA Polymerase Blend	Not available.		
WT Primer Mix	Not available.		
Solubility	:		
		T7 Primer	Easily soluble in the following materials: cold water and hot water.
		5X First Strand Buffer	Soluble in the following materials: cold water and hot water.
		0.1 M DTT	Easily soluble in the following materials: cold water and hot water.
		10 mM dNTP Mix	Easily soluble in the following materials: cold water and hot water.
		AffinityScript RT RNase Block Mix	Soluble in the following materials: cold water and hot water.
		5X Transcription Buffer	Easily soluble in the following materials: cold water and hot water.
		NTP Mix	Easily soluble in the following materials: cold water and hot water.
		T7 RNA Polymerase Blend	Soluble in the following materials: cold water and hot water.
		WT Primer Mix	Easily soluble in the following materials: cold water and hot water.
		Partition coefficient: n-octanol/water	:
T7 Primer	Not applicable.		
5X First Strand Buffer	Not applicable.		
0.1 M DTT	Not applicable.		
10 mM dNTP Mix	Not applicable.		
AffinityScript RT RNase Block Mix	Not applicable.		
5X Transcription Buffer	Not applicable.		
NTP Mix	Not applicable.		
T7 RNA Polymerase Blend	Not applicable.		
WT Primer Mix	Not applicable.		
Auto-ignition temperature	:		

Section 9. Physical and chemical properties and safety characteristics

Ingredient name	°C	°F	Method
T7 Primer			
Edetic acid	>400	>752	VDI 2263
AffinityScript RT RNase Block Mix			
Glycerol	370	698	
4-(2-Hydroxyethyl)piperazin-1-ylethanesulphonic acid	>400	>752	EU A.16
5X Transcription Buffer			
Polyethylene glycol	360	680	
T7 RNA Polymerase Blend			
Glycerol	370	698	
4-(2-Hydroxyethyl)piperazin-1-ylethanesulphonic acid	>400	>752	EU A.16

Decomposition temperature :

- Nuclease-Free Water Not available.
- T7 Primer Not available.
- 5X First Strand Buffer Not available.
- 0.1 M DTT Not available.
- 10 mM dNTP Mix Not available.
- AffinityScript RT RNase Block Mix Not available.
- 5X Transcription Buffer Not available.
- NTP Mix Not available.
- T7 RNA Polymerase Blend Not available.
- WT Primer Mix Not available.

Viscosity :

- Nuclease-Free Water Not available.
- T7 Primer Not available.
- 5X First Strand Buffer Not available.
- 0.1 M DTT Not available.
- 10 mM dNTP Mix Not available.
- AffinityScript RT RNase Block Mix Not available.
- 5X Transcription Buffer Not available.
- NTP Mix Not available.
- T7 RNA Polymerase Blend Not available.
- WT Primer Mix Not available.

Particle characteristics

Median particle size :

- Nuclease-Free Water Not applicable.
- T7 Primer Not applicable.
- 5X First Strand Buffer Not applicable.
- 0.1 M DTT Not applicable.
- 10 mM dNTP Mix Not applicable.
- AffinityScript RT RNase Block Mix Not applicable.
- 5X Transcription Buffer Not applicable.
- NTP Mix Not applicable.
- T7 RNA Polymerase Blend Not applicable.
- WT Primer Mix Not applicable.

Section 10. Stability and reactivity

Reactivity	: Nuclease-Free Water T7 Primer 5X First Strand Buffer 0.1 M DTT 10 mM dNTP Mix AffinityScript RT RNase Block Mix 5X Transcription Buffer NTP Mix T7 RNA Polymerase Blend WT Primer Mix	No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: Nuclease-Free Water T7 Primer 5X First Strand Buffer 0.1 M DTT 10 mM dNTP Mix AffinityScript RT RNase Block Mix 5X Transcription Buffer NTP Mix T7 RNA Polymerase Blend WT Primer Mix	The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable.
Possibility of hazardous reactions	: Nuclease-Free Water T7 Primer 5X First Strand Buffer 0.1 M DTT 10 mM dNTP Mix AffinityScript RT RNase Block Mix 5X Transcription Buffer NTP Mix T7 RNA Polymerase Blend WT Primer Mix	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.

Section 10. Stability and reactivity

Conditions to avoid	<ul style="list-style-type: none"> : Nuclease-Free Water T7 Primer 5X First Strand Buffer 0.1 M DTT 10 mM dNTP Mix AffinityScript RT RNase Block Mix 5X Transcription Buffer NTP Mix T7 RNA Polymerase Blend WT Primer Mix 	<ul style="list-style-type: none"> No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
Incompatible materials	<ul style="list-style-type: none"> : Nuclease-Free Water T7 Primer 5X First Strand Buffer 0.1 M DTT 10 mM dNTP Mix AffinityScript RT RNase Block Mix 5X Transcription Buffer NTP Mix T7 RNA Polymerase Blend WT Primer Mix 	<ul style="list-style-type: none"> May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials.
Hazardous decomposition products	<ul style="list-style-type: none"> : Nuclease-Free Water T7 Primer 5X First Strand Buffer 0.1 M DTT 10 mM dNTP Mix AffinityScript RT RNase Block Mix 5X Transcription Buffer NTP Mix T7 RNA Polymerase Blend WT Primer Mix 	<ul style="list-style-type: none"> Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
5X First Strand Buffer Potassium chloride Magnesium chloride	LD50 Oral LD50 Dermal	Rat Rat - Male, Female	2600 mg/kg >2000 mg/kg	- -
	LD50 Oral	Rat	2800 mg/kg	-
AffinityScript RT RNase Block Mix Glycerol	LD50 Oral	Rat	12600 mg/kg	-
T7 RNA Polymerase Blend Glycerol	LD50 Oral	Rat	12600 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
5X First Strand Buffer Potassium chloride	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
AffinityScript RT RNase Block Mix Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
5X Transcription Buffer Polyethylene glycol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Mild irritant	Rabbit	-	500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
T7 RNA Polymerase Blend 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)

Section 11. Toxicological information

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

<p>: Nuclease-Free Water T7 Primer 5X First Strand Buffer 0.1 M DTT 10 mM dNTP Mix AffinityScript RT RNase Block Mix 5X Transcription Buffer NTP Mix T7 RNA Polymerase Blend WT Primer Mix</p>	<p>Not available. Not available. Not available. Not available. Not available. Routes of entry anticipated: Oral, Dermal, Inhalation. Routes of entry anticipated: Oral, Dermal, Inhalation. Routes of entry anticipated: Oral, Dermal, Inhalation. Not available.</p>
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Potential acute health effects

Eye contact

<p>: Nuclease-Free Water T7 Primer 5X First Strand Buffer 0.1 M DTT 10 mM dNTP Mix AffinityScript RT RNase Block Mix 5X Transcription Buffer NTP Mix T7 RNA Polymerase Blend WT Primer Mix</p>	<p>No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. Causes eye irritation. Causes eye irritation. No known significant effects or critical hazards. Causes eye irritation. No known significant effects or critical hazards.</p>
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Inhalation

<p>: Nuclease-Free Water T7 Primer 5X First Strand Buffer 0.1 M DTT 10 mM dNTP Mix AffinityScript RT RNase Block Mix 5X Transcription Buffer NTP Mix T7 RNA Polymerase Blend WT Primer Mix</p>	<p>No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.</p>
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Skin contact

<p>: Nuclease-Free Water T7 Primer 5X First Strand Buffer 0.1 M DTT 10 mM dNTP Mix AffinityScript RT RNase Block Mix 5X Transcription Buffer NTP Mix T7 RNA Polymerase Blend WT Primer Mix</p>	<p>No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.</p>
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Section 11. Toxicological information

Ingestion	: Nuclease-Free Water	No known significant effects or critical hazards.
	T7 Primer	No known significant effects or critical hazards.
	5X First Strand Buffer	No known significant effects or critical hazards.
	0.1 M DTT	No known significant effects or critical hazards.
	10 mM dNTP Mix	No known significant effects or critical hazards.
	AffinityScript RT RNase Block Mix	No known significant effects or critical hazards.
	5X Transcription Buffer	No known significant effects or critical hazards.
	NTP Mix	No known significant effects or critical hazards.
	T7 RNA Polymerase Blend	No known significant effects or critical hazards.
	WT Primer Mix	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: Nuclease-Free Water	No specific data.
	T7 Primer	No specific data.
	5X First Strand Buffer	No specific data.
	0.1 M DTT	No specific data.
	10 mM dNTP Mix	No specific data.
	AffinityScript RT RNase Block Mix	Adverse symptoms may include the following: irritation watering redness
	5X Transcription Buffer	Adverse symptoms may include the following: irritation watering redness
	NTP Mix	No specific data.
	T7 RNA Polymerase Blend	Adverse symptoms may include the following: irritation watering redness
	WT Primer Mix	No specific data.
Inhalation	: Nuclease-Free Water	No specific data.
	T7 Primer	No specific data.
	5X First Strand Buffer	No specific data.
	0.1 M DTT	No specific data.
	10 mM dNTP Mix	No specific data.
	AffinityScript RT RNase Block Mix	No specific data.
	5X Transcription Buffer	No specific data.
	NTP Mix	No specific data.
	T7 RNA Polymerase Blend	No specific data.
	WT Primer Mix	No specific data.
Skin contact	: Nuclease-Free Water	No specific data.
	T7 Primer	No specific data.
	5X First Strand Buffer	No specific data.
	0.1 M DTT	No specific data.
	10 mM dNTP Mix	No specific data.
	AffinityScript RT RNase Block Mix	No specific data.
	5X Transcription Buffer	No specific data.
	NTP Mix	No specific data.
	T7 RNA Polymerase Blend	No specific data.
	WT Primer Mix	No specific data.

Section 11. Toxicological information

Ingestion	: Nuclease-Free Water	No specific data.
	T7 Primer	No specific data.
	5X First Strand Buffer	No specific data.
	0.1 M DTT	No specific data.
	10 mM dNTP Mix	No specific data.
	AffinityScript RT RNase Block Mix	No specific data.
	5X Transcription Buffer	No specific data.
	NTP Mix	No specific data.
	T7 RNA Polymerase Blend	No specific data.
	WT Primer Mix	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	: Nuclease-Free Water	No known significant effects or critical hazards.
	T7 Primer	No known significant effects or critical hazards.
	5X First Strand Buffer	No known significant effects or critical hazards.
	0.1 M DTT	No known significant effects or critical hazards.
	10 mM dNTP Mix	No known significant effects or critical hazards.
	AffinityScript RT RNase Block Mix	No known significant effects or critical hazards.
	5X Transcription Buffer	No known significant effects or critical hazards.
	NTP Mix	No known significant effects or critical hazards.
	T7 RNA Polymerase Blend	No known significant effects or critical hazards.
	WT Primer Mix	No known significant effects or critical hazards.
Carcinogenicity	: Nuclease-Free Water	No known significant effects or critical hazards.
	T7 Primer	No known significant effects or critical hazards.
	5X First Strand Buffer	No known significant effects or critical hazards.
	0.1 M DTT	No known significant effects or critical hazards.
	10 mM dNTP Mix	No known significant effects or critical hazards.
	AffinityScript RT RNase Block Mix	No known significant effects or critical hazards.
	5X Transcription Buffer	No known significant effects or critical hazards.
	NTP Mix	No known significant effects or critical hazards.
	T7 RNA Polymerase Blend	No known significant effects or critical hazards.
	WT Primer Mix	No known significant effects or critical hazards.
Mutagenicity	: Nuclease-Free Water	No known significant effects or critical hazards.
	T7 Primer	No known significant effects or critical hazards.
	5X First Strand Buffer	No known significant effects or critical hazards.
	0.1 M DTT	No known significant effects or critical hazards.
	10 mM dNTP Mix	No known significant effects or critical hazards.
	AffinityScript RT RNase Block Mix	No known significant effects or critical hazards.
	5X Transcription Buffer	No known significant effects or critical hazards.
	NTP Mix	No known significant effects or critical hazards.
	T7 RNA Polymerase Blend	No known significant effects or critical hazards.
	WT Primer Mix	No known significant effects or critical hazards.

Section 11. Toxicological information

Reproductive toxicity	: Nuclease-Free Water	No known significant effects or critical hazards.
	T7 Primer	No known significant effects or critical hazards.
	5X First Strand Buffer	No known significant effects or critical hazards.
	0.1 M DTT	No known significant effects or critical hazards.
	10 mM dNTP Mix	No known significant effects or critical hazards.
	AffinityScript RT RNase Block Mix	No known significant effects or critical hazards.
	5X Transcription Buffer	No known significant effects or critical hazards.
	NTP Mix	No known significant effects or critical hazards.
	T7 RNA Polymerase Blend	No known significant effects or critical hazards.
	WT Primer Mix	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
5X First Strand Buffer					
5X First Strand Buffer	92526.7	N/A	N/A	N/A	N/A
Potassium chloride	2600	N/A	N/A	N/A	N/A
Magnesium chloride	2800	2500	N/A	N/A	N/A
AffinityScript RT RNase Block Mix					
Glycerol	12600	N/A	N/A	N/A	N/A
5X Transcription Buffer					
Polyethylene glycol	28000	N/A	N/A	N/A	N/A
T7 RNA Polymerase Blend					
Glycerol	12600	N/A	N/A	N/A	N/A

Other information	: Nuclease-Free Water	Not available.
	T7 Primer	Not available.
	5X First Strand Buffer	Not available.
	0.1 M DTT	Not available.
	10 mM dNTP Mix	Not available.
	AffinityScript RT RNase Block Mix	Not available.
	5X Transcription Buffer	Adverse symptoms may include the following: May cause skin sensitization.
	NTP Mix	Not available.
	T7 RNA Polymerase Blend	Adverse symptoms may include the following: May cause skin sensitization.
	WT Primer Mix	Not available.

Section 12. Ecological information

Toxicity

Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure
5X First Strand Buffer Potassium chloride	Acute EC50 1337000 µg/l Fresh water Acute EC50 9.24 g/L Fresh water	Algae - Navicula seminulum Algae - Desmodesmus subspicatus	96 hours 72 hours
Magnesium chloride	Acute EC50 83000 µg/l Fresh water Acute LC50 9.68 mg/l Fresh water	Daphnia - Daphnia magna Crustaceans - Pseudosida ramosa - Neonate	48 hours 48 hours
	Acute LC50 509.65 mg/l Fresh water Acute EC50 >100 mg/l Fresh water	Fish - Danio rerio Algae - Desmodesmus subspicatus	96 hours 72 hours
	Acute EC50 180000 µg/l Fresh water	Crustaceans - Eudiaptomus padanus ssp. padanus - Adult	48 hours
	Acute IC50 6.8 mg/l Fresh water	Aquatic plants - Lemna aequinoctialis	96 hours
	Acute LC50 32000 µg/l Fresh water	Daphnia - Daphnia hyalina - Adult	48 hours
	Acute LC50 2120 mg/l Fresh water Acute NOEC 100 mg/l Fresh water	Fish - Pimephales promelas Algae - Desmodesmus subspicatus	96 hours 72 hours
	Chronic NOEC 0.1 mg/l Fresh water	Fish - Cyprinus carpio	35 days
AffinityScript RT RNase Block Mix Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
5X Transcription Buffer Polyethylene glycol	Acute LC50 >1000000 µg/l Fresh water	Fish - Salmo salar - Parr	96 hours
T7 RNA Polymerase Blend Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
AffinityScript RT RNase Block Mix Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
5X Transcription Buffer Polyethylene glycol	OECD 301D Ready Biodegradability - Closed Bottle Test	74.85 % - Readily - 28 days	4 mg/l	-
T7 RNA Polymerase Blend Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

Section 12. Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Nuclease-Free Water water	-	-	Readily
5X First Strand Buffer Potassium chloride	-	-	Readily
5X Transcription Buffer Polyethylene glycol	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Nuclease-Free Water water	-1.38	-	low
5X First Strand Buffer Potassium chloride	-0.46	-	low
AffinityScript RT RNase Block Mix Glycerol	-1.76	-	low
5X Transcription Buffer Polyethylene glycol	-	3.2	low
T7 RNA Polymerase Blend Glycerol	-1.76	-	low

Mobility in soil

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

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

Section 13. Disposal considerations

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.

Section 14. Transport information

TDG / 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

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

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 : Not determined.

Canada : Not determined.

China : Not determined.

Europe : All components are listed or exempted.

Japan : **Japan inventory (CSCL):** Not determined.
Japan inventory (ISHL): Not determined.

New Zealand : Not determined.

Philippines : Not determined.

Republic of Korea : Not determined.

Taiwan : Not determined.

Thailand : Not determined.

Turkey : Not determined.

United States : At least one component is inactive.

Viet Nam : Not determined.

Section 16. Other information

History

Date of issue/Date of revision : 04/13/2022

Date of previous issue : 08/20/2019

Version : 6

Key to abbreviations

: ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 HPR = Hazardous Products Regulations
 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

Procedure used to derive the classification

Classification	Justification
AffinityScript RT RNase Block Mix EYE IRRITATION - Category 2B	Calculation method
5X Transcription Buffer EYE IRRITATION - Category 2B	Calculation method
T7 RNA Polymerase Blend EYE IRRITATION - Category 2B	Calculation method

References : Not available.

 Indicates information that has changed from previously issued version.

Notice to reader

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