

Ready-to-use plasmid DNA solution

Safety data sheet

Prepared in accordance with Regulation (EC) No. 1907/2006 (REACH)

Version 1.1 | Created: 18 March 2015 | Revised: 1 June 2015

SECTION 1. Identification of the substance/mixture and of the company/undertaking

Product name and description	Plasmid DNA in 100 mM calcium chloride solution, sterile
Trade name/Brand	Not applicable
Synonyms	Deoxyribonucleic acid, (<i>pNCBE-Kan-GFP</i>) in calcium chloride solution
REACH Number	Not applicable, mixture
CAS Number	Not applicable, mixture
EC Number	Not applicable, mixture
Recommended use	This product should be used only for making competent cells of <i>E. coli</i> strain DH10B and transforming them following the instructions in the NCBE <i>Bacterial transformation kit</i> (see Section 16).
Uses advised against	This plasmid should NOT be used for transforming other strains of <i>E. coli</i> or other species of microorganisms because so doing may not be successful and could contravene the <i>Genetically Modified Organisms (Contained Use) Regulations, 2014</i> .
Supplier of the product and of this safety data sheet	National Centre for Biotechnology Education (NCBE) University of Reading 2 Earley Gate Whiteknights READING RG6 6AU United Kingdom T: 0118 9873743 F: 0118 9750140 E: NCBE@reading.ac.uk W: www.ncbe.reading.ac.uk
Manufacturer of the product	National Centre for Biotechnology Education (NCBE) University of Reading 2 Earley Gate Whiteknights READING RG6 6AU United Kingdom T: 0118 9873743 F: 0118 9750140 E: NCBE@reading.ac.uk W: www.ncbe.reading.ac.uk
Emergency telephone number	0118 9873743 (NCBE, University of Reading. 08.30 to 17.00 weekdays only)

SECTION 2. Hazards identification

Classification according to Regulation (EC) No. 1272/2008 [CLP] Eye irritation (Cat. 2), H319

Label elements

WARNING

H319 Causes serious eye irritation.

P305+P351
+P338+P315 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical advice/attention.



Other hazards

None known

SECTION 3. Composition/information on ingredients

Name of component (Synonyms) [CLP index number]	Weight (%)	EC (EINECS) number	CAS number	REACH registration number	Classification under Regulation (EC) No 1272/2008 [CLP]
Water [Not indexed under CLP yet]	98.9	231-791-2	7732-18-5	-	-
Calcium chloride (dihydrate) (Calcium (II) chloride, Calcium dichloride) [017-013-00-2]	1.1	233-140-8	10035-04-8	-	Eye Irrit. 2 (H319)
DNA (Deoxyribonucleic acid)	<0.1%	-	9007-49-2	-	-

Note: It is only because the calcium chloride is present at more than 1% that this mixture requires any safety precautions. The amount of plasmid DNA present in the solution 0.00025% by mass. Technically, the DNA does not need to be listed on this Safety Data Sheet because of the small quantity involved and the fact that it does not pose a safety concern. We have included it here, however, as it might appear to be an error if a product described as a 'DNA solution' did not appear to contain any DNA.

SECTION 4. First aid measures

General information

If symptoms persist or in all cases of doubt, seek medical advice. Show this Safety Data Sheet to the doctor in attendance.

Inhalation

Move the casualty to fresh air. If respiratory problems occur, consult a doctor.

Skin contact

Wash with water. Contaminated clothing can be washed as normal.

Eye contact

Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion

Unlikely to be harmful. Do NOT induce vomiting. Never give an unconscious person anything to drink.

Self-protection of the first aider

Wash any spilt solution from the skin/hands with water.

Most important symptoms and effects, both acute and delayed	May cause eye irritation.
Indication of any immediate medical attention and special treatment	If in contact with the eyes, flush with water. If ingested, do not induce vomiting.
Advice to doctor	Treat symptomatically.

SECTION 5. Firefighting measures

The product is ~99% water. It is not flammable.

Extinguishing media

Not applicable.

Special hazards arising from the substance or mixture

None known.

Advice for firefighters

Not applicable.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes. Wear a lab coat and eye protection. If spilt, wipe up the spill with paper towels, then wash away any remaining traces with water. Dispose of the paper towels and any other contaminated material in the normal waste.

Environmental precautions

None required.

Methods and material for containment and cleaning up

Wash down a foul water drain. After cleaning, wash away traces with water.

Reference to other sections

See Section 13 for disposal instructions.

SECTION 7. Handling and storage

Precautions for safe handling

Wear a lab coat to prevent any spills from damaging clothing.

Conditions for safe storage, including any incompatibilities

Store container tightly closed and frozen at -18 to -20 °C to prevent deterioration of the DNA.

Specific end use(s)

This solution is used to treat bacteria so that they can be transformed by plasmid DNA, and to transform the cells.

SECTION 8. Exposure controls/personal protection

Control parameters

Exposure limits	No information available.
Biological limit values	No information available.
Derived no effect level	No information available.
Predicated no effect level	No information available.

Exposure controls

Handle in accordance with good laboratory hygiene and safety practice. Wear eye protection. Wash hands before breaks and after handling the mixture.

SECTION 9. Physical and chemical properties

Physical state	Liquid.
Appearance	Clear, colourless aqueous solution.
Odour	No smell is detectable.
pH	~7.0
Flash point	Does not flash.
Solubility	Not applicable.

SECTION 10. Stability and reactivity

Chemical stability	No information available.
Possibility of hazardous reactions	No information available.
Conditions to avoid	No information available.
Incompatible materials	No information available.
Hazardous decomposition products	No information available.

SECTION 11. Toxicological information

Acute toxicity	No information available.
Chronic toxicity	No information available.
Carcinogenicity	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Sensitisation	No information available.
Mutagenic effects	No information available.
Reproductive effects	No information available.
Developmental effects	No information available.
Target organs	No information available.
Endocrine disruptor information	No information available.

SECTION 12. Ecological information

Toxicity	No information available.
Persistence and degradability	Expected to be biodegradable.
Bioaccumulative potential	No information available.
Mobility in soil	No information available.
Results of PBT and vPVB assessment	No information available.
Other adverse effects	None known.

SECTION 13. Disposal considerations

Waste from residues/unused product	Wash down a foul water drain with plenty of water.
Contaminated packaging	Dispose of in normal waste according to local regulations. The bottle is made of polypropylene and can be recycled after it has been washed.

SECTION 14. Transport information

UN number	Not applicable.
UN proper shipping name	Not applicable.
Transport hazard class	Not applicable.
Packaging group	Not applicable.
Environmental hazards	Not applicable.

SECTION 15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture
No information available.

Chemical Safety Assessment
No information available.

SECTION 16. Other information

Full text of GHS hazard statements

H319 Causes serious eye irritation.

Refer to the Teacher's guide which accompanies the *NCBE Bacterial transformation* kit. This can be downloaded from the NCBE's Web site: www.ncbe.reading.ac.uk/transformation

The information given in this Safety Data Sheet is based on the present state of our knowledge.

This Safety Data Sheet has been compiled and is solely intended for this product.

This Safety Data Sheet was revised on 1 June 2015, when the older (67/548/EEC [DSD]) safety classifications were deleted.

END OF SAFETY DATA SHEET