

SAFETY DATA SHEET



ABLE Electroporation-Competent Cell Kit, Part Number 200160

Section 1. Identification

Product identifier : ABLE Electroporation-Competent Cell Kit, Part Number 200160
Part No. (Chemical Kit) : 200160
Part No. : ABLE C electroporation competent cells 200161-41
 ABLE K electroporation competent cells 200162-41
 pUC 18 DNA Control Plasmid 200231-42

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

Analytical reagent.

ABLE C electroporation competent cells 5 x 0.1 ml
 ABLE K electroporation competent cells 5 x 0.1 ml
 pUC 18 DNA Control Plasmid 0.01 ml (0.1 ng/μl)

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.

ABLE C electroporation competent cells Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 10 - 30%
 ABLE K electroporation competent cells Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 10 - 30%

GHS label elements

Signal word : ABLE C electroporation competent cells No signal word.
 ABLE K electroporation competent cells No signal word.
 pUC 18 DNA Control Plasmid No signal word.

Hazard statements : ABLE C electroporation competent cells No known significant effects or critical hazards.
 ABLE K electroporation competent cells No known significant effects or critical hazards.
 pUC 18 DNA Control Plasmid No known significant effects or critical hazards.

Precautionary statements

Prevention : ABLE C electroporation competent cells Not applicable.
 ABLE K electroporation competent cells Not applicable.
 pUC 18 DNA Control Plasmid Not applicable.

Response : ABLE C electroporation competent cells Not applicable.
 ABLE K electroporation competent cells Not applicable.
 pUC 18 DNA Control Plasmid Not applicable.

Section 2. Hazard(s) identification

Storage	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells	Not applicable.
	ABLE K electroporation competent cells	Not applicable.
	pUC 18 DNA Control Plasmid	Not applicable.
Disposal	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells	Not applicable.
	ABLE K electroporation competent cells	Not applicable.
	pUC 18 DNA Control Plasmid	Not applicable.
Supplemental label elements		
Additional warning phrases	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells	Not applicable.
	ABLE K electroporation competent cells	Not applicable.
	pUC 18 DNA Control Plasmid	Not applicable.
Other hazards which do not result in classification	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells	None known.
	ABLE K electroporation competent cells	None known.
	pUC 18 DNA Control Plasmid	None known.

Section 3. Composition and ingredient information

Substance/mixture	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells	Mixture
	ABLE K electroporation competent cells	Mixture
	pUC 18 DNA Control Plasmid	Mixture

CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
<input checked="" type="checkbox"/> ABLE C electroporation competent cells Glycerol	≤10	56-81-5
ABLE K electroporation competent cells Glycerol	≤10	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	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells	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.
	ABLE K electroporation competent cells	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.
	pUC 18 DNA Control Plasmid	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.

Section 4. First aid measures

Inhalation	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	ABLE K electroporation competent cells	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	pUC 18 DNA Control Plasmid	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	ABLE K electroporation competent cells	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	pUC 18 DNA Control Plasmid	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells	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.
	ABLE K electroporation competent cells	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.
	pUC 18 DNA Control Plasmid	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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells	No known significant effects or critical hazards.
	ABLE K electroporation competent cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
Inhalation	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells	No known significant effects or critical hazards.
	ABLE K electroporation competent cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
Skin contact	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells	No known significant effects or critical hazards.
	ABLE K electroporation competent cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.

Section 4. First aid measures

Ingestion	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells ABLE K electroporation competent cells pUC 18 DNA Control Plasmid	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Over-exposure signs/symptoms		
Eye contact	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells ABLE K electroporation competent cells pUC 18 DNA Control Plasmid	No specific data. No specific data. No specific data.
Inhalation	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells ABLE K electroporation competent cells pUC 18 DNA Control Plasmid	No specific data. No specific data. No specific data.
Skin contact	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells ABLE K electroporation competent cells pUC 18 DNA Control Plasmid	No specific data. No specific data. No specific data.
Ingestion	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells ABLE K electroporation competent cells pUC 18 DNA Control Plasmid	No specific data. No specific data. No specific data.

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

Notes to physician	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells ABLE K electroporation competent cells pUC 18 DNA Control Plasmid	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells ABLE K electroporation competent cells pUC 18 DNA Control Plasmid	No specific treatment. No specific treatment. No specific treatment.
Protection of first-aiders	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells ABLE K electroporation competent cells pUC 18 DNA Control Plasmid	No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells ABLE K electroporation competent cells pUC 18 DNA Control Plasmid	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.
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Section 5. Firefighting measures

Unsuitable extinguishing media	: A/BLE C electroporation competent cells	None known.
	ABLE K electroporation competent cells	None known.
	pUC 18 DNA Control Plasmid	None known.
Specific hazards arising from the chemical	: A/BLE C electroporation competent cells	In a fire or if heated, a pressure increase will occur and the container may burst.
	ABLE K electroporation competent cells	In a fire or if heated, a pressure increase will occur and the container may burst.
	pUC 18 DNA Control Plasmid	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	: A/BLE C electroporation competent cells	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	ABLE K electroporation competent cells	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	pUC 18 DNA Control Plasmid	No specific data.
Special protective actions for fire-fighters	: A/BLE C electroporation competent cells	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.
	ABLE K electroporation competent cells	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.
	pUC 18 DNA Control Plasmid	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	: A/BLE C electroporation competent cells	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	ABLE K electroporation competent cells	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	pUC 18 DNA Control Plasmid	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	: A/BLE C electroporation competent cells	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.
	ABLE K electroporation competent cells	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.

Section 6. Accidental release measures

pUC 18 DNA Control Plasmid 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 : **ABLE C** electroporation competent cells

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".

ABLE K electroporation competent cells

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".

pUC 18 DNA Control Plasmid

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 : **ABLE C** electroporation competent cells

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).

ABLE K electroporation competent cells

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).

pUC 18 DNA Control Plasmid

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 : **ABLE C** electroporation competent cells

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.

ABLE K electroporation competent cells

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.

pUC 18 DNA Control Plasmid

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

- : **ABLE C** electroporation competent cells Put on appropriate personal protective equipment (see Section 8).
- ABLE K electroporation competent cells Put on appropriate personal protective equipment (see Section 8).
- pUC 18 DNA Control Plasmid Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene

- : **ABLE C** electroporation competent cells 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.
- ABLE K electroporation competent cells 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.
- pUC 18 DNA Control Plasmid 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

- : **ABLE C** electroporation competent cells 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. See Section 10 for incompatible materials before handling or use.
- ABLE K electroporation competent cells 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. See Section 10 for incompatible materials before handling or use.
- pUC 18 DNA Control Plasmid 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

Section 7. Handling and storage

environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
ABLE C electroporation competent cells Glycerol	Safe Work Australia (Australia, 1/2014). TWA: 10 mg/m ³ 8 hours.
ABLE K electroporation competent cells 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	:	ABLE C electroporation competent cells	Liquid.
		ABLE K electroporation competent cells	Liquid.
		pUC 18 DNA Control Plasmid	Liquid.
Colour	:	ABLE C electroporation competent cells	Not available.
		ABLE K electroporation competent cells	Not available.
		pUC 18 DNA Control Plasmid	Not available.
Odour	:	ABLE C electroporation competent cells	Not available.
		ABLE K electroporation competent cells	Not available.
		pUC 18 DNA Control Plasmid	Not available.
Odour threshold	:	ABLE C electroporation competent cells	Not available.
		ABLE K electroporation competent cells	Not available.
		pUC 18 DNA Control Plasmid	Not available.
pH	:	ABLE C electroporation competent cells	Not available.
		ABLE K electroporation competent cells	Not available.
		pUC 18 DNA Control Plasmid	7.5
Melting point	:	ABLE C electroporation competent cells	Not available.
		ABLE K electroporation competent cells	Not available.
		pUC 18 DNA Control Plasmid	0°C (32°F)
Boiling point	:	ABLE C electroporation competent cells	Not available.
		ABLE K electroporation competent cells	Not available.
		pUC 18 DNA Control Plasmid	100°C (212°F)
Flash point	:	ABLE C electroporation competent cells	Not available.
		ABLE K electroporation competent cells	Not available.
		pUC 18 DNA Control Plasmid	Not available.
Evaporation rate	:	ABLE C electroporation competent cells	Not available.
		ABLE K electroporation competent cells	Not available.
		pUC 18 DNA Control Plasmid	Not available.
Flammability (solid, gas)	:	ABLE C electroporation competent cells	Not applicable.
		ABLE K electroporation competent cells	Not applicable.
		pUC 18 DNA Control Plasmid	Not applicable.
Lower and upper explosive (flammable) limits	:	ABLE C electroporation competent cells	Not available.
		ABLE K electroporation competent cells	Not available.
		pUC 18 DNA Control Plasmid	Not available.

Section 9. Physical and chemical properties

Vapour pressure	: A/BLE C electroporation competent cells	Not available.
	ABLE K electroporation competent cells	Not available.
	pUC 18 DNA Control Plasmid	Not available.
Vapour density	: A/BLE C electroporation competent cells	Not available.
	ABLE K electroporation competent cells	Not available.
	pUC 18 DNA Control Plasmid	Not available.
Relative density	: A/BLE C electroporation competent cells	Not available.
	ABLE K electroporation competent cells	Not available.
	pUC 18 DNA Control Plasmid	Not available.
Solubility	: A/BLE C electroporation competent cells	Soluble in the following materials: cold water and hot water.
	ABLE K electroporation competent cells	Soluble in the following materials: cold water and hot water.
	pUC 18 DNA Control Plasmid	Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: A/BLE C electroporation competent cells	Not available.
	ABLE K electroporation competent cells	Not available.
	pUC 18 DNA Control Plasmid	Not available.
Auto-ignition temperature	: A/BLE C electroporation competent cells	Not available.
	ABLE K electroporation competent cells	Not available.
	pUC 18 DNA Control Plasmid	Not available.
Decomposition temperature	: A/BLE C electroporation competent cells	Not available.
	ABLE K electroporation competent cells	Not available.
	pUC 18 DNA Control Plasmid	Not available.
Viscosity	: A/BLE C electroporation competent cells	Not available.
	ABLE K electroporation competent cells	Not available.
	pUC 18 DNA Control Plasmid	Not available.

Section 10. Stability and reactivity

Reactivity	: A/BLE C electroporation competent cells	No specific test data related to reactivity available for this product or its ingredients.
	ABLE K electroporation competent cells	No specific test data related to reactivity available for this product or its ingredients.
	pUC 18 DNA Control Plasmid	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: A/BLE C electroporation competent cells	The product is stable.
	ABLE K electroporation competent cells	The product is stable.
	pUC 18 DNA Control Plasmid	The product is stable.

Section 10. Stability and reactivity

Possibility of hazardous reactions	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells	Under normal conditions of storage and use, hazardous reactions will not occur.
	ABLE K electroporation competent cells	Under normal conditions of storage and use, hazardous reactions will not occur.
	pUC 18 DNA Control Plasmid	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells	No specific data.
	ABLE K electroporation competent cells	No specific data.
	pUC 18 DNA Control Plasmid	No specific data.
Incompatible materials	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells	May react or be incompatible with oxidising materials.
	ABLE K electroporation competent cells	May react or be incompatible with oxidising materials.
	pUC 18 DNA Control Plasmid	May react or be incompatible with oxidising materials.
Hazardous decomposition products	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	ABLE K electroporation competent cells	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	pUC 18 DNA Control Plasmid	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
ABLE C electroporation competent cells Glycerol	LD50 Oral	Rat	12600 mg/kg	-
ABLE K electroporation competent cells Glycerol	LD50 Oral	Rat	12600 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
ABLE C electroporation competent cells Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-		24 hours 500 milligrams
ABLE K electroporation competent cells Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-		24 hours 500 milligrams

Sensitisation

Section 11. Toxicological information

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

Not available.

Information on likely routes of exposure	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells	Routes of entry anticipated: Oral, Dermal, Inhalation.
	<input checked="" type="checkbox"/> ABLE K electroporation competent cells	Routes of entry anticipated: Oral, Dermal, Inhalation.
	<input checked="" type="checkbox"/> pUC 18 DNA Control Plasmid	Not available.

Potential acute health effects

Eye contact	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells	No known significant effects or critical hazards.
	<input checked="" type="checkbox"/> ABLE K electroporation competent cells	No known significant effects or critical hazards.
	<input checked="" type="checkbox"/> pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
Inhalation	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells	No known significant effects or critical hazards.
	<input checked="" type="checkbox"/> ABLE K electroporation competent cells	No known significant effects or critical hazards.
	<input checked="" type="checkbox"/> pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
Skin contact	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells	No known significant effects or critical hazards.
	<input checked="" type="checkbox"/> ABLE K electroporation competent cells	No known significant effects or critical hazards.
	<input checked="" type="checkbox"/> pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
Ingestion	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells	No known significant effects or critical hazards.
	<input checked="" type="checkbox"/> ABLE K electroporation competent cells	No known significant effects or critical hazards.
	<input checked="" type="checkbox"/> pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: <input checked="" type="checkbox"/> ABLE C electroporation competent cells	No specific data.
	<input checked="" type="checkbox"/> ABLE K electroporation competent cells	No specific data.
	<input checked="" type="checkbox"/> pUC 18 DNA Control Plasmid	No specific data.

Section 11. Toxicological information

Inhalation	: A/BLE C electroporation competent cells	No specific data.
	ABLE K electroporation competent cells	No specific data.
	pUC 18 DNA Control Plasmid	No specific data.
Skin contact	: A/BLE C electroporation competent cells	No specific data.
	ABLE K electroporation competent cells	No specific data.
	pUC 18 DNA Control Plasmid	No specific data.
Ingestion	: A/BLE C electroporation competent cells	No specific data.
	ABLE K electroporation competent cells	No specific data.
	pUC 18 DNA Control Plasmid	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	: A/BLE C electroporation competent cells	No known significant effects or critical hazards.
	ABLE K electroporation competent cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
Carcinogenicity	: A/BLE C electroporation competent cells	No known significant effects or critical hazards.
	ABLE K electroporation competent cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
Mutagenicity	: A/BLE C electroporation competent cells	No known significant effects or critical hazards.
	ABLE K electroporation competent cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
Teratogenicity	: A/BLE C electroporation competent cells	No known significant effects or critical hazards.
	ABLE K electroporation competent cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
Developmental effects	: A/BLE C electroporation competent cells	No known significant effects or critical hazards.
	ABLE K electroporation competent cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.
Fertility effects	: A/BLE C electroporation competent cells	No known significant effects or critical hazards.
	ABLE K electroporation competent cells	No known significant effects or critical hazards.
	pUC 18 DNA Control Plasmid	No known significant effects or critical hazards.

Section 11. Toxicological information

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
ABLE C electroporation competent cells Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
ABLE K electroporation competent cells Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
ABLE C electroporation competent cells Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
ABLE K electroporation competent cells Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
ABLE C electroporation competent cells Glycerol	-1.76	-	low
ABLE K electroporation competent cells 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 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

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

Not regulated.

Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

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 Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : All components are listed or exempted.
Canada : All components are listed or exempted.
China : All components are listed or exempted.
Europe : All components are listed or exempted.
Japan : **Japan inventory (ENCS):** All components are listed or exempted.
Japan inventory (ISHL): All components are listed or exempted.
Malaysia : Not determined.
New Zealand : All components are listed or exempted.
Philippines : All components are listed or exempted.
Republic of Korea : All components are listed or exempted.

Section 15. Regulatory information

- Taiwan** : All components are listed or exempted.
- Thailand** : Not determined.
- Turkey** : Not determined.
- United States** : All components are listed or exempted.
- Viet Nam** : Not determined.

Section 16. Any other relevant information

History

Date of issue/Date of revision : 27/11/2017

Date of previous issue : 24/08/2015.

Version : 5

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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