

SAFETY DATA SHEET



Uni-ZAP XR Gigapack III Gold Cloning Kit, Part Number 237612

Section 1. Identification

Product identifier	: Uni-ZAP XR Gigapack III Gold Cloning Kit, Part Number 237612
Part No. (Chemical Kit)	: 237612
Part No.	: Gigapack III packaging extract 200201-41
	Wild-Type Lambda DNA c1857ind 1 246203-51
	Sam7
	VCS257 E. coli Strain 200256-51
	XL1-Blue MRF' E. coli Strain 200301-81
	VCSM13 Interference-Resistant Helper Phage 200251-81
	ExAssist Interference-Resistant Helper Phage 200253-81
	SOLR Bacterial Strain 200298-81
	Uni-ZAP XR Vector Predigested With EcoR I And Xho I 237211-51
	pBR322 Test Insert Digested With EcoR I and Sal I 210200-52

Relevant identified uses of the substance or mixture and uses advised against

Analytical reagent.

Gigapack III packaging extract	0.275 ml (11 x 0.025 ml)
Wild-Type Lambda DNA c1857ind 1 Sam7	0.005 ml (0.21 µg/µl)
VCS257 E. coli Strain	1 ml
XL1-Blue MRF' E. coli Strain	0.5 ml
VCSM13 Interference-Resistant Helper Phage	1 ml (>1 X 10e11 pfu/ml)
ExAssist Interference-Resistant Helper Phage	1 ml (>1 x E10 pfu/ml)
SOLR Bacterial Strain	0.5 ml
Uni-ZAP XR Vector Predigested With EcoR I And Xho I	0.012 ml
pBR322 Test Insert Digested With EcoR I and Sal I	0.01 ml

Supplier/Manufacturer : Agilent Technologies Australia Pty Ltd
679 Springvale Road
Mulgrave
Victoria 3170, Australia
1800 802 402

Emergency telephone number (with hours of operation) : CHEMTREC®: (61)-290372994

Section 2. Hazard(s) identification

Classification of the substance or mixture

Not classified.




GHS label elements

Signal word	: Gigapack III packaging extract	No signal word.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No signal word.
	VCS257 E. coli Strain	No signal word.
	XL1-Blue MRF' E. coli Strain	No signal word.
	VCSM13 Interference-Resistant Helper Phage	No signal word.
	ExAssist Interference-Resistant Helper Phage	No signal word.

Section 2. Hazard(s) identification

	SOLR Bacterial Strain	No signal word.
	Uni-ZAP XR Vector	No signal word.
	Predigested With EcoR I And Xho I	
	pBR322 Test Insert Digested With EcoR I and Sal I	No signal word.
Hazard statements	: Gigapack III packaging extract	No known significant effects or critical hazards.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.
	VCS257 E. coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRF' E. coli Strain	No known significant effects or critical hazards.
	VCSM13 Interference- Resistant Helper Phage	No known significant effects or critical hazards.
	ExAssist Interference- Resistant Helper Phage	No known significant effects or critical hazards.
	SOLR Bacterial Strain	No known significant effects or critical hazards.
	Uni-ZAP XR Vector	No known significant effects or critical hazards.
	Predigested With EcoR I And Xho I	
	pBR322 Test Insert Digested With EcoR I and Sal I	No known significant effects or critical hazards.
Precautionary statements		
Prevention	: Gigapack III packaging extract	Not applicable.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not applicable.
	VCS257 E. coli Strain	Not applicable.
	XL1-Blue MRF' E. coli Strain	Not applicable.
	VCSM13 Interference- Resistant Helper Phage	Not applicable.
	ExAssist Interference- Resistant Helper Phage	Not applicable.
	SOLR Bacterial Strain	Not applicable.
	Uni-ZAP XR Vector	Not applicable.
	Predigested With EcoR I And Xho I	
	pBR322 Test Insert Digested With EcoR I and Sal I	Not applicable.
Response	: Gigapack III packaging extract	Not applicable.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not applicable.
	VCS257 E. coli Strain	Not applicable.
	XL1-Blue MRF' E. coli Strain	Not applicable.
	VCSM13 Interference- Resistant Helper Phage	Not applicable.
	ExAssist Interference- Resistant Helper Phage	Not applicable.
	SOLR Bacterial Strain	Not applicable.
	Uni-ZAP XR Vector	Not applicable.
	Predigested With EcoR I And Xho I	
	pBR322 Test Insert Digested With EcoR I and Sal I	Not applicable.
Storage	: Gigapack III packaging extract	Not applicable.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not applicable.
	VCS257 E. coli Strain	Not applicable.
	XL1-Blue MRF' E. coli Strain	Not applicable.
	VCSM13 Interference-	Not applicable.

Section 2. Hazard(s) identification

	Resistant Helper Phage	
	ExAssist Interference-Resistant Helper Phage	Not applicable.
	SOLR Bacterial Strain	Not applicable.
	Uni-ZAP XR Vector	Not applicable.
	Predigested With EcoR I And Xho I	
	pBR322 Test Insert Digested With EcoR I and Sal I	Not applicable.
Disposal	:  Gigapack III packaging extract	Not applicable.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not applicable.
	VCS257 E. coli Strain	Not applicable.
	XL1-Blue MRF' E. coli Strain	Not applicable.
	VCSM13 Interference-Resistant Helper Phage	Not applicable.
	ExAssist Interference-Resistant Helper Phage	Not applicable.
	SOLR Bacterial Strain	Not applicable.
	Uni-ZAP XR Vector	Not applicable.
	Predigested With EcoR I And Xho I	
	pBR322 Test Insert Digested With EcoR I and Sal I	Not applicable.
Supplemental label elements	:  Gigapack III packaging extract	Not applicable.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not applicable.
	VCS257 E. coli Strain	Not applicable.
	XL1-Blue MRF' E. coli Strain	Not applicable.
	VCSM13 Interference-Resistant Helper Phage	Not applicable.
	ExAssist Interference-Resistant Helper Phage	Not applicable.
	SOLR Bacterial Strain	Not applicable.
	Uni-ZAP XR Vector	Not applicable.
	Predigested With EcoR I And Xho I	
	pBR322 Test Insert Digested With EcoR I and Sal I	Not applicable.
Other hazards which do not result in classification	:  Gigapack III packaging extract	None known.
	Wild-Type Lambda DNA c1857ind 1 Sam7	None known.
	VCS257 E. coli Strain	None known.
	XL1-Blue MRF' E. coli Strain	None known.
	VCSM13 Interference-Resistant Helper Phage	None known.
	ExAssist Interference-Resistant Helper Phage	None known.
	SOLR Bacterial Strain	None known.
	Uni-ZAP XR Vector	None known.
	Predigested With EcoR I And Xho I	
	pBR322 Test Insert Digested With EcoR I and Sal I	None known.

Section 3. Composition and ingredient information

Substance/mixture	:	☒ Gigapack III packaging extract	Mixture
		Wild-Type Lambda DNA c1857ind 1 Sam7	Mixture
		VCS257 E. coli Strain	Mixture
		XL1-Blue MRF' E. coli Strain	Mixture
		VCSM13 Interference-Resistant Helper Phage	Mixture
		ExAssist Interference-Resistant Helper Phage	Mixture
		SOLR Bacterial Strain	Mixture
		Uni-ZAP XR Vector	Mixture
		Predigested With EcoR I And Xho I	
		pBR322 Test Insert Digested With EcoR I and Sal I	Mixture

CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
☒ Gigapack III packaging extract Sucrose	≤10	57-50-1
VCS257 E. coli Strain Glycerol	≥10 - ≤30	56-81-5
XL1-Blue MRF' E. coli Strain Glycerol	≥10 - ≤30	56-81-5
SOLR Bacterial Strain Glycerol	≥10 - ≤30	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	:	☒ Gigapack III packaging extract	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.
		Wild-Type Lambda DNA c1857ind 1 Sam7	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.
		VCS257 E. coli Strain	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 MRF' E. coli Strain	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.
		VCSM13 Interference-Resistant Helper Phage	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.
		ExAssist Interference-Resistant Helper Phage	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids.

Section 4. First aid measures

	SOLR Bacterial Strain	Check for and remove any contact lenses. Get medical attention if irritation occurs. 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.
	Uni-ZAP XR Vector Predigested With EcoR I And Xho 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.
	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.
Inhalation	:  Gigapack III packaging extract	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	VCS257 E. coli Strain	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	XL1-Blue MRF' E. coli Strain	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	VCSM13 Interference- Resistant Helper Phage	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	ExAssist Interference- Resistant Helper Phage	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	SOLR Bacterial Strain	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Uni-ZAP XR Vector Predigested With EcoR I And Xho I	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	pBR322 Test Insert Digested With EcoR I and Sal I	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	:  Gigapack III packaging extract	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	VCS257 E. coli Strain	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	XL1-Blue MRF' E. coli Strain	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	VCSM13 Interference- Resistant Helper Phage	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	ExAssist Interference- Resistant Helper Phage	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	SOLR Bacterial Strain	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Uni-ZAP XR Vector	Flush contaminated skin with plenty of water.

Section 4. First aid measures

Ingestion

<p>Predigested With EcoR I And Xho I pBR322 Test Insert Digested With EcoR I and Sal I</p>	<p>Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.</p>
<p>:  Gigapack III packaging extract</p>	<p>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.</p>
<p>Wild-Type Lambda DNA c1857ind 1 Sam7</p>	<p>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.</p>
<p>VCS257 E. coli Strain</p>	<p>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.</p>
<p>XL1-Blue MRF' E. coli Strain</p>	<p>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.</p>
<p>VCSM13 Interference- Resistant Helper Phage</p>	<p>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.</p>
<p>ExAssist Interference- Resistant Helper Phage</p>	<p>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.</p>
<p>SOLR Bacterial Strain</p>	<p>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.</p>
<p>Uni-ZAP XR Vector Predigested With EcoR I And Xho I</p>	<p>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.</p>
<p>pBR322 Test Insert Digested With EcoR I and Sal I</p>	<p>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for</p>

Section 4. First aid measures

breathing. 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	: Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain XL1-Blue MRF' E. coli Strain VCSM13 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage SOLR Bacterial Strain Uni-ZAP XR Vector Predigested With EcoR I And Xho I pBR322 Test Insert Digested With EcoR I and Sal I	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.
Inhalation	: Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain XL1-Blue MRF' E. coli Strain VCSM13 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage SOLR Bacterial Strain Uni-ZAP XR Vector Predigested With EcoR I And Xho I pBR322 Test Insert Digested With EcoR I and Sal I	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	: Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain XL1-Blue MRF' E. coli Strain VCSM13 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage SOLR Bacterial Strain Uni-ZAP XR Vector Predigested With EcoR I And Xho I pBR322 Test Insert Digested With EcoR I and Sal I	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.

Section 4. First aid measures

Ingestion	: Gigapack III packaging extract	No known significant effects or critical hazards.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.
	VCS257 E. coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRF' E. coli Strain	No known significant effects or critical hazards.
	VCSM13 Interference-Resistant Helper Phage	No known significant effects or critical hazards.
	ExAssist Interference-Resistant Helper Phage	No known significant effects or critical hazards.
	SOLR Bacterial Strain	No known significant effects or critical hazards.
	Uni-ZAP XR Vector	No known significant effects or critical hazards.
	Predigested With EcoR I And Xho I	
	pBR322 Test Insert Digested With EcoR I and Sal I	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	: Gigapack III packaging extract	No specific data.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data.
	VCS257 E. coli Strain	No specific data.
	XL1-Blue MRF' E. coli Strain	No specific data.
	VCSM13 Interference-Resistant Helper Phage	No specific data.
	ExAssist Interference-Resistant Helper Phage	No specific data.
	SOLR Bacterial Strain	No specific data.
	Uni-ZAP XR Vector	No specific data.
	Predigested With EcoR I And Xho I	
	pBR322 Test Insert Digested With EcoR I and Sal I	No specific data.

Inhalation	: Gigapack III packaging extract	No specific data.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data.
	VCS257 E. coli Strain	No specific data.
	XL1-Blue MRF' E. coli Strain	No specific data.
	VCSM13 Interference-Resistant Helper Phage	No specific data.
	ExAssist Interference-Resistant Helper Phage	No specific data.
	SOLR Bacterial Strain	No specific data.
	Uni-ZAP XR Vector	No specific data.
	Predigested With EcoR I And Xho I	
	pBR322 Test Insert Digested With EcoR I and Sal I	No specific data.

Skin contact	: Gigapack III packaging extract	No specific data.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data.
	VCS257 E. coli Strain	No specific data.
	XL1-Blue MRF' E. coli Strain	No specific data.
	VCSM13 Interference-Resistant Helper Phage	No specific data.
	ExAssist Interference-Resistant Helper Phage	No specific data.
	SOLR Bacterial Strain	No specific data.
	Uni-ZAP XR Vector	No specific data.
	Predigested With EcoR I And Xho I	

Section 4. First aid measures

	pBR322 Test Insert Digested With EcoR I and Sal I	No specific data.
Ingestion	: Gigapack III packaging extract	No specific data.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data.
	VCS257 E. coli Strain	No specific data.
	XL1-Blue MRF' E. coli Strain	No specific data.
	VCSM13 Interference-Resistant Helper Phage	No specific data.
	ExAssist Interference-Resistant Helper Phage	No specific data.
	SOLR Bacterial Strain	No specific data.
	Uni-ZAP XR Vector	No specific data.
	Predigested With EcoR I And Xho I	
	pBR322 Test Insert Digested With EcoR I and Sal I	No specific data.

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

Notes to physician	: Gigapack III packaging extract	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	VCS257 E. coli Strain	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	XL1-Blue MRF' E. coli Strain	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	VCSM13 Interference-Resistant Helper Phage	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	ExAssist Interference-Resistant Helper Phage	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	SOLR Bacterial Strain	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Uni-ZAP XR Vector	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Predigested With EcoR I And Xho I	
	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.

Specific treatments	: Gigapack III packaging extract	No specific treatment.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No specific treatment.
	VCS257 E. coli Strain	No specific treatment.
	XL1-Blue MRF' E. coli Strain	No specific treatment.
	VCSM13 Interference-Resistant Helper Phage	No specific treatment.
	ExAssist Interference-Resistant Helper Phage	No specific treatment.
	SOLR Bacterial Strain	No specific treatment.
	Uni-ZAP XR Vector	No specific treatment.
	Predigested With EcoR I And Xho I	
	pBR322 Test Insert Digested	No specific treatment.

Section 4. First aid measures

	With EcoR I and Sal I	
Protection of first-aiders	: Gigapack III packaging extract	No action shall be taken involving any personal risk or without suitable training.
	Wild-Type Lambda DNA	No action shall be taken involving any personal risk or without suitable training.
	c1857ind 1 Sam7	No action shall be taken involving any personal risk or without suitable training.
	VCS257 E. coli Strain	No action shall be taken involving any personal risk or without suitable training.
	XL1-Blue MRF' E. coli Strain	No action shall be taken involving any personal risk or without suitable training.
	VCSM13 Interference-Resistant Helper Phage	No action shall be taken involving any personal risk or without suitable training.
	ExAssist Interference-Resistant Helper Phage	No action shall be taken involving any personal risk or without suitable training.
	SOLR Bacterial Strain	No action shall be taken involving any personal risk or without suitable training.
	Uni-ZAP XR Vector	No action shall be taken involving any personal risk or without suitable training.
	Predigested With EcoR I And Xho I	No action shall be taken involving any personal risk or without suitable training.
	pBR322 Test Insert Digested With EcoR I and Sal I	No action shall be taken involving any personal risk or without suitable training.




See toxicological information (Section 11)

Section 5. Firefighting measures


Extinguishing media

Suitable extinguishing media	: Gigapack III packaging extract	Use an extinguishing agent suitable for the surrounding fire.
	Wild-Type Lambda DNA	Use an extinguishing agent suitable for the surrounding fire.
	c1857ind 1 Sam7	Use an extinguishing agent suitable for the surrounding fire.
	VCS257 E. coli Strain	Use an extinguishing agent suitable for the surrounding fire.
	XL1-Blue MRF' E. coli Strain	Use an extinguishing agent suitable for the surrounding fire.
	VCSM13 Interference-Resistant Helper Phage	Use an extinguishing agent suitable for the surrounding fire.
	ExAssist Interference-Resistant Helper Phage	Use an extinguishing agent suitable for the surrounding fire.
	SOLR Bacterial Strain	Use an extinguishing agent suitable for the surrounding fire.
	Uni-ZAP XR Vector	Use an extinguishing agent suitable for the surrounding fire.
	Predigested With EcoR I And Xho I	Use an extinguishing agent suitable for the surrounding fire.
	pBR322 Test Insert Digested With EcoR I and Sal I	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: Gigapack III packaging extract	None known.
	Wild-Type Lambda DNA	None known.
	c1857ind 1 Sam7	None known.
	VCS257 E. coli Strain	None known.
	XL1-Blue MRF' E. coli Strain	None known.
	VCSM13 Interference-Resistant Helper Phage	None known.
	ExAssist Interference-Resistant Helper Phage	None known.
	SOLR Bacterial Strain	None known.
	Uni-ZAP XR Vector	None known.
	Predigested With EcoR I And Xho I	None known.
	pBR322 Test Insert Digested With EcoR I and Sal I	None known.

Section 5. Firefighting measures



Specific hazards arising from the chemical	<p>:  Gigapack III packaging extract</p> <p>Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain</p> <p>XL1-Blue MRF' E. coli Strain</p> <p>VCSM13 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage SOLR Bacterial Strain</p> <p>Uni-ZAP XR Vector Predigested With EcoR I And Xho I pBR322 Test Insert Digested With EcoR I and Sal I</p>	<p>In a fire or if heated, a pressure increase will occur and the container may burst.</p> <p>In a fire or if heated, a pressure increase will occur and the container may burst.</p> <p>In a fire or if heated, a pressure increase will occur and the container may burst.</p> <p>In a fire or if heated, a pressure increase will occur and the container may burst.</p> <p>In a fire or if heated, a pressure increase will occur and the container may burst.</p> <p>In a fire or if heated, a pressure increase will occur and the container may burst.</p> <p>In a fire or if heated, a pressure increase will occur and the container may burst.</p> <p>In a fire or if heated, a pressure increase will occur and the container may burst.</p> <p>In a fire or if heated, a pressure increase will occur and the container may burst.</p> <p>In a fire or if heated, a pressure increase will occur and the container may burst.</p>
Hazardous thermal decomposition products	<p>:  Gigapack III packaging extract</p> <p>Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain</p> <p>XL1-Blue MRF' E. coli Strain</p> <p>VCSM13 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage SOLR Bacterial Strain</p> <p>Uni-ZAP XR Vector Predigested With EcoR I And Xho I pBR322 Test Insert Digested With EcoR I and Sal I</p>	<p>Decomposition products may include the following materials: carbon dioxide carbon monoxide No specific data.</p> <p>Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides</p> <p>Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides</p> <p>Decomposition products may include the following materials: No specific data.</p> <p>No specific data.</p> <p>Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides No specific data.</p> <p>No specific data.</p>
Special protective actions for fire-fighters	<p>:  Gigapack III packaging extract</p> <p>Wild-Type Lambda DNA c1857ind 1 Sam7</p> <p>VCS257 E. coli Strain</p>	<p>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.</p> <p>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.</p> <p>Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No</p>

Section 5. Firefighting measures

		action shall be taken involving any personal risk or without suitable training.
	XL1-Blue MRF' 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.
	VCSM13 Interference-Resistant Helper Phage	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.
	ExAssist Interference-Resistant Helper Phage	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.
	SOLR Bacterial 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.
	Uni-ZAP XR Vector Predigested With EcoR I And Xho 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.
	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.
Special protective equipment for fire-fighters	:  Gigapack III packaging extract	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	VCS257 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 MRF' 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.
	VCSM13 Interference-Resistant Helper Phage	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	ExAssist Interference-Resistant Helper Phage	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	SOLR Bacterial Strain	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Uni-ZAP XR Vector Predigested With EcoR I And Xho I	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	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.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	:  Gigapack III packaging extract	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 spilt material. Put on appropriate personal protective equipment.
	Wild-Type Lambda DNA c1857ind 1 Sam7	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 spilt material. Put on appropriate personal protective equipment.
	VCS257 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 spilt material. Put on appropriate personal protective equipment.
	XL1-Blue MRF' 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 spilt material. Put on appropriate personal protective equipment.
	VCSM13 Interference-Resistant Helper Phage	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 spilt material. Put on appropriate personal protective equipment.
	ExAssist Interference-Resistant Helper Phage	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 spilt material. Put on appropriate personal protective equipment.
	SOLR Bacterial 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 spilt material. Put on appropriate personal protective equipment.
	Uni-ZAP XR Vector Predigested With EcoR I And Xho 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 spilt material. Put on appropriate personal protective equipment.
	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 spilt material. Put on appropriate personal protective equipment.
For emergency responders	:  Gigapack III packaging extract	If specialised 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".
	Wild-Type Lambda DNA c1857ind 1 Sam7	If specialised 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

VCS257 E. coli Strain	If specialised 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 MRF' E. coli Strain	If specialised 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".
VCSM13 Interference-Resistant Helper Phage	If specialised 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".
ExAssist Interference-Resistant Helper Phage	If specialised 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".
SOLR Bacterial Strain	If specialised 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".
Uni-ZAP XR Vector Predigested With EcoR I And Xho I	If specialised 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".
pBR322 Test Insert Digested With EcoR I and Sal I	If specialised 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 :	Gigapack III packaging extract	Avoid dispersal of spilt 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).
	Wild-Type Lambda DNA c1857ind 1 Sam7	Avoid dispersal of spilt 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).
	VCS257 E. coli Strain	Avoid dispersal of spilt 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 MRF' E. coli Strain	Avoid dispersal of spilt 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).
	VCSM13 Interference-Resistant Helper Phage	Avoid dispersal of spilt 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).
	ExAssist Interference-Resistant Helper Phage	Avoid dispersal of spilt 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).
	SOLR Bacterial Strain	Avoid dispersal of spilt 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).

Section 6. Accidental release measures

Uni-ZAP XR Vector Predigested With EcoR I And Xho I	soil or air). Avoid dispersal of spilt 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).
pBR322 Test Insert Digested With EcoR I and Sal I	Avoid dispersal of spilt 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 material for containment and cleaning up

Methods for cleaning up	: Gigapack III packaging extract	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.
	Wild-Type Lambda DNA c1857ind 1 Sam7	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.
	VCS257 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 MRF' 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.
	VCSM13 Interference- Resistant Helper Phage	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.
	ExAssist Interference- Resistant Helper Phage	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.
	SOLR Bacterial 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.
	Uni-ZAP XR Vector Predigested With EcoR I And Xho 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.
	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.

Section 6. Accidental release measures

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

<ul style="list-style-type: none"> • Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain XL1-Blue MRF' E. coli Strain VCSM13 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage SOLR Bacterial Strain Uni-ZAP XR Vector Predigested With EcoR I And Xho I pBR322 Test Insert Digested With EcoR I and Sal I 	<ul style="list-style-type: none"> Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8).
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Advice on general occupational hygiene

<ul style="list-style-type: none"> • Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain XL1-Blue MRF' E. coli Strain VCSM13 Interference-Resistant Helper Phage 	<ul style="list-style-type: none"> Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. 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. 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. 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
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Section 7. Handling and storage

ExAssist Interference-Resistant Helper Phage

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.

SOLR Bacterial 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.

Uni-ZAP XR Vector Predigested With EcoR I And Xho 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.

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.

Conditions for safe storage, including any incompatibilities : Gigapack III packaging extract

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 unlabelled containers. Use appropriate containment to avoid environmental contamination.

Wild-Type Lambda DNA c1857ind 1 Sam7

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 unlabelled containers. Use appropriate containment to avoid environmental contamination.

VCS257 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 unlabelled containers. Use appropriate containment to avoid environmental contamination.

XL1-Blue MRF' E. coli Strain

Store in accordance with local regulations. Store in original container protected from direct sunlight in a

Section 7. Handling and storage

	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 unlabelled containers. Use appropriate containment to avoid environmental contamination.
VCSM13 Interference-Resistant Helper Phage	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 unlabelled containers. Use appropriate containment to avoid environmental contamination.
ExAssist Interference-Resistant Helper Phage	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 unlabelled containers. Use appropriate containment to avoid environmental contamination.
SOLR Bacterial 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 unlabelled containers. Use appropriate containment to avoid environmental contamination.
Uni-ZAP XR Vector Predigested With EcoR I And Xho 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 unlabelled containers. Use appropriate containment to avoid environmental contamination.
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 unlabelled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Gigapack III packaging extract Sucrose	Safe Work Australia (Australia, 1/2014). TWA: 10 mg/m ³ 8 hours.
VCS257 E. coli Strain Glycerol	Safe Work Australia (Australia, 1/2014). TWA: 10 mg/m ³ 8 hours.
XL1-Blue MRF' E. coli Strain Glycerol	Safe Work Australia (Australia, 1/2014). TWA: 10 mg/m ³ 8 hours.
SOLR Bacterial Strain Glycerol	Safe Work Australia (Australia, 1/2014). TWA: 10 mg/m ³ 8 hours.

- 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** : 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: safety glasses with side-shields.
- 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.
- 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

Appearance

Physical state	:	Gigapack III packaging extract	Liquid.
		Wild-Type Lambda DNA c1857ind 1 Sam7	Liquid.
		VCS257 E. coli Strain	Liquid.
		XL1-Blue MRF' E. coli Strain	Liquid.
		VCSM13 Interference-Resistant Helper Phage	Liquid.
		ExAssist Interference-Resistant Helper Phage	Liquid.
		SOLR Bacterial Strain	Liquid.
		Uni-ZAP XR Vector Predigested With EcoR I And Xho I	Liquid.
		pBR322 Test Insert Digested With EcoR I and Sal I	Liquid.
	Colour	:	Gigapack III packaging extract
		Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.
		VCS257 E. coli Strain	Not available.
		XL1-Blue MRF' E. coli Strain	Not available.
		VCSM13 Interference-Resistant Helper Phage	Not available.
		ExAssist Interference-Resistant Helper Phage	Not available.
		SOLR Bacterial Strain	Not available.
		Uni-ZAP XR Vector Predigested With EcoR I And Xho I	Not available.
		pBR322 Test Insert Digested With EcoR I and Sal I	Not available.
Odour		:	Gigapack III packaging extract
		Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.
		VCS257 E. coli Strain	Not available.
		XL1-Blue MRF' E. coli Strain	Not available.
		VCSM13 Interference-Resistant Helper Phage	Not available.
		ExAssist Interference-Resistant Helper Phage	Not available.
		SOLR Bacterial Strain	Not available.
		Uni-ZAP XR Vector Predigested With EcoR I And Xho I	Not available.
		pBR322 Test Insert Digested With EcoR I and Sal I	Not available.
	Odour threshold	:	Gigapack III packaging extract
		Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.
		VCS257 E. coli Strain	Not available.
		XL1-Blue MRF' E. coli Strain	Not available.
		VCSM13 Interference-Resistant Helper Phage	Not available.
		ExAssist Interference-Resistant Helper Phage	Not available.
		SOLR Bacterial Strain	Not available.
		Uni-ZAP XR Vector Predigested With EcoR I	Not available.

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		And Xho I	
		pBR322 Test Insert Digested With EcoR I and Sal I	Not available.
pH	:	<ul style="list-style-type: none"> ☒ Gigapack III packaging extract 8 Wild-Type Lambda DNA c1857ind 1 Sam7 7 VCS257 E. coli Strain 7 XL1-Blue MRF' E. coli Strain 7 VCSM13 Interference-Resistant Helper Phage 7.5 ExAssist Interference-Resistant Helper Phage 7.5 SOLR Bacterial Strain 7 Uni-ZAP XR Vector Predigested With EcoR I And Xho I 7.5 	
Melting point	:	<ul style="list-style-type: none"> ☒ Gigapack III packaging extract Not available. Wild-Type Lambda DNA c1857ind 1 Sam7 0°C (32°F) VCS257 E. coli Strain Not available. XL1-Blue MRF' E. coli Strain Not available. VCSM13 Interference-Resistant Helper Phage 0°C (32°F) ExAssist Interference-Resistant Helper Phage 0°C (32°F) SOLR Bacterial Strain Not available. Uni-ZAP XR Vector Predigested With EcoR I And Xho I 0°C (32°F) 	
Boiling point	:	<ul style="list-style-type: none"> ☒ Gigapack III packaging extract Not available. Wild-Type Lambda DNA c1857ind 1 Sam7 100°C (212°F) VCS257 E. coli Strain Not available. XL1-Blue MRF' E. coli Strain Not available. VCSM13 Interference-Resistant Helper Phage 100°C (212°F) ExAssist Interference-Resistant Helper Phage 100°C (212°F) SOLR Bacterial Strain Not available. Uni-ZAP XR Vector Predigested With EcoR I And Xho I 100°C (212°F) 	
Flash point	:	<ul style="list-style-type: none"> ☒ Gigapack III packaging extract Not available. Wild-Type Lambda DNA c1857ind 1 Sam7 Not available. VCS257 E. coli Strain Not available. XL1-Blue MRF' E. coli Strain Not available. VCSM13 Interference-Resistant Helper Phage Not available. ExAssist Interference-Resistant Helper Phage Not available. SOLR Bacterial Strain Not available. Uni-ZAP XR Vector Not available. 	

Section 9. Physical and chemical properties

		Predigested With EcoR I And Xho I	
		pBR322 Test Insert Digested With EcoR I and Sal I	Not available.
Evaporation rate	:	Gigapack III packaging extract	Not available.
		Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.
		VCS257 E. coli Strain	Not available.
		XL1-Blue MRF' E. coli Strain	Not available.
		VCSM13 Interference- Resistant Helper Phage	Not available.
		ExAssist Interference- Resistant Helper Phage	Not available.
		SOLR Bacterial Strain	Not available.
		Uni-ZAP XR Vector	Not available.
		Predigested With EcoR I And Xho I	
		pBR322 Test Insert Digested With EcoR I and Sal I	Not available.
Flammability (solid, gas)	:	Gigapack III packaging extract	Not applicable.
		Wild-Type Lambda DNA c1857ind 1 Sam7	Not applicable.
		VCS257 E. coli Strain	Not applicable.
		XL1-Blue MRF' E. coli Strain	Not applicable.
		VCSM13 Interference- Resistant Helper Phage	Not applicable.
		ExAssist Interference- Resistant Helper Phage	Not applicable.
		SOLR Bacterial Strain	Not applicable.
		Uni-ZAP XR Vector	Not applicable.
		Predigested With EcoR I And Xho I	
		pBR322 Test Insert Digested With EcoR I and Sal I	Not applicable.
Lower and upper explosive (flammable) limits	:	Gigapack III packaging extract	Not available.
		Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.
		VCS257 E. coli Strain	Not available.
		XL1-Blue MRF' E. coli Strain	Not available.
		VCSM13 Interference- Resistant Helper Phage	Not available.
		ExAssist Interference- Resistant Helper Phage	Not available.
		SOLR Bacterial Strain	Not available.
		Uni-ZAP XR Vector	Not available.
		Predigested With EcoR I And Xho I	
		pBR322 Test Insert Digested With EcoR I and Sal I	Not available.
Vapour pressure	:	Gigapack III packaging extract	Not available.
		Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.
		VCS257 E. coli Strain	Not available.
		XL1-Blue MRF' E. coli Strain	Not available.
		VCSM13 Interference- Resistant Helper Phage	Not available.
		ExAssist Interference- Resistant Helper Phage	Not available.
		SOLR Bacterial Strain	Not available.

Section 9. Physical and chemical properties

	Uni-ZAP XR Vector	Not available.
	Predigested With EcoR I And Xho I	
	pBR322 Test Insert Digested With EcoR I and Sal I	Not available.
Vapour density	: Gigapack III packaging extract	Not available.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.
	VCS257 E. coli Strain	Not available.
	XL1-Blue MRF' E. coli Strain	Not available.
	VCSM13 Interference- Resistant Helper Phage	Not available.
	ExAssist Interference- Resistant Helper Phage	Not available.
	SOLR Bacterial Strain	Not available.
	Uni-ZAP XR Vector Predigested With EcoR I And Xho I	Not available.
	pBR322 Test Insert Digested With EcoR I and Sal I	Not available.
Relative density	: Gigapack III packaging extract	Not available.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.
	VCS257 E. coli Strain	Not available.
	XL1-Blue MRF' E. coli Strain	Not available.
	VCSM13 Interference- Resistant Helper Phage	Not available.
	ExAssist Interference- Resistant Helper Phage	Not available.
	SOLR Bacterial Strain	Not available.
	Uni-ZAP XR Vector Predigested With EcoR I And Xho I	Not available.
	pBR322 Test Insert Digested With EcoR I and Sal I	Not available.
Solubility	: Gigapack III packaging extract	Easily soluble in the following materials: cold water and hot water.
	Wild-Type Lambda DNA c1857ind 1 Sam7	Easily soluble in the following materials: cold water and hot water.
	VCS257 E. coli Strain	Easily soluble in the following materials: cold water and hot water.
	XL1-Blue MRF' E. coli Strain	Soluble in the following materials: cold water and hot water.
	VCSM13 Interference- Resistant Helper Phage	Easily soluble in the following materials: cold water and hot water.
	ExAssist Interference- Resistant Helper Phage	Easily soluble in the following materials: cold water and hot water.
	SOLR Bacterial Strain	Soluble in the following materials: cold water and hot water.
	Uni-ZAP XR Vector Predigested With EcoR I And Xho I	Easily soluble in the following materials: cold water and hot water.
	pBR322 Test Insert Digested With EcoR I and Sal I	Easily soluble in the following materials: cold water and hot water.




Section 9. Physical and chemical properties

Partition coefficient: n-octanol/water	:	Gigapack III packaging extract	Not available.		
		Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.		
		VCS257 E. coli Strain	Not available.		
		XL1-Blue MRF' E. coli Strain	Not available.		
		VCSM13 Interference-Resistant Helper Phage	Not available.		
		ExAssist Interference-Resistant Helper Phage	Not available.		
		SOLR Bacterial Strain	Not available.		
		Uni-ZAP XR Vector	Not available.		
		Predigested With EcoR I And Xho I			
		pBR322 Test Insert Digested With EcoR I and Sal I	Not available.		
		Auto-ignition temperature	:	Gigapack III packaging extract	Not available.
				Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.
				VCS257 E. coli Strain	Not available.
XL1-Blue MRF' E. coli Strain	Not available.				
VCSM13 Interference-Resistant Helper Phage	Not available.				
ExAssist Interference-Resistant Helper Phage	Not available.				
SOLR Bacterial Strain	Not available.				
Uni-ZAP XR Vector	Not available.				
Predigested With EcoR I And Xho I					
pBR322 Test Insert Digested With EcoR I and Sal I	Not available.				
Decomposition temperature	:			Gigapack III packaging extract	Not available.
				Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.
				VCS257 E. coli Strain	Not available.
		XL1-Blue MRF' E. coli Strain	Not available.		
		VCSM13 Interference-Resistant Helper Phage	Not available.		
		ExAssist Interference-Resistant Helper Phage	Not available.		
		SOLR Bacterial Strain	Not available.		
		Uni-ZAP XR Vector	Not available.		
		Predigested With EcoR I And Xho I			
		pBR322 Test Insert Digested With EcoR I and Sal I	Not available.		
		Viscosity	:	Gigapack III packaging extract	Not available.
				Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.
				VCS257 E. coli Strain	Not available.
XL1-Blue MRF' E. coli Strain	Not available.				
VCSM13 Interference-Resistant Helper Phage	Not available.				
ExAssist Interference-Resistant Helper Phage	Not available.				
SOLR Bacterial Strain	Not available.				
Uni-ZAP XR Vector	Not available.				
Predigested With EcoR I And Xho I					
pBR322 Test Insert Digested	Not available.				




Section 9. Physical and chemical properties

With EcoR I and Sal I

Section 10. Stability and reactivity

Reactivity	:  Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain XL1-Blue MRF' E. coli Strain VCSM13 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage SOLR Bacterial Strain Uni-ZAP XR Vector Predigested With EcoR I And Xho I pBR322 Test Insert Digested With EcoR I and Sal I	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	:  Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain XL1-Blue MRF' E. coli Strain VCSM13 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage SOLR Bacterial Strain Uni-ZAP XR Vector Predigested With EcoR I And Xho I pBR322 Test Insert Digested With EcoR I and Sal I	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	:  Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain XL1-Blue MRF' E. coli Strain VCSM13 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage SOLR Bacterial Strain Uni-ZAP XR Vector Predigested With EcoR I And Xho I pBR322 Test Insert Digested With EcoR I and Sal I	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	:  Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain XL1-Blue MRF' E. coli Strain VCSM13 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage SOLR Bacterial Strain Uni-ZAP XR Vector Predigested With EcoR I And Xho I pBR322 Test Insert Digested With EcoR I and Sal I	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	:  Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain XL1-Blue MRF' E. coli Strain VCSM13 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage SOLR Bacterial Strain Uni-ZAP XR Vector Predigested With EcoR I And Xho I pBR322 Test Insert Digested With EcoR I and Sal I	May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials.
Hazardous decomposition products	:  Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain XL1-Blue MRF' E. coli Strain VCSM13 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage SOLR Bacterial Strain Uni-ZAP XR Vector Predigested With EcoR I And Xho I pBR322 Test Insert Digested With EcoR I and Sal I	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
Gigapack III packaging extract Sucrose	LD50 Oral	Rat	29700 mg/kg	-
VCS257 E. coli Strain Glycerol	LD50 Oral	Rat	12600 mg/kg	-
XL1-Blue MRF' E. coli Strain Glycerol	LD50 Oral	Rat	12600 mg/kg	-
SOLR Bacterial Strain Glycerol	LD50 Oral	Rat	12600 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
VCS257 E. coli Strain Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
XL1-Blue MRF' E. coli Strain Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
SOLR Bacterial Strain Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Sensitisation

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Section 11. Toxicological information

Not available.

Information on likely routes of exposure	:	⊗ Gigapack III packaging extract	Not available.
		Wild-Type Lambda DNA c1857ind 1 Sam7	Not available.
		VCS257 E. coli Strain	Routes of entry anticipated: Oral, Dermal, Inhalation.
		XL1-Blue MRF' E. coli Strain	Routes of entry anticipated: Oral, Dermal, Inhalation.
		VCSM13 Interference-Resistant Helper Phage	Not available.
		ExAssist Interference-Resistant Helper Phage	Not available.
		SOLR Bacterial Strain	Routes of entry anticipated: Oral, Dermal, Inhalation.
		Uni-ZAP XR Vector	Not available.
		Predigested With EcoR I And Xho I	
		pBR322 Test Insert Digested With EcoR I and Sal I	Not available.

Potential acute health effects

Eye contact

:	⊗ Gigapack III packaging extract	No known significant effects or critical hazards.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.
	VCS257 E. coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRF' E. coli Strain	No known significant effects or critical hazards.
	VCSM13 Interference-Resistant Helper Phage	No known significant effects or critical hazards.
	ExAssist Interference-Resistant Helper Phage	No known significant effects or critical hazards.
	SOLR Bacterial Strain	No known significant effects or critical hazards.
	Uni-ZAP XR Vector	No known significant effects or critical hazards.
	Predigested With EcoR I And Xho I	
	pBR322 Test Insert Digested With EcoR I and Sal I	No known significant effects or critical hazards.

Inhalation

:	⊗ Gigapack III packaging extract	No known significant effects or critical hazards.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.
	VCS257 E. coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRF' E. coli Strain	No known significant effects or critical hazards.
	VCSM13 Interference-Resistant Helper Phage	No known significant effects or critical hazards.
	ExAssist Interference-Resistant Helper Phage	No known significant effects or critical hazards.
	SOLR Bacterial Strain	No known significant effects or critical hazards.
	Uni-ZAP XR Vector	No known significant effects or critical hazards.
	Predigested With EcoR I And Xho I	
	pBR322 Test Insert Digested With EcoR I and Sal I	No known significant effects or critical hazards.

Skin contact

:	⊗ Gigapack III packaging extract	No known significant effects or critical hazards.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.
	VCS257 E. coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRF' E. coli Strain	No known significant effects or critical hazards.
	VCSM13 Interference-Resistant Helper Phage	No known significant effects or critical hazards.
	ExAssist Interference-Resistant Helper Phage	No known significant effects or critical hazards.
	SOLR Bacterial Strain	No known significant effects or critical hazards.

Section 11. Toxicological information

	Uni-ZAP XR Vector Predigested With EcoR I And Xho I	No known significant effects or critical hazards.
	pBR322 Test Insert Digested With EcoR I and Sal I	No known significant effects or critical hazards.
Ingestion	: Gigapack III packaging extract	No known significant effects or critical hazards.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.
	VCS257 E. coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRF' E. coli Strain	No known significant effects or critical hazards.
	VCSM13 Interference- Resistant Helper Phage	No known significant effects or critical hazards.
	ExAssist Interference- Resistant Helper Phage	No known significant effects or critical hazards.
	SOLR Bacterial Strain	No known significant effects or critical hazards.
	Uni-ZAP XR Vector Predigested With EcoR I And Xho I	No known significant effects or critical hazards.
	pBR322 Test Insert Digested With EcoR I and Sal I	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: Gigapack III packaging extract	No specific data.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data.
	VCS257 E. coli Strain	No specific data.
	XL1-Blue MRF' E. coli Strain	No specific data.
	VCSM13 Interference- Resistant Helper Phage	No specific data.
	ExAssist Interference- Resistant Helper Phage	No specific data.
	SOLR Bacterial Strain	No specific data.
	Uni-ZAP XR Vector Predigested With EcoR I And Xho I	No specific data.
	pBR322 Test Insert Digested With EcoR I and Sal I	No specific data.
Inhalation	: Gigapack III packaging extract	No specific data.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data.
	VCS257 E. coli Strain	No specific data.
	XL1-Blue MRF' E. coli Strain	No specific data.
	VCSM13 Interference- Resistant Helper Phage	No specific data.
	ExAssist Interference- Resistant Helper Phage	No specific data.
	SOLR Bacterial Strain	No specific data.
	Uni-ZAP XR Vector Predigested With EcoR I And Xho I	No specific data.
	pBR322 Test Insert Digested With EcoR I and Sal I	No specific data.
Skin contact	: Gigapack III packaging extract	No specific data.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data.
	VCS257 E. coli Strain	No specific data.
	XL1-Blue MRF' E. coli Strain	No specific data.
	VCSM13 Interference-	No specific data.

Section 11. Toxicological information

	Resistant Helper Phage	
	ExAssist Interference-Resistant Helper Phage	No specific data.
	SOLR Bacterial Strain	No specific data.
	Uni-ZAP XR Vector	No specific data.
	Predigested With EcoR I And Xho I	
	pBR322 Test Insert Digested With EcoR I and Sal I	No specific data.
Ingestion	: Gigapack III packaging extract	No specific data.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No specific data.
	VCS257 E. coli Strain	No specific data.
	XL1-Blue MRF' E. coli Strain	No specific data.
	VCSM13 Interference-Resistant Helper Phage	No specific data.
	ExAssist Interference-Resistant Helper Phage	No specific data.
	SOLR Bacterial Strain	No specific data.
	Uni-ZAP XR Vector	No specific data.
	Predigested With EcoR I And Xho I	
	pBR322 Test Insert Digested With EcoR I and Sal I	No specific data.

Delayed and immediate effects as well as 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

Not available.

General	: Gigapack III packaging extract	No known significant effects or critical hazards.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.
	VCS257 E. coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRF' E. coli Strain	No known significant effects or critical hazards.
	VCSM13 Interference-Resistant Helper Phage	No known significant effects or critical hazards.
	ExAssist Interference-Resistant Helper Phage	No known significant effects or critical hazards.
	SOLR Bacterial Strain	No known significant effects or critical hazards.
	Uni-ZAP XR Vector	No known significant effects or critical hazards.
	Predigested With EcoR I And Xho I	
	pBR322 Test Insert Digested With EcoR I and Sal I	No known significant effects or critical hazards.

Section 11. Toxicological information

Carcinogenicity	: Gigapack III packaging extract	No known significant effects or critical hazards.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.
	VCS257 E. coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRF' E. coli Strain	No known significant effects or critical hazards.
	VCSM13 Interference-Resistant Helper Phage	No known significant effects or critical hazards.
	ExAssist Interference-Resistant Helper Phage	No known significant effects or critical hazards.
	SOLR Bacterial Strain	No known significant effects or critical hazards.
	Uni-ZAP XR Vector	No known significant effects or critical hazards.
	Predigested With EcoR I And Xho I	
	pBR322 Test Insert Digested With EcoR I and Sal I	No known significant effects or critical hazards.
Mutagenicity	: Gigapack III packaging extract	No known significant effects or critical hazards.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.
	VCS257 E. coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRF' E. coli Strain	No known significant effects or critical hazards.
	VCSM13 Interference-Resistant Helper Phage	No known significant effects or critical hazards.
	ExAssist Interference-Resistant Helper Phage	No known significant effects or critical hazards.
	SOLR Bacterial Strain	No known significant effects or critical hazards.
	Uni-ZAP XR Vector	No known significant effects or critical hazards.
	Predigested With EcoR I And Xho I	
	pBR322 Test Insert Digested With EcoR I and Sal I	No known significant effects or critical hazards.
Teratogenicity	: Gigapack III packaging extract	No known significant effects or critical hazards.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.
	VCS257 E. coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRF' E. coli Strain	No known significant effects or critical hazards.
	VCSM13 Interference-Resistant Helper Phage	No known significant effects or critical hazards.
	ExAssist Interference-Resistant Helper Phage	No known significant effects or critical hazards.
	SOLR Bacterial Strain	No known significant effects or critical hazards.
	Uni-ZAP XR Vector	No known significant effects or critical hazards.
	Predigested With EcoR I And Xho I	
	pBR322 Test Insert Digested With EcoR I and Sal I	No known significant effects or critical hazards.
Developmental effects	: Gigapack III packaging extract	No known significant effects or critical hazards.
	Wild-Type Lambda DNA c1857ind 1 Sam7	No known significant effects or critical hazards.
	VCS257 E. coli Strain	No known significant effects or critical hazards.
	XL1-Blue MRF' E. coli Strain	No known significant effects or critical hazards.
	VCSM13 Interference-Resistant Helper Phage	No known significant effects or critical hazards.
	ExAssist Interference-Resistant Helper Phage	No known significant effects or critical hazards.
	SOLR Bacterial Strain	No known significant effects or critical hazards.
	Uni-ZAP XR Vector	No known significant effects or critical hazards.
	Predigested With EcoR I And Xho I	
	pBR322 Test Insert Digested	No known significant effects or critical hazards.

Section 11. Toxicological information

Fertility effects

With EcoR I and Sal I Gigapack III packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain XL1-Blue MRF' E. coli Strain VCSM13 Interference-Resistant Helper Phage ExAssist Interference-Resistant Helper Phage SOLR Bacterial Strain Uni-ZAP XR Vector Predigested With EcoR I And Xho I pBR322 Test Insert Digested With EcoR I and Sal I	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.
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Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
VCS257 E. coli Strain Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
XL1-Blue MRF' E. coli Strain Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
SOLR Bacterial Strain Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Gigapack III packaging extract Sucrose	-3.7	-	low
VCS257 E. coli Strain Glycerol	-1.76	-	low
XL1-Blue MRF' E. coli Strain Glycerol	-1.76	-	low
SOLR Bacterial Strain Glycerol	-1.76	-	low

Section 12. Ecological information

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 minimised 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. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

Regulatory information

ADG / IMDG / IATA : Not regulated as Dangerous Goods according to the ADG Code .

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 Annex II of Marpol and the IBC Code : Not available.

Section 15. Regulatory information

Standard Uniform Schedule of Medicine and Poisons



Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

Australia inventory (AICS) : Not determined.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

International lists

National inventory

Section 15. Regulatory information

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

Section 16. Any other relevant information

History

Date of issue/Date of revision	: 29/02/2016
Date of previous issue	: 24/04/2014.
Version	: 3.01

Key to abbreviations

: ADG = Australian Dangerous Goods
: ATE = Acute Toxicity Estimate
: BCF = Bioconcentration Factor
: GHS = Globally Harmonized System of Classification and Labelling of Chemicals
: IATA = International Air Transport Association
: IBC = Intermediate Bulk Container
: IMDG = International Maritime Dangerous Goods
: LogPow = logarithm of the octanol/water partition coefficient
: MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
: NOHSC = National Occupational Health and Safety Commission
: SUSMP = Standard Uniform Schedule of Medicine and Poisons
: UN = United Nations

Procedure used to derive the classification

Classification	Justification
Not classified.	

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

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