

SAFETY DATA SHEET

Lambda DASH II BamH I Vector Kit, Part Number 247211

Section 1. Identification

Product identifier	: Lambda DASH II BamH I Vector Kit, Part Number 247211		
Part no. (chemical kit)	: 247211		
Part no.	: pBR322 Test Insert Digested With EcoR I and Sal I	210200-52	
	: XL1-Blue MRA E.coli Strain	200302-81	
	: XL1-Blue MRA (p2) E.coli Strain	200303-81	
	: Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	247211-51	
Material uses	: Analytical reagent.		
	: pBR322 Test Insert Digested With EcoR I and Sal I	10 µl (2.5 µg 0.25 µg/µl)	
	: XL1-Blue MRA E.coli Strain	500 µl	
	: XL1-Blue MRA (p2) E.coli Strain	500 µl	
	: Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	10 µl (10 µg 1 µg/µl)	
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

XL1-Blue MRA E.coli Strain H319	EYE IRRITATION - Category 2A
XL1-Blue MRA (p2) E.coli Strain H319	EYE IRRITATION - Category 2A

GHS label elements

Hazard pictograms : XL1-Blue MRA E.coli Strain



XL1-Blue MRA (p2) E.coli Strain



Section 2. Hazard identification

Signal word	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No signal word. Warning Warning No signal word.
Hazard statements	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No known significant effects or critical hazards. H319 - Causes serious eye irritation. H319 - Causes serious eye irritation. No known significant effects or critical hazards.
<u>Precautionary statements</u>		
Prevention	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Not applicable. P280 - Wear eye or face protection. P280 - Wear eye or face protection. Not applicable.
Response	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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.
Storage	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Not applicable. Not applicable. Not applicable. Not applicable.
Disposal	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Not applicable. Not applicable. Not applicable. Not applicable.

Section 2. Hazard identification

Supplemental label elements	: pBR322 Test Insert Digested With EcoR I and Sal I	None known.
	XL1-Blue MRA E.coli Strain	None known.
	XL1-Blue MRA (p2) E.coli Strain	None known.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	None known.
Other hazards which do not result in classification	: pBR322 Test Insert Digested With EcoR I and Sal I	None known.
	XL1-Blue MRA E.coli Strain	None known.
	XL1-Blue MRA (p2) E.coli Strain	None known.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	None known.

Section 3. Composition/information on ingredients

Substance/mixture	: pBR322 Test Insert Digested With EcoR I and Sal I	Mixture
	XL1-Blue MRA E.coli Strain	Mixture
	XL1-Blue MRA (p2) E.coli Strain	Mixture
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Mixture

Ingredient name	% (w/w)	CAS number
XL1-Blue MRA E.coli Strain		
Glycerol	10 - 30	56-81-5
Sodium chloride	0.1 - 1	7647-14-5
XL1-Blue MRA (p2) E.coli Strain		
Glycerol	10 - 30	56-81-5
Sodium chloride	0.1 - 1	7647-14-5

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	: pBR322 Test Insert Digested With EcoR I and Sal I	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.
	XL1-Blue MRA E.coli Strain	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. Get medical attention.
	XL1-Blue MRA (p2) E.coli Strain	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. Get medical attention.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get

Section 4. First-aid measures

Inhalation

- : pBR322 Test Insert Digested With EcoR I and Sal I
 XL1-Blue MRA E.coli Strain
 medical attention if irritation occurs. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
- XL1-Blue MRA E.coli Strain
 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.
- XL1-Blue MRA (p2) E.coli Strain
 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.
- Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated
 Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact

- : pBR322 Test Insert Digested With EcoR I and Sal I
 XL1-Blue MRA E.coli Strain
 Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- XL1-Blue MRA E.coli Strain
 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.
- XL1-Blue MRA (p2) E.coli Strain
 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.
- Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated
 Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion

- : pBR322 Test Insert Digested With EcoR I and Sal I
 XL1-Blue MRA E.coli Strain
 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.
- XL1-Blue MRA E.coli Strain
 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

Section 4. First-aid measures

XL1-Blue MRA (p2) E.coli Strain

airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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.

Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated

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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact

- : pBR322 Test Insert Digested With EcoR I and Sal I No known significant effects or critical hazards.
- XL1-Blue MRA E.coli Strain Causes serious eye irritation.
- XL1-Blue MRA (p2) E.coli Strain Causes serious eye irritation.
- Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated No known significant effects or critical hazards.

Inhalation

- : pBR322 Test Insert Digested With EcoR I and Sal I No known significant effects or critical hazards.
- XL1-Blue MRA E.coli Strain No known significant effects or critical hazards.
- XL1-Blue MRA (p2) E.coli Strain No known significant effects or critical hazards.
- Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated No known significant effects or critical hazards.

Skin contact

- : pBR322 Test Insert Digested With EcoR I and Sal I No known significant effects or critical hazards.
- XL1-Blue MRA E.coli Strain No known significant effects or critical hazards.
- XL1-Blue MRA (p2) E.coli Strain No known significant effects or critical hazards.
- Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated No known significant effects or critical hazards.

Ingestion

- : pBR322 Test Insert Digested With EcoR I and Sal I No known significant effects or critical hazards.
- XL1-Blue MRA E.coli Strain No known significant effects or critical hazards.
- XL1-Blue MRA (p2) E.coli Strain No known significant effects or critical hazards.
- Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated No known significant effects or critical hazards.

Over-exposure signs/symptoms

Section 4. First-aid measures

Eye contact	: pBR322 Test Insert Digested With EcoR I and Sal I	No specific data.
	XL1-Blue MRA E.coli Strain	Adverse symptoms may include the following: pain or irritation watering redness
	XL1-Blue MRA (p2) E.coli Strain	Adverse symptoms may include the following: pain or irritation watering redness
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific data.
Inhalation	: pBR322 Test Insert Digested With EcoR I and Sal I	No specific data.
	XL1-Blue MRA E.coli Strain	No specific data.
	XL1-Blue MRA (p2) E.coli Strain	No specific data.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific data.
Skin contact	: pBR322 Test Insert Digested With EcoR I and Sal I	No specific data.
	XL1-Blue MRA E.coli Strain	No specific data.
	XL1-Blue MRA (p2) E.coli Strain	No specific data.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific data.
Ingestion	: pBR322 Test Insert Digested With EcoR I and Sal I	No specific data.
	XL1-Blue MRA E.coli Strain	No specific data.
	XL1-Blue MRA (p2) E.coli Strain	No specific data.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific data.

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

Notes to physician	: pBR322 Test Insert Digested With EcoR I and Sal I	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	XL1-Blue MRA E.coli Strain	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	XL1-Blue MRA (p2) E.coli Strain	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Section 4. First-aid measures

Specific treatments	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific treatment. No specific treatment. No specific treatment. No specific treatment.
Protection of first-aiders	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. 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. 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	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	None known. None known. None known. None known.

Specific hazards arising from the chemical

: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain	In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst.
XL1-Blue MRA (p2) E.coli Strain	In a fire or if heated, a pressure increase will occur and the container may burst.
Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	In a fire or if heated, a pressure increase will occur and the container may burst.

Section 5. Fire-fighting measures

Hazardous thermal decomposition products	: pBR322 Test Insert Digested With EcoR I and Sal I	No specific data.
	XL1-Blue MRA E.coli Strain	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides
	XL1-Blue MRA (p2) E.coli Strain	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific data.
Special protective actions for fire-fighters	: pBR322 Test Insert Digested With EcoR I and Sal I	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.
	XL1-Blue MRA E.coli Strain	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.
	XL1-Blue MRA (p2) E.coli Strain	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.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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	: pBR322 Test Insert Digested With EcoR I and Sal I	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	XL1-Blue MRA E.coli Strain	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	XL1-Blue MRA (p2) E.coli Strain	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: pBR322 Test Insert Digested With EcoR I and Sal I	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.
	XL1-Blue MRA E.coli Strain	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.
	XL1-Blue MRA (p2) E.coli Strain	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.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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	: pBR322 Test Insert Digested With EcoR I and Sal I	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".
	XL1-Blue MRA E.coli Strain	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".
	XL1-Blue MRA (p2) E.coli Strain	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".
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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".
Environmental precautions	: pBR322 Test Insert Digested With EcoR I and Sal I	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).
	XL1-Blue MRA E.coli Strain	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).
	XL1-Blue MRA (p2) E.coli Strain	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has

Section 6. Accidental release measures

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caused environmental pollution (sewers, waterways, soil or air).

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

Methods and materials for containment and cleaning up

Methods for cleaning up	: pBR322 Test Insert Digested With EcoR I and Sal I	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.
	XL1-Blue MRA E.coli Strain	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.
	XL1-Blue MRA (p2) E.coli Strain	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.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain	Put on appropriate personal protective equipment (see Section 8). 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.
	XL1-Blue MRA (p2) E.coli Strain	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.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Put on appropriate personal protective equipment (see Section 8).

Section 7. Handling and storage

Advice on general occupational hygiene	: pBR322 Test Insert Digested With EcoR I and Sal I	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.
	XL1-Blue MRA E.coli Strain	Potentially biohazardous material. 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.
	XL1-Blue MRA (p2) E.coli Strain	Potentially biohazardous material. 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.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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	: pBR322 Test Insert Digested With EcoR I and Sal I	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.
	XL1-Blue MRA E.coli Strain	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.
	XL1-Blue MRA (p2) E.coli Strain	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

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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.

Section 8. Exposure controls/personal protection

[Control parameters](#)

[Occupational exposure limits](#)

Ingredient name	Exposure limits
<p><input checked="" type="checkbox"/> XL1-Blue MRA E.coli Strain Glycerol</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>
<p>XL1-Blue MRA (p2) E.coli Strain Glycerol</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>

[Appropriate engineering controls](#)

: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Section 8. Exposure controls/personal protection

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 : Handle as biohazard material (Biosafety level 1). 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.

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 :

pBR322 Test Insert Digested With EcoR I and Sal I	Liquid.
XL1-Blue MRA E.coli Strain	Liquid.
XL1-Blue MRA (p2) E.coli Strain	Liquid.
Lambda DASH II Vector	Liquid.
Double Digested With BamH I And Xho I CIAP Treated	

Section 9. Physical and chemical properties and safety characteristics

Color	: pBR322 Test Insert Digested With EcoR I and Sal I	Not available.
	XL1-Blue MRA E.coli Strain	Not available.
	XL1-Blue MRA (p2) E.coli Strain	Not available.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Not available.
Odor	: pBR322 Test Insert Digested With EcoR I and Sal I	Not available.
	XL1-Blue MRA E.coli Strain	Not available.
	XL1-Blue MRA (p2) E.coli Strain	Not available.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Not available.
Odor threshold	: pBR322 Test Insert Digested With EcoR I and Sal I	Not available.
	XL1-Blue MRA E.coli Strain	Not available.
	XL1-Blue MRA (p2) E.coli Strain	Not available.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Not available.
pH	: pBR322 Test Insert Digested With EcoR I and Sal I	7.5
	XL1-Blue MRA E.coli Strain	7
	XL1-Blue MRA (p2) E.coli Strain	7
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	7.5
Melting point/freezing point	: pBR322 Test Insert Digested With EcoR I and Sal I	0°C (32°F)
	XL1-Blue MRA E.coli Strain	Not available.
	XL1-Blue MRA (p2) E.coli Strain	Not available.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	0°C (32°F)
Boiling point, initial boiling point, and boiling range	: pBR322 Test Insert Digested With EcoR I and Sal I	100°C (212°F)
	XL1-Blue MRA E.coli Strain	Not available.
	XL1-Blue MRA (p2) E.coli Strain	Not available.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	100°C (212°F)
Flash point	:	

Section 9. Physical and chemical properties and safety characteristics

Ingredient name	Closed cup			Open cup		
	°C	°F	Method	°C	°F	Method
pBR322 Test Insert Digested With EcoR I and Sal I						
Edetic acid	>100	>212	DIN 51758			
XL1-Blue MRA E.coli Strain						
Glycerol			Pensky-Martens	177	350.6	
XL1-Blue MRA (p2) E. coli Strain						
Glycerol			Pensky-Martens	177	350.6	
Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated						
Edetic acid	>100	>212	DIN 51758			

Evaporation rate : pBR322 Test Insert Digested With EcoR I and Sal I Not available.
 XL1-Blue MRA E.coli Strain Not available.
 XL1-Blue MRA (p2) E.coli Strain Not available.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not available.

Flammability : pBR322 Test Insert Digested With EcoR I and Sal I Not applicable.
 XL1-Blue MRA E.coli Strain Not applicable.
 XL1-Blue MRA (p2) E.coli Strain Not applicable.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not applicable.

Lower and upper explosion limit/flammability limit : pBR322 Test Insert Digested With EcoR I and Sal I Not available.
 XL1-Blue MRA E.coli Strain Not available.
 XL1-Blue MRA (p2) E.coli Strain Not available.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not available.

Vapor pressure :

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
pBR322 Test Insert Digested With EcoR I and Sal I						
Water	23.8	3.2				
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0	0		0.000007501	0.000001	
XL1-Blue MRA E.coli Strain						
Water	23.8	3.2				
Glycerol	0	0		0	0	
XL1-Blue MRA (p2) E. coli Strain						
Water	23.8	3.2				
Glycerol	0	0		0	0	
Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated						
Water	23.8	3.2				
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0	0		0.000007501	0.000001	

Relative vapor density : pBR322 Test Insert Digested With EcoR I and Sal I Not available.
 XL1-Blue MRA E.coli Strain Not available.
 XL1-Blue MRA (p2) E.coli Strain Not available.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not available.

Relative density : pBR322 Test Insert Digested With EcoR I and Sal I Not available.
 XL1-Blue MRA E.coli Strain Not available.
 XL1-Blue MRA (p2) E.coli Strain Not available.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not available.

Solubility : pBR322 Test Insert Digested With EcoR I and Sal I Easily soluble in the following materials: cold water and hot water.
 XL1-Blue MRA E.coli Strain Soluble in the following materials: cold water and hot water.
 XL1-Blue MRA (p2) E.coli Strain Soluble in the following materials: cold water and hot water.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Easily soluble in the following materials: cold water and hot water.

Section 9. Physical and chemical properties and safety characteristics

Partition coefficient: n-octanol/water : pBR322 Test Insert Digested With EcoR I and Sal I Not applicable.
 XL1-Blue MRA E.coli Strain Not applicable.
 XL1-Blue MRA (p2) E.coli Strain Not applicable.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not applicable.

Auto-ignition temperature :

Ingredient name	°C	°F	Method
pBR322 Test Insert Digested With EcoR I and Sal I			
Edetic acid	>400	>752	VDI 2263
XL1-Blue MRA E.coli Strain			
Glycerol	370	698	
XL1-Blue MRA (p2) E.coli Strain			
Glycerol	370	698	
Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated			
Edetic acid	>400	>752	VDI 2263

Decomposition temperature : pBR322 Test Insert Digested With EcoR I and Sal I Not available.
 XL1-Blue MRA E.coli Strain Not available.
 XL1-Blue MRA (p2) E.coli Strain Not available.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not available.

Viscosity : pBR322 Test Insert Digested With EcoR I and Sal I Not available.
 XL1-Blue MRA E.coli Strain Not available.
 XL1-Blue MRA (p2) E.coli Strain Not available.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not available.

Particle characteristics

Median particle size : pBR322 Test Insert Digested With EcoR I and Sal I Not applicable.
 XL1-Blue MRA E.coli Strain Not applicable.
 XL1-Blue MRA (p2) E.coli Strain Not applicable.
 Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated Not applicable.

Section 10. Stability and reactivity

Reactivity	<ul style="list-style-type: none"> : pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> : pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated 	<ul style="list-style-type: none"> The product is stable. The product is stable. The product is stable. The product is stable.
Possibility of hazardous reactions	<ul style="list-style-type: none"> : pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated 	<ul style="list-style-type: none"> 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.
Conditions to avoid	<ul style="list-style-type: none"> : pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated 	<ul style="list-style-type: none"> No specific data. No specific data. No specific data. No specific data.
Incompatible materials	<ul style="list-style-type: none"> : pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated 	<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.
Hazardous decomposition products	<ul style="list-style-type: none"> : pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain 	<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.

Section 10. Stability and reactivity

Lambda DASH II Vector Under normal conditions of storage and use,
 Double Digested With BamH hazardous decomposition products should not be
 I And Xho I CIAP Treated produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
XL1-Blue MRA E.coli Strain				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Sodium chloride	LD50 Oral	Rat	3000 mg/kg	-
XL1-Blue MRA (p2) E.coli Strain				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Sodium chloride	LD50 Oral	Rat	3000 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
XL1-Blue MRA E.coli Strain					
Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	10 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
XL1-Blue MRA (p2) E.coli Strain					
Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	10 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.

Section 11. Toxicological information

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

- : pBR322 Test Insert Digested With EcoR I and Sal I Not available.
- XL1-Blue MRA E.coli Strain Routes of entry anticipated: Oral, Dermal, Inhalation.
- XL1-Blue MRA (p2) E.coli Strain Routes of entry anticipated: Oral, Dermal, Inhalation.
- Lambda DASH II Vector Not available.
- Double Digested With BamH I And Xho I CIAP Treated

Potential acute health effects

Eye contact

- : pBR322 Test Insert Digested With EcoR I and Sal I No known significant effects or critical hazards.
- XL1-Blue MRA E.coli Strain Causes serious eye irritation.
- XL1-Blue MRA (p2) E.coli Strain Causes serious eye irritation.
- Lambda DASH II Vector No known significant effects or critical hazards.
- Double Digested With BamH I And Xho I CIAP Treated

Inhalation

- : pBR322 Test Insert Digested With EcoR I and Sal I No known significant effects or critical hazards.
- XL1-Blue MRA E.coli Strain No known significant effects or critical hazards.
- XL1-Blue MRA (p2) E.coli Strain No known significant effects or critical hazards.
- Lambda DASH II Vector No known significant effects or critical hazards.
- Double Digested With BamH I And Xho I CIAP Treated

Skin contact

- : pBR322 Test Insert Digested With EcoR I and Sal I No known significant effects or critical hazards.
- XL1-Blue MRA E.coli Strain No known significant effects or critical hazards.
- XL1-Blue MRA (p2) E.coli Strain No known significant effects or critical hazards.
- Lambda DASH II Vector No known significant effects or critical hazards.
- Double Digested With BamH I And Xho I CIAP Treated

Ingestion

- : pBR322 Test Insert Digested With EcoR I and Sal I No known significant effects or critical hazards.
- XL1-Blue MRA E.coli Strain No known significant effects or critical hazards.
- XL1-Blue MRA (p2) E.coli Strain No known significant effects or critical hazards.
- Lambda DASH II Vector No known significant effects or critical hazards.
- Double Digested With BamH I And Xho I CIAP Treated

Symptoms related to the physical, chemical and toxicological characteristics

Section 11. Toxicological information

Eye contact	: pBR322 Test Insert Digested With EcoR I and Sal I	No specific data.
	XL1-Blue MRA E.coli Strain	Adverse symptoms may include the following: pain or irritation watering redness
	XL1-Blue MRA (p2) E.coli Strain	Adverse symptoms may include the following: pain or irritation watering redness
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific data.
Inhalation	: pBR322 Test Insert Digested With EcoR I and Sal I	No specific data.
	XL1-Blue MRA E.coli Strain	No specific data.
	XL1-Blue MRA (p2) E.coli Strain	No specific data.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific data.
Skin contact	: pBR322 Test Insert Digested With EcoR I and Sal I	No specific data.
	XL1-Blue MRA E.coli Strain	No specific data.
	XL1-Blue MRA (p2) E.coli Strain	No specific data.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No specific data.
Ingestion	: pBR322 Test Insert Digested With EcoR I and Sal I	No specific data.
	XL1-Blue MRA E.coli Strain	No specific data.
	XL1-Blue MRA (p2) E.coli Strain	No specific data.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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	: pBR322 Test Insert Digested With EcoR I and Sal I	No known significant effects or critical hazards.
	XL1-Blue MRA E.coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRA (p2) E.coli Strain	No known significant effects or critical hazards.
	Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	No known significant effects or critical hazards.

Section 11. Toxicological information

Carcinogenicity	I And Xho I CIAP Treated : pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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.
Mutagenicity	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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.
Reproductive toxicity	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	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.

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)
XL1-Blue MRA E.coli Strain					
XL1-Blue MRA E.coli Strain	300000	N/A	N/A	N/A	N/A
Glycerol	12600	N/A	N/A	N/A	N/A
Sodium chloride	3000	N/A	N/A	N/A	N/A
XL1-Blue MRA (p2) E.coli Strain					
XL1-Blue MRA (p2) E.coli Strain	300000	N/A	N/A	N/A	N/A
Glycerol	12600	N/A	N/A	N/A	N/A
Sodium chloride	3000	N/A	N/A	N/A	N/A

Other information	: pBR322 Test Insert Digested With EcoR I and Sal I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain Lambda DASH II Vector Double Digested With BamH I And Xho I CIAP Treated	Not available. Not available. Not available. Not available.
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Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
XL1-Blue MRA E.coli Strain Glycerol Sodium chloride	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute EC50 4.74 g/L Fresh water	Algae - Chlamydomonas reinhardtii	96 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute IC50 6.87 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - Morone saxatilis - Larvae	96 hours
	Chronic LC10 781 mg/l Fresh water	Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	3 weeks
	Chronic NOEC 6 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 0.314 g/L Fresh water	Daphnia - Daphnia pulex	21 days
	Chronic NOEC 100 mg/l Fresh water	Fish - Gambusia holbrooki - Adult	8 weeks
	XL1-Blue MRA (p2) E.coli Strain Glycerol Sodium chloride	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss
Acute EC50 4.74 g/L Fresh water		Algae - Chlamydomonas reinhardtii	96 hours
Acute EC50 519.6 mg/l Fresh water		Crustaceans - Cypris subglobosa	48 hours
Acute IC50 6.87 g/L Fresh water		Aquatic plants - Lemna minor	96 hours
Acute LC50 1000000 µg/l Fresh water		Fish - Morone saxatilis - Larvae	96 hours
Chronic LC10 781 mg/l Fresh water		Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	3 weeks
Chronic NOEC 6 g/L Fresh water		Aquatic plants - Lemna minor	96 hours
Chronic NOEC 0.314 g/L Fresh water		Daphnia - Daphnia pulex	21 days
Chronic NOEC 100 mg/l Fresh water		Fish - Gambusia holbrooki - Adult	8 weeks

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
XL1-Blue MRA E.coli Strain Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
XL1-Blue MRA (p2) E.coli Strain Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
XL1-Blue MRA E.coli Strain Glycerol	-1.76	-	low
XL1-Blue MRA (p2) E.coli Strain 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)

Section 15. Regulatory information

Not listed.

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

Not listed.

[Inventory list](#)

Australia	: All components are listed or exempted.
Canada	: All components are listed or exempted.
China	: All components are listed or exempted.
Europe	: All components are listed or exempted.
Japan	: Japan inventory (CSCL) : All components are listed or exempted. Japan inventory (ISHL) : All components are listed or exempted.
New Zealand	: All components are listed or exempted.
Philippines	: All components are listed or exempted.
Republic of Korea	: All components are listed or exempted.
Taiwan	: All components are listed or exempted.
Thailand	: Not determined.
Turkey	: Not determined.
United States	: <input checked="" type="checkbox"/> All components are active or exempted.
Viet Nam	: <input checked="" type="checkbox"/> All components are listed or exempted.

Section 16. Other information

[History](#)

Date of issue/Date of revision	: 09/30/2021
Date of previous issue	: 05/23/2019
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
<input checked="" type="checkbox"/> XL1-Blue MRA E.coli Strain EYE IRRITATION - Category 2A	Calculation method
XL1-Blue MRA (p2) E.coli Strain EYE IRRITATION - Category 2A	Calculation method

References : Not available.

Indicates information that has changed from previously issued version.

[Notice to reader](#)

Section 16. Other information

Disclaimer: The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.