

SAFETY DATA SHEET



pESC Yeast Epitope Tagging Vectors, Part Number 217455

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

1.1 Product identifier

Product name	:	pESC Yeast Epitope Tagging Vectors, Part Number 217455	
Part No. (Kit)	:	217455	
Part No.	:	pESC-HIS Vector	217451-51
		GAL 1 Forward Primer Lyophilized	217451-52
		GAL 1 Reverse Primer Lyophilized	217451-53
		GAL 10 Forward Primer Lyophilized	217451-54
		GAL 10 Reverse Primer Lyophilized	217451-55
		pESC-LEU Vector	217452-51
		pESC-TRP Vector	217453-51
		pESC-URA Vector	217454-51
		YPH 499 Yeast Strain	200257-41
		YPH 500 Yeast Strain	200258-41
		YPH 501 Yeast Strain	200259-41

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

Identified uses	
Analytical reagent.	
pESC-HIS Vector	0.02 ml (20 µg 1 µg/µl)
GAL 1 Forward Primer Lyophilized	0.0025 mg
GAL 1 Reverse Primer Lyophilized	0.0025 mg
GAL 10 Forward Primer Lyophilized	0.0025 mg
GAL 10 Reverse Primer Lyophilized	0.0025 mg
pESC-LEU Vector	0.02 ml (20 µg 1 µg/µl)
pESC-TRP Vector	0.02 ml (20 µg 1 µg/µl)
pESC-URA Vector	0.02 ml (20 µg 1 µg/µl)
YPH 499 Yeast Strain	0.5 ml
YPH 500 Yeast Strain	0.5 ml
YPH 501 Yeast Strain	0.5 ml

1.3 Details of the supplier of the safety data sheet

Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str. 8
76337 Waldbronn
Germany
0800 603 1000

e-mail address of person responsible for this SDS : pdl-msds_author@agilent.com

1.4 Emergency telephone number

Emergency telephone number (with hours of operation) : CHEMTREC®: +(44)-870-8200418

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture**

Product definition	:	pESC-HIS Vector	Mixture
		GAL 1 Forward Primer Lyophilized	Mixture
		GAL 1 Reverse Primer Lyophilized	Mixture
		GAL 10 Forward Primer Lyophilized	Mixture
		GAL 10 Reverse Primer Lyophilized	Mixture
		pESC-LEU Vector	Mixture
		pESC-TRP Vector	Mixture
		pESC-URA Vector	Mixture
		YPH 499 Yeast Strain	Mixture
		YPH 500 Yeast Strain	Mixture
		YPH 501 Yeast Strain	Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

Ingredients of unknown toxicity	:	YPH 499 Yeast Strain	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 2%
		YPH 500 Yeast Strain	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 2%
		YPH 501 Yeast Strain	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 2%
Ingredients of unknown ecotoxicity	:	YPH 499 Yeast Strain	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 2%
		YPH 500 Yeast Strain	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 2%
		YPH 501 Yeast Strain	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 2%

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Signal word	:	pESC-HIS Vector	No signal word.	
		GAL 1 Forward Primer Lyophilized	No signal word.	
		GAL 1 Reverse Primer Lyophilized	No signal word.	
		GAL 10 Forward Primer Lyophilized	No signal word.	
		GAL 10 Reverse Primer Lyophilized	No signal word.	
		pESC-LEU Vector	No signal word.	
		pESC-TRP Vector	No signal word.	
		pESC-URA Vector	No signal word.	
		YPH 499 Yeast Strain	No signal word.	
		YPH 500 Yeast Strain	No signal word.	
		YPH 501 Yeast Strain	No signal word.	
	Hazard statements	:	pESC-HIS Vector	No known significant effects or critical hazards.
			GAL 1 Forward Primer Lyophilized	No known significant effects or critical hazards.
		GAL 1 Reverse Primer Lyophilized	No known significant effects or critical hazards.	
		GAL 10 Forward Primer Lyophilized	No known significant effects or critical hazards.	
		GAL 10 Reverse Primer Lyophilized	No known significant effects or critical hazards.	
		pESC-LEU Vector	No known significant effects or critical hazards.	

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pESC-TRP Vector	No known significant effects or critical hazards.
pESC-URA Vector	No known significant effects or critical hazards.
YPH 499 Yeast Strain	No known significant effects or critical hazards.
YPH 500 Yeast Strain	No known significant effects or critical hazards.
YPH 501 Yeast Strain	No known significant effects or critical hazards.

Precautionary statements**Prevention**

: pESC-HIS Vector	Not applicable.
GAL 1 Forward Primer Lyophilized	Not applicable.
GAL 1 Reverse Primer Lyophilized	Not applicable.
GAL 10 Forward Primer Lyophilized	Not applicable.
GAL 10 Reverse Primer Lyophilized	Not applicable.
pESC-LEU Vector	Not applicable.
pESC-TRP Vector	Not applicable.
pESC-URA Vector	Not applicable.
YPH 499 Yeast Strain	Not applicable.
YPH 500 Yeast Strain	Not applicable.
YPH 501 Yeast Strain	Not applicable.

Response

: pESC-HIS Vector	Not applicable.
GAL 1 Forward Primer Lyophilized	Not applicable.
GAL 1 Reverse Primer Lyophilized	Not applicable.
GAL 10 Forward Primer Lyophilized	Not applicable.
GAL 10 Reverse Primer Lyophilized	Not applicable.
pESC-LEU Vector	Not applicable.
pESC-TRP Vector	Not applicable.
pESC-URA Vector	Not applicable.
YPH 499 Yeast Strain	Not applicable.
YPH 500 Yeast Strain	Not applicable.
YPH 501 Yeast Strain	Not applicable.

Storage

: pESC-HIS Vector	Not applicable.
GAL 1 Forward Primer Lyophilized	Not applicable.
GAL 1 Reverse Primer Lyophilized	Not applicable.
GAL 10 Forward Primer Lyophilized	Not applicable.
GAL 10 Reverse Primer Lyophilized	Not applicable.
pESC-LEU Vector	Not applicable.
pESC-TRP Vector	Not applicable.
pESC-URA Vector	Not applicable.
YPH 499 Yeast Strain	Not applicable.
YPH 500 Yeast Strain	Not applicable.
YPH 501 Yeast Strain	Not applicable.

Disposal

: pESC-HIS Vector	Not applicable.
GAL 1 Forward Primer Lyophilized	Not applicable.
GAL 1 Reverse Primer Lyophilized	Not applicable.
GAL 10 Forward Primer Lyophilized	Not applicable.
GAL 10 Reverse Primer Lyophilized	Not applicable.
pESC-LEU Vector	Not applicable.
pESC-TRP Vector	Not applicable.

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	pESC-URA Vector	Not applicable.
	YPH 499 Yeast Strain	Not applicable.
	YPH 500 Yeast Strain	Not applicable.
	YPH 501 Yeast Strain	Not applicable.
Supplemental label elements	: pESC-HIS Vector	Not applicable.
	GAL 1 Forward Primer Lyophilized	Not applicable.
	GAL 1 Reverse Primer Lyophilized	Not applicable.
	GAL 10 Forward Primer Lyophilized	Not applicable.
	GAL 10 Reverse Primer Lyophilized	Not applicable.
	pESC-LEU Vector	Not applicable.
	pESC-TRP Vector	Not applicable.
	pESC-URA Vector	Not applicable.
	YPH 499 Yeast Strain	Not applicable.
	YPH 500 Yeast Strain	Not applicable.
	YPH 501 Yeast Strain	Not applicable.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	: pESC-HIS Vector	Not applicable.
	GAL 1 Forward Primer Lyophilized	Not applicable.
	GAL 1 Reverse Primer Lyophilized	Not applicable.
	GAL 10 Forward Primer Lyophilized	Not applicable.
	GAL 10 Reverse Primer Lyophilized	Not applicable.
	pESC-LEU Vector	Not applicable.
	pESC-TRP Vector	Not applicable.
	pESC-URA Vector	Not applicable.
	YPH 499 Yeast Strain	Not applicable.
	YPH 500 Yeast Strain	Not applicable.
	YPH 501 Yeast Strain	Not applicable.
Special packaging requirements		
Tactile warning of danger	: pESC-HIS Vector	Not applicable.
	GAL 1 Forward Primer Lyophilized	Not applicable.
	GAL 1 Reverse Primer Lyophilized	Not applicable.
	GAL 10 Forward Primer Lyophilized	Not applicable.
	GAL 10 Reverse Primer Lyophilized	Not applicable.
	pESC-LEU Vector	Not applicable.
	pESC-TRP Vector	Not applicable.
	pESC-URA Vector	Not applicable.
	YPH 499 Yeast Strain	Not applicable.
	YPH 500 Yeast Strain	Not applicable.
	YPH 501 Yeast Strain	Not applicable.

2.3 Other hazards

Other hazards which do not result in classification	: pESC-HIS Vector	None known.
	GAL 1 Forward Primer Lyophilized	None known.
	GAL 1 Reverse Primer Lyophilized	None known.
	GAL 10 Forward Primer Lyophilized	None known.
	GAL 10 Reverse Primer Lyophilized	None known.
	pESC-LEU Vector	None known.

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pESC-TRP Vector	None known.
pESC-URA Vector	None known.
YPH 499 Yeast Strain	None known.
YPH 500 Yeast Strain	None known.
YPH 501 Yeast Strain	None known.

SECTION 3: Composition/information on ingredients

3.1 Substances

pESC-HIS Vector	Mixture
GAL 1 Forward Primer Lyophilized	Mixture
GAL 1 Reverse Primer Lyophilized	Mixture
GAL 10 Forward Primer Lyophilized	Mixture
GAL 10 Reverse Primer Lyophilized	Mixture
pESC-LEU Vector	Mixture
pESC-TRP Vector	Mixture
pESC-URA Vector	Mixture
YPH 499 Yeast Strain	Mixture
YPH 500 Yeast Strain	Mixture
YPH 501 Yeast Strain	Mixture

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
YPH 499 Yeast Strain Glycerol	EC: 200-289-5 CAS: 56-81-5	≥10 - ≤25	Not classified.	[2]
YPH 500 Yeast Strain Glycerol	EC: 200-289-5 CAS: 56-81-5	≥10 - ≤25	Not classified.	[2]
YPH 501 Yeast Strain Glycerol	EC: 200-289-5 CAS: 56-81-5	≥10 - ≤25	Not classified.	[2]

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.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact	: pESC-HIS Vector	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.
	GAL 1 Forward Primer Lyophilized	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.
	GAL 1 Reverse Primer Lyophilized	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.
	GAL 10 Forward Primer Lyophilized	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.
	GAL 10 Reverse Primer Lyophilized	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.

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	pESC-LEU Vector	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.
	pESC-TRP Vector	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.
	pESC-URA Vector	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.
	YPH 499 Yeast 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.
	YPH 500 Yeast 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.
	YPH 501 Yeast 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.
Inhalation	: pESC-HIS Vector	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	GAL 1 Forward Primer Lyophilized	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	GAL 1 Reverse Primer Lyophilized	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	GAL 10 Forward Primer Lyophilized	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	GAL 10 Reverse Primer Lyophilized	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	pESC-LEU Vector	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	pESC-TRP Vector	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	pESC-URA Vector	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	YPH 499 Yeast Strain	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	YPH 500 Yeast Strain	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	YPH 501 Yeast Strain	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

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Skin contact	:	pESC-HIS Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		GAL 1 Forward Primer Lyophilized	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		GAL 1 Reverse Primer Lyophilized	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		GAL 10 Forward Primer Lyophilized	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		GAL 10 Reverse Primer Lyophilized	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		pESC-LEU Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		pESC-TRP Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		pESC-URA Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		YPH 499 Yeast Strain	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		YPH 500 Yeast Strain	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		YPH 501 Yeast Strain	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	:	pESC-HIS Vector	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.
		GAL 1 Forward Primer Lyophilized	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.
		GAL 1 Reverse Primer Lyophilized	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.
		GAL 10 Forward Primer Lyophilized	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.
		GAL 10 Reverse Primer Lyophilized	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.
		pESC-LEU Vector	Wash out mouth with water. Remove victim to fresh air and

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	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. 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.
pESC-TRP Vector	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.
pESC-URA Vector	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.
YPH 499 Yeast Strain	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.
YPH 500 Yeast Strain	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.
YPH 501 Yeast Strain	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.
Protection of first-aiders :	
pESC-HIS Vector	No action shall be taken involving any personal risk or without suitable training.
GAL 1 Forward Primer Lyophilized	No action shall be taken involving any personal risk or without suitable training.
GAL 1 Reverse Primer Lyophilized	No action shall be taken involving any personal risk or without suitable training.
GAL 10 Forward Primer Lyophilized	No action shall be taken involving any personal risk or without suitable training.
GAL 10 Reverse Primer Lyophilized	No action shall be taken involving any personal risk or without suitable training.
pESC-LEU Vector	No action shall be taken involving any personal risk or without suitable training.
pESC-TRP Vector	No action shall be taken involving any personal risk or without suitable training.
pESC-URA Vector	No action shall be taken involving any personal risk or without suitable training.
YPH 499 Yeast Strain	No action shall be taken involving any personal risk or without suitable training.
YPH 500 Yeast Strain	No action shall be taken involving any personal risk or without suitable training.
YPH 501 Yeast Strain	No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed**Potential acute health effects**

SECTION 4: First aid measures

Eye contact	:	pESC-HIS Vector	No known significant effects or critical hazards.
		GAL 1 Forward Primer	No known significant effects or critical hazards.
		Lyophilized	
		GAL 1 Reverse Primer	No known significant effects or critical hazards.
		Lyophilized	
		GAL 10 Forward Primer	No known significant effects or critical hazards.
		Lyophilized	
		GAL 10 Reverse Primer	No known significant effects or critical hazards.
		Lyophilized	
		pESC-LEU Vector	No known significant effects or critical hazards.
Inhalation	:	pESC-HIS Vector	No known significant effects or critical hazards.
		GAL 1 Forward Primer	No known significant effects or critical hazards.
		Lyophilized	
		GAL 1 Reverse Primer	No known significant effects or critical hazards.
		Lyophilized	
		GAL 10 Forward Primer	No known significant effects or critical hazards.
		Lyophilized	
		GAL 10 Reverse Primer	No known significant effects or critical hazards.
		Lyophilized	
		pESC-LEU Vector	No known significant effects or critical hazards.
Skin contact	:	pESC-HIS Vector	No known significant effects or critical hazards.
		GAL 1 Forward Primer	No known significant effects or critical hazards.
		Lyophilized	
		GAL 1 Reverse Primer	No known significant effects or critical hazards.
		Lyophilized	
		GAL 10 Forward Primer	No known significant effects or critical hazards.
		Lyophilized	
		GAL 10 Reverse Primer	No known significant effects or critical hazards.
		Lyophilized	
		pESC-LEU Vector	No known significant effects or critical hazards.
Ingestion	:	pESC-HIS Vector	No known significant effects or critical hazards.
		GAL 1 Forward Primer	No known significant effects or critical hazards.
		Lyophilized	
		GAL 1 Reverse Primer	No known significant effects or critical hazards.
		Lyophilized	
		GAL 10 Forward Primer	No known significant effects or critical hazards.
		Lyophilized	
		GAL 10 Reverse Primer	No known significant effects or critical hazards.
		Lyophilized	
		pESC-LEU Vector	No known significant effects or critical hazards.

Over-exposure signs/symptoms

SECTION 4: First aid measures

Eye contact	:	pESC-HIS Vector	No specific data.
		GAL 1 Forward Primer	No specific data.
		Lyophilized	
		GAL 1 Reverse Primer	No specific data.
		Lyophilized	
		GAL 10 Forward Primer	No specific data.
		Lyophilized	
		GAL 10 Reverse Primer	No specific data.
		Lyophilized	
		pESC-LEU Vector	No specific data.
		pESC-TRP Vector	No specific data.
		pESC-URA Vector	No specific data.
		YPH 499 Yeast Strain	No specific data.
		YPH 500 Yeast Strain	No specific data.
	YPH 501 Yeast Strain	No specific data.	
Inhalation	:	pESC-HIS Vector	No specific data.
		GAL 1 Forward Primer	No specific data.
		Lyophilized	
		GAL 1 Reverse Primer	No specific data.
		Lyophilized	
		GAL 10 Forward Primer	No specific data.
		Lyophilized	
		GAL 10 Reverse Primer	No specific data.
		Lyophilized	
		pESC-LEU Vector	No specific data.
		pESC-TRP Vector	No specific data.
		pESC-URA Vector	No specific data.
		YPH 499 Yeast Strain	No specific data.
		YPH 500 Yeast Strain	No specific data.
	YPH 501 Yeast Strain	No specific data.	
Skin contact	:	pESC-HIS Vector	No specific data.
		GAL 1 Forward Primer	No specific data.
		Lyophilized	
		GAL 1 Reverse Primer	No specific data.
		Lyophilized	
		GAL 10 Forward Primer	No specific data.
		Lyophilized	
		GAL 10 Reverse Primer	No specific data.
		Lyophilized	
		pESC-LEU Vector	No specific data.
		pESC-TRP Vector	No specific data.
		pESC-URA Vector	No specific data.
		YPH 499 Yeast Strain	No specific data.
		YPH 500 Yeast Strain	No specific data.
	YPH 501 Yeast Strain	No specific data.	
Ingestion	:	pESC-HIS Vector	No specific data.
		GAL 1 Forward Primer	No specific data.
		Lyophilized	
		GAL 1 Reverse Primer	No specific data.
		Lyophilized	
		GAL 10 Forward Primer	No specific data.
		Lyophilized	
		GAL 10 Reverse Primer	No specific data.
		Lyophilized	
		pESC-LEU Vector	No specific data.
		pESC-TRP Vector	No specific data.
		pESC-URA Vector	No specific data.
		YPH 499 Yeast Strain	No specific data.
		YPH 500 Yeast Strain	No specific data.
	YPH 501 Yeast Strain	No specific data.	

4.3 Indication of any immediate medical attention and special treatment needed

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Notes to physician	:	<p>pESC-HIS Vector Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</p> <p>GAL 1 Forward Primer Lyophilized In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.</p> <p>GAL 1 Reverse Primer Lyophilized In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.</p> <p>GAL 10 Forward Primer Lyophilized In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.</p> <p>GAL 10 Reverse Primer Lyophilized In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.</p> <p>pESC-LEU Vector Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</p> <p>pESC-TRP Vector Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</p> <p>pESC-URA Vector Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</p> <p>YPH 499 Yeast Strain Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</p> <p>YPH 500 Yeast Strain Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</p> <p>YPH 501 Yeast Strain Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</p>
Specific treatments	:	<p>pESC-HIS Vector No specific treatment.</p> <p>GAL 1 Forward Primer Lyophilized No specific treatment.</p> <p>GAL 1 Reverse Primer Lyophilized No specific treatment.</p> <p>GAL 10 Forward Primer Lyophilized No specific treatment.</p> <p>GAL 10 Reverse Primer Lyophilized No specific treatment.</p> <p>pESC-LEU Vector No specific treatment.</p> <p>pESC-TRP Vector No specific treatment.</p> <p>pESC-URA Vector No specific treatment.</p> <p>YPH 499 Yeast Strain No specific treatment.</p> <p>YPH 500 Yeast Strain No specific treatment.</p> <p>YPH 501 Yeast Strain No specific treatment.</p>

SECTION 5: Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing media	:	<p>pESC-HIS Vector Use an extinguishing agent suitable for the surrounding fire.</p> <p>GAL 1 Forward Primer Lyophilized Use an extinguishing agent suitable for the surrounding fire.</p> <p>GAL 1 Reverse Primer Lyophilized Use an extinguishing agent suitable for the surrounding fire.</p> <p>GAL 10 Forward Primer Lyophilized Use an extinguishing agent suitable for the surrounding fire.</p> <p>GAL 10 Reverse Primer Lyophilized Use an extinguishing agent suitable for the surrounding fire.</p> <p>pESC-LEU Vector Use an extinguishing agent suitable for the surrounding fire.</p> <p>pESC-TRP Vector Use an extinguishing agent suitable for the surrounding fire.</p> <p>pESC-URA Vector Use an extinguishing agent suitable for the surrounding fire.</p> <p>YPH 499 Yeast Strain Use an extinguishing agent suitable for the surrounding fire.</p> <p>YPH 500 Yeast Strain Use an extinguishing agent suitable for the surrounding fire.</p> <p>YPH 501 Yeast Strain Use an extinguishing agent suitable for the surrounding fire.</p>
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SECTION 5: Firefighting measures

Unsuitable extinguishing media	: pESC-HIS Vector	None known.
	GAL 1 Forward Primer Lyophilized	None known.
	GAL 1 Reverse Primer Lyophilized	None known.
	GAL 10 Forward Primer Lyophilized	None known.
	GAL 10 Reverse Primer Lyophilized	None known.
	pESC-LEU Vector	None known.
	pESC-TRP Vector	None known.
	pESC-URA Vector	None known.
	YPH 499 Yeast Strain	None known.
	YPH 500 Yeast Strain	None known.
	YPH 501 Yeast Strain	None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	: pESC-HIS Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
	GAL 1 Forward Primer Lyophilized	No specific fire or explosion hazard.
	GAL 1 Reverse Primer Lyophilized	No specific fire or explosion hazard.
	GAL 10 Forward Primer Lyophilized	No specific fire or explosion hazard.
	GAL 10 Reverse Primer Lyophilized	No specific fire or explosion hazard.
	pESC-LEU Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
	pESC-TRP Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
	pESC-URA Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
	YPH 499 Yeast Strain	In a fire or if heated, a pressure increase will occur and the container may burst.
	YPH 500 Yeast Strain	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous combustion products	: pESC-HIS Vector	No specific data.
	GAL 1 Forward Primer Lyophilized	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides
	GAL 1 Reverse Primer Lyophilized	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides
	GAL 10 Forward Primer Lyophilized	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides
	GAL 10 Reverse Primer Lyophilized	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides

SECTION 5: Firefighting measures

pESC-LEU Vector	phosphorus oxides No specific data.
pESC-TRP Vector	No specific data.
pESC-URA Vector	No specific data.
YPH 499 Yeast Strain	Decomposition products may include the following materials: carbon dioxide carbon monoxide
YPH 500 Yeast Strain	Decomposition products may include the following materials: carbon dioxide carbon monoxide
YPH 501 Yeast Strain	Decomposition products may include the following materials: carbon dioxide carbon monoxide

5.3 Advice for firefighters

Special precautions for fire-fighters

: pESC-HIS Vector	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.
GAL 1 Forward Primer Lyophilized	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.
GAL 1 Reverse Primer Lyophilized	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.
GAL 10 Forward Primer Lyophilized	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.
GAL 10 Reverse Primer Lyophilized	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.
pESC-LEU Vector	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.
pESC-TRP Vector	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.
pESC-URA Vector	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.
YPH 499 Yeast 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.
YPH 500 Yeast 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.
YPH 501 Yeast 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.

Special protective equipment for fire-fighters

: pESC-HIS Vector	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
GAL 1 Forward Primer Lyophilized	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
GAL 1 Reverse Primer Lyophilized	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for

SECTION 5: Firefighting measures

	fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
GAL 10 Forward Primer Lyophilized	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
GAL 10 Reverse Primer Lyophilized	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
pESC-LEU Vector	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
pESC-TRP Vector	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
pESC-URA Vector	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
YPH 499 Yeast Strain	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
YPH 500 Yeast Strain	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
YPH 501 Yeast Strain	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

For non-emergency personnel	: pESC-HIS Vector	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.
	GAL 1 Forward Primer Lyophilized	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

SECTION 6: Accidental release measures

GAL 1 Reverse Primer Lyophilized	appropriate personal protective equipment. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
GAL 10 Forward Primer Lyophilized	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.
GAL 10 Reverse Primer Lyophilized	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.
pESC-LEU Vector	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.
pESC-TRP Vector	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.
pESC-URA Vector	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.
YPH 499 Yeast 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.
YPH 500 Yeast 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.
YPH 501 Yeast 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.
: pESC-HIS Vector	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".
GAL 1 Forward Primer Lyophilized	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".
GAL 1 Reverse Primer Lyophilized	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".
GAL 10 Forward Primer Lyophilized	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".
GAL 10 Reverse Primer Lyophilized	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and

For emergency responders

SECTION 6: Accidental release measures

pESC-LEU Vector	unsuitable materials. See also the information in "For non-emergency personnel". 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".
pESC-TRP Vector	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".
pESC-URA Vector	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".
YPH 499 Yeast 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".
YPH 500 Yeast 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".
YPH 501 Yeast 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".

6.2 Environmental precautions

: pESC-HIS Vector	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).
GAL 1 Forward Primer Lyophilized	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).
GAL 1 Reverse Primer Lyophilized	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).
GAL 10 Forward Primer Lyophilized	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).
GAL 10 Reverse Primer Lyophilized	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).
pESC-LEU Vector	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).
pESC-TRP Vector	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).
pESC-URA Vector	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).
YPH 499 Yeast 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).
YPH 500 Yeast Strain	Avoid dispersal of spilt material and runoff and contact with

SECTION 6: Accidental release measures

	soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
YPH 501 Yeast 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).

6.3 Methods and material for containment and cleaning up**Methods for cleaning up** : pESC-HIS Vector

	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.
GAL 1 Forward Primer Lyophilized	Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.
GAL 1 Reverse Primer Lyophilized	Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.
GAL 10 Forward Primer Lyophilized	Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.
GAL 10 Reverse Primer Lyophilized	Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.
pESC-LEU Vector	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.
pESC-TRP Vector	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.
pESC-URA Vector	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.
YPH 499 Yeast 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.
YPH 500 Yeast 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.
YPH 501 Yeast 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.

6.4 Reference to other sections

- : See Section 1 for emergency contact information.
- See Section 8 for information on appropriate personal protective equipment.
- See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Protective measures	: pESC-HIS Vector	Put on appropriate personal protective equipment (see Section 8).
	GAL 1 Forward Primer Lyophilized	Put on appropriate personal protective equipment (see Section 8).
	GAL 1 Reverse Primer Lyophilized	Put on appropriate personal protective equipment (see Section 8).
	GAL 10 Forward Primer Lyophilized	Put on appropriate personal protective equipment (see Section 8).
	GAL 10 Reverse Primer Lyophilized	Put on appropriate personal protective equipment (see Section 8).
	pESC-LEU Vector	Put on appropriate personal protective equipment (see Section 8).
	pESC-TRP Vector	Put on appropriate personal protective equipment (see Section 8).
	pESC-URA Vector	Put on appropriate personal protective equipment (see Section 8).
	YPH 499 Yeast Strain	Put on appropriate personal protective equipment (see Section 8).
	YPH 500 Yeast Strain	Put on appropriate personal protective equipment (see Section 8).
	YPH 501 Yeast Strain	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	: pESC-HIS Vector	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.
	GAL 1 Forward Primer Lyophilized	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.
	GAL 1 Reverse Primer Lyophilized	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.
	GAL 10 Forward Primer Lyophilized	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.
	GAL 10 Reverse Primer Lyophilized	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.
	pESC-LEU Vector	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.
	pESC-TRP Vector	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

SECTION 7: Handling and storage

pESC-URA Vector	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.
YPH 499 Yeast Strain	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.
YPH 500 Yeast Strain	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.
YPH 501 Yeast Strain	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.

7.2 Conditions for safe storage, including any incompatibilities**Storage**

pESC-HIS Vector	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.
GAL 1 Forward Primer Lyophilized	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.
GAL 1 Reverse Primer Lyophilized	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.
GAL 10 Forward Primer Lyophilized	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

SECTION 7: Handling and storage

GAL 10 Reverse Primer Lyophilized	contamination. 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.
pESC-LEU Vector	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.
pESC-TRP Vector	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.
pESC-URA Vector	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.
YPH 499 Yeast 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.
YPH 500 Yeast 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.
YPH 501 Yeast 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.

SECTION 7: Handling and storage

7.3 Specific end use(s)

Recommendations	:	pESC-HIS Vector GAL 1 Forward Primer Lyophilized GAL 1 Reverse Primer Lyophilized GAL 10 Forward Primer Lyophilized GAL 10 Reverse Primer Lyophilized pESC-LEU Vector pESC-TRP Vector pESC-URA Vector YPH 499 Yeast Strain YPH 500 Yeast Strain YPH 501 Yeast Strain	Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications.
Industrial sector specific solutions	:	pESC-HIS Vector GAL 1 Forward Primer Lyophilized GAL 1 Reverse Primer Lyophilized GAL 10 Forward Primer Lyophilized GAL 10 Reverse Primer Lyophilized pESC-LEU Vector pESC-TRP Vector pESC-URA Vector YPH 499 Yeast Strain YPH 500 Yeast Strain YPH 501 Yeast Strain	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
YPH 499 Yeast Strain Glycerol	EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 10 mg/m ³ 8 hours. Form: Mist
YPH 500 Yeast Strain Glycerol	EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 10 mg/m ³ 8 hours. Form: Mist
YPH 501 Yeast Strain Glycerol	EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 10 mg/m ³ 8 hours. Form: Mist

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

SECTION 8: Exposure controls/personal protection

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available

8.2 Exposure controls

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

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: 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.

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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	:	pESC-HIS Vector	Liquid.
		GAL 1 Forward Primer	Solid.
		Lyophilized	
		GAL 1 Reverse Primer	Solid.
		Lyophilized	
		GAL 10 Forward Primer	Solid.
		Lyophilized	
		GAL 10 Reverse	Solid.
		Primer Lyophilized	
		pESC-LEU Vector	Liquid.
		pESC-TRP Vector	Liquid.
		pESC-URA Vector	Liquid.
		YPH 499 Yeast Strain	Liquid.
	YPH 500 Yeast Strain	Liquid.	
	YPH 501 Yeast Strain	Liquid.	

SECTION 9: Physical and chemical properties

Colour	:	pESC-HIS Vector	Not available.	
		GAL 1 Forward Primer Lyophilized	Not available.	
		GAL 1 Reverse Primer Lyophilized	Not available.	
		GAL 10 Forward Primer Lyophilized	Not available.	
		GAL 10 Reverse Primer Lyophilized	Not available.	
		pESC-LEU Vector	Not available.	
		pESC-TRP Vector	Not available.	
		pESC-URA Vector	Not available.	
		YPH 499 Yeast Strain	Not available.	
		YPH 500 Yeast Strain	Not available.	
		YPH 501 Yeast Strain	Not available.	
	Odour	:	pESC-HIS Vector	Not available.
			GAL 1 Forward Primer Lyophilized	Not available.
		GAL 1 Reverse Primer Lyophilized	Not available.	
		GAL 10 Forward Primer Lyophilized	Not available.	
		GAL 10 Reverse Primer Lyophilized	Not available.	
		pESC-LEU Vector	Not available.	
		pESC-TRP Vector	Not available.	
		pESC-URA Vector	Not available.	
		YPH 499 Yeast Strain	Not available.	
		YPH 500 Yeast Strain	Not available.	
		YPH 501 Yeast Strain	Not available.	
Odour threshold		:	pESC-HIS Vector	Not available.
			GAL 1 Forward Primer Lyophilized	Not available.
		GAL 1 Reverse Primer Lyophilized	Not available.	
		GAL 10 Forward Primer Lyophilized	Not available.	
		GAL 10 Reverse Primer Lyophilized	Not available.	
		pESC-LEU Vector	Not available.	
		pESC-TRP Vector	Not available.	
		pESC-URA Vector	Not available.	
		YPH 499 Yeast Strain	Not available.	
		YPH 500 Yeast Strain	Not available.	
		YPH 501 Yeast Strain	Not available.	
	pH	:	pESC-HIS Vector	7.5
			GAL 1 Forward Primer Lyophilized	Not available.
		GAL 1 Reverse Primer Lyophilized	Not available.	
		GAL 10 Forward Primer Lyophilized	Not available.	
		GAL 10 Reverse Primer Lyophilized	Not available.	
		pESC-LEU Vector	7.5	
		pESC-TRP Vector	7.5	
		pESC-URA Vector	7.5	
		YPH 499 Yeast Strain	Not available.	
		YPH 500 Yeast Strain	Not available.	
		YPH 501 Yeast Strain	Not available.	

SECTION 9: Physical and chemical properties

Melting point/freezing point	:	pESC-HIS Vector	0°C
		GAL 1 Forward Primer	Not available.
		Lyophilized	
		GAL 1 Reverse Primer	Not available.
		Lyophilized	
		GAL 10 Forward Primer	Not available.
		Lyophilized	
		GAL 10 Reverse	Not available.
		Primer Lyophilized	
		pESC-LEU Vector	0°C
		pESC-TRP Vector	0°C
		pESC-URA Vector	0°C
		YPH 499 Yeast Strain	Not available.
	YPH 500 Yeast Strain	Not available.	
	YPH 501 Yeast Strain	Not available.	
Initial boiling point and boiling range	:	pESC-HIS Vector	100°C
		GAL 1 Forward Primer	Not available.
		Lyophilized	
		GAL 1 Reverse Primer	Not available.
		Lyophilized	
		GAL 10 Forward Primer	Not available.
		Lyophilized	
		GAL 10 Reverse	Not available.
		Primer Lyophilized	
		pESC-LEU Vector	100°C
		pESC-TRP Vector	100°C
		pESC-URA Vector	100°C
		YPH 499 Yeast Strain	Not available.
	YPH 500 Yeast Strain	Not available.	
	YPH 501 Yeast Strain	Not available.	
Flash point	:	pESC-HIS Vector	Not available.
		GAL 1 Forward Primer	Not available.
		Lyophilized	
		GAL 1 Reverse Primer	Not available.
		Lyophilized	
		GAL 10 Forward Primer	Not available.
		Lyophilized	
		GAL 10 Reverse	Not available.
		Primer Lyophilized	
		pESC-LEU Vector	Not available.
		pESC-TRP Vector	Not available.
		pESC-URA Vector	Not available.
		YPH 499 Yeast Strain	Not available.
	YPH 500 Yeast Strain	Not available.	
	YPH 501 Yeast Strain	Not available.	
Evaporation rate	:	pESC-HIS Vector	Not available.
		GAL 1 Forward Primer	Not available.
		Lyophilized	
		GAL 1 Reverse Primer	Not available.
		Lyophilized	
		GAL 10 Forward Primer	Not available.
		Lyophilized	
		GAL 10 Reverse	Not available.
		Primer Lyophilized	
		pESC-LEU Vector	Not available.
		pESC-TRP Vector	Not available.
		pESC-URA Vector	Not available.
		YPH 499 Yeast Strain	Not available.
	YPH 500 Yeast Strain	Not available.	
	YPH 501 Yeast Strain	Not available.	

SECTION 9: Physical and chemical properties

Flammability (solid, gas)	:	pESC-HIS Vector	Not applicable.	
		GAL 1 Forward Primer Lyophilized	Not available.	
		GAL 1 Reverse Primer Lyophilized	Not available.	
		GAL 10 Forward Primer Lyophilized	Not available.	
		GAL 10 Reverse Primer Lyophilized	Not available.	
		pESC-LEU Vector	Not applicable.	
		pESC-TRP Vector	Not applicable.	
		pESC-URA Vector	Not applicable.	
		YPH 499 Yeast Strain	Not applicable.	
		YPH 500 Yeast Strain	Not applicable.	
		YPH 501 Yeast Strain	Not applicable.	
	Upper/lower flammability or explosive limits	:	pESC-HIS Vector	Not available.
			GAL 1 Forward Primer Lyophilized	Not available.
		GAL 1 Reverse Primer Lyophilized	Not available.	
		GAL 10 Forward Primer Lyophilized	Not available.	
		GAL 10 Reverse Primer Lyophilized	Not available.	
		pESC-LEU Vector	Not available.	
		pESC-TRP Vector	Not available.	
		pESC-URA Vector	Not available.	
		YPH 499 Yeast Strain	Not available.	
		YPH 500 Yeast Strain	Not available.	
		YPH 501 Yeast Strain	Not available.	
Vapour pressure		:	pESC-HIS Vector	Not available.
			GAL 1 Forward Primer Lyophilized	Not available.
		GAL 1 Reverse Primer Lyophilized	Not available.	
		GAL 10 Forward Primer Lyophilized	Not available.	
		GAL 10 Reverse Primer Lyophilized	Not available.	
		pESC-LEU Vector	Not available.	
		pESC-TRP Vector	Not available.	
		pESC-URA Vector	Not available.	
		YPH 499 Yeast Strain	Not available.	
		YPH 500 Yeast Strain	Not available.	
		YPH 501 Yeast Strain	Not available.	
	Vapour density	:	pESC-HIS Vector	Not available.
			GAL 1 Forward Primer Lyophilized	Not available.
		GAL 1 Reverse Primer Lyophilized	Not available.	
		GAL 10 Forward Primer Lyophilized	Not available.	
		GAL 10 Reverse Primer Lyophilized	Not available.	
		pESC-LEU Vector	Not available.	
		pESC-TRP Vector	Not available.	
		pESC-URA Vector	Not available.	
		YPH 499 Yeast Strain	Not available.	
		YPH 500 Yeast Strain	Not available.	
		YPH 501 Yeast Strain	Not available.	

SECTION 9: Physical and chemical properties

Relative density	:	pESC-HIS Vector	Not available.
		GAL 1 Forward Primer Lyophilized	Not available.
		GAL 1 Reverse Primer Lyophilized	Not available.
		GAL 10 Forward Primer Lyophilized	Not available.
		GAL 10 Reverse Primer Lyophilized	Not available.
		pESC-LEU Vector	Not available.
		pESC-TRP Vector	Not available.
		pESC-URA Vector	Not available.
		YPH 499 Yeast Strain	Not available.
		YPH 500 Yeast Strain	Not available.
		YPH 501 Yeast Strain	Not available.
Solubility(ies)	:	pESC-HIS Vector	Easily soluble in the following materials: cold water and hot water.
		GAL 1 Forward Primer Lyophilized	Soluble in the following materials: cold water and hot water.
		GAL 1 Reverse Primer Lyophilized	Not available.
		GAL 10 Forward Primer Lyophilized	Soluble in the following materials: cold water and hot water.
		GAL 10 Reverse Primer Lyophilized	Soluble in the following materials: cold water and hot water.
		pESC-LEU Vector	Easily soluble in the following materials: cold water and hot water.
		pESC-TRP Vector	Easily soluble in the following materials: cold water and hot water.
		pESC-URA Vector	Easily soluble in the following materials: cold water and hot water.
		YPH 499 Yeast Strain	Soluble in the following materials: cold water and hot water.
		YPH 500 Yeast Strain	Soluble in the following materials: cold water and hot water.
		YPH 501 Yeast Strain	Soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	:	pESC-HIS Vector	Not available.
		GAL 1 Forward Primer Lyophilized	Not available.
		GAL 1 Reverse Primer Lyophilized	Not available.
		GAL 10 Forward Primer Lyophilized	Not available.
		GAL 10 Reverse Primer Lyophilized	Not available.
		pESC-LEU Vector	Not available.
		pESC-TRP Vector	Not available.
		pESC-URA Vector	Not available.
		YPH 499 Yeast Strain	Not available.
		YPH 500 Yeast Strain	Not available.
		YPH 501 Yeast Strain	Not available.
Auto-ignition temperature	:	pESC-HIS Vector	Not available.
		GAL 1 Forward Primer Lyophilized	Not available.
		GAL 1 Reverse Primer Lyophilized	Not available.
		GAL 10 Forward Primer Lyophilized	Not available.
		GAL 10 Reverse Primer Lyophilized	Not available.
		pESC-LEU Vector	Not available.
		pESC-TRP Vector	Not available.

SECTION 9: Physical and chemical properties

	pESC-URA Vector	Not available.
	YPH 499 Yeast Strain	Not available.
	YPH 500 Yeast Strain	Not available.
	YPH 501 Yeast Strain	Not available.
Decomposition temperature	: pESC-HIS Vector	Not available.
	GAL 1 Forward Primer Lyophilized	Not available.
	GAL 1 Reverse Primer Lyophilized	Not available.
	GAL 10 Forward Primer Lyophilized	Not available.
	GAL 10 Reverse Primer Lyophilized	Not available.
	pESC-LEU Vector	Not available.
	pESC-TRP Vector	Not available.
	pESC-URA Vector	Not available.
	YPH 499 Yeast Strain	Not available.
	YPH 500 Yeast Strain	Not available.
	YPH 501 Yeast Strain	Not available.
Viscosity	: pESC-HIS Vector	Not available.
	GAL 1 Forward Primer Lyophilized	Not available.
	GAL 1 Reverse Primer Lyophilized	Not available.
	GAL 10 Forward Primer Lyophilized	Not available.
	GAL 10 Reverse Primer Lyophilized	Not available.
	pESC-LEU Vector	Not available.
	pESC-TRP Vector	Not available.
	pESC-URA Vector	Not available.
	YPH 499 Yeast Strain	Not available.
	YPH 500 Yeast Strain	Not available.
	YPH 501 Yeast Strain	Not available.
Explosive properties	: pESC-HIS Vector	Not available.
	GAL 1 Forward Primer Lyophilized	Not available.
	GAL 1 Reverse Primer Lyophilized	Not available.
	GAL 10 Forward Primer Lyophilized	Not available.
	GAL 10 Reverse Primer Lyophilized	Not available.
	pESC-LEU Vector	Not available.
	pESC-TRP Vector	Not available.
	pESC-URA Vector	Not available.
	YPH 499 Yeast Strain	Not available.
	YPH 500 Yeast Strain	Not available.
	YPH 501 Yeast Strain	Not available.
Oxidising properties	: pESC-HIS Vector	Not available.
	GAL 1 Forward Primer Lyophilized	Not available.
	GAL 1 Reverse Primer Lyophilized	Not available.
	GAL 10 Forward Primer Lyophilized	Not available.
	GAL 10 Reverse Primer Lyophilized	Not available.
	pESC-LEU Vector	Not available.
	pESC-TRP Vector	Not available.
	pESC-URA Vector	Not available.
	YPH 499 Yeast Strain	Not available.
	YPH 500 Yeast Strain	Not available.

SECTION 9: Physical and chemical properties

YPH 501 Yeast Strain Not available.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	: pESC-HIS Vector GAL 1 Forward Primer Lyophilized GAL 1 Reverse Primer Lyophilized GAL 10 Forward Primer Lyophilized GAL 10 Reverse Primer Lyophilized pESC-LEU Vector pESC-TRP Vector pESC-URA Vector YPH 499 Yeast Strain YPH 500 Yeast Strain YPH 501 Yeast Strain	No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. 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.
10.2 Chemical stability	: pESC-HIS Vector GAL 1 Forward Primer Lyophilized GAL 1 Reverse Primer Lyophilized GAL 10 Forward Primer Lyophilized GAL 10 Reverse Primer Lyophilized pESC-LEU Vector pESC-TRP Vector pESC-URA Vector YPH 499 Yeast Strain YPH 500 Yeast Strain YPH 501 Yeast Strain	The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable.
10.3 Possibility of hazardous reactions	: pESC-HIS Vector GAL 1 Forward Primer Lyophilized GAL 1 Reverse Primer Lyophilized GAL 10 Forward Primer Lyophilized GAL 10 Reverse Primer Lyophilized pESC-LEU Vector pESC-TRP Vector pESC-URA Vector YPH 499 Yeast Strain	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.

SECTION 10: Stability and reactivity

YPH 500 Yeast Strain	reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
YPH 501 Yeast Strain	Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid	:	pESC-HIS Vector	No specific data.
		GAL 1 Forward Primer Lyophilized	No specific data.
		GAL 1 Reverse Primer Lyophilized	No specific data.
		GAL 10 Forward Primer Lyophilized	No specific data.
		GAL 10 Reverse Primer Lyophilized	No specific data.
		pESC-LEU Vector	No specific data.
		pESC-TRP Vector	No specific data.
		pESC-URA Vector	No specific data.
		YPH 499 Yeast Strain	No specific data.
		YPH 500 Yeast Strain	No specific data.
		YPH 501 Yeast Strain	No specific data.

10.5 Incompatible materials	:	pESC-HIS Vector	May react or be incompatible with oxidising materials.
		GAL 1 Forward Primer Lyophilized	May react or be incompatible with oxidising materials.
		GAL 1 Reverse Primer Lyophilized	May react or be incompatible with oxidising materials.
		GAL 10 Forward Primer Lyophilized	May react or be incompatible with oxidising materials.
		GAL 10 Reverse Primer Lyophilized	May react or be incompatible with oxidising materials.
		pESC-LEU Vector	May react or be incompatible with oxidising materials.
		pESC-TRP Vector	May react or be incompatible with oxidising materials.
		pESC-URA Vector	May react or be incompatible with oxidising materials.
		YPH 499 Yeast Strain	May react or be incompatible with oxidising materials.
		YPH 500 Yeast Strain	May react or be incompatible with oxidising materials.
		YPH 501 Yeast Strain	May react or be incompatible with oxidising materials.

10.6 Hazardous decomposition products	:	pESC-HIS Vector	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		GAL 1 Forward Primer Lyophilized	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		GAL 1 Reverse Primer Lyophilized	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		GAL 10 Forward Primer Lyophilized	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		GAL 10 Reverse Primer Lyophilized	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		pESC-LEU Vector	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		pESC-TRP Vector	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		pESC-URA Vector	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		YPH 499 Yeast Strain	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		YPH 500 Yeast Strain	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		YPH 501 Yeast Strain	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity**

Not available.

Acute toxicity estimates

Not available.

Irritation/Corrosion**Conclusion/Summary** : Not available.**Sensitiser****Conclusion/Summary** : 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

pESC-HIS Vector	Not available.
GAL 1 Forward Primer Lyophilized	Not available.
GAL 1 Reverse Primer Lyophilized	Not available.
GAL 10 Forward Primer Lyophilized	Not available.
GAL 10 Reverse Primer Lyophilized	Not available.
pESC-LEU Vector	Not available.
pESC-TRP Vector	Not available.
pESC-URA Vector	Not available.
YPH 499 Yeast Strain	Routes of entry anticipated: Oral, Dermal, Inhalation.
YPH 500 Yeast Strain	Routes of entry anticipated: Oral, Dermal, Inhalation.
YPH 501 Yeast Strain	Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Inhalation	: pESC-HIS Vector	No known significant effects or critical hazards.
	GAL 1 Forward Primer Lyophilized	No known significant effects or critical hazards.
	GAL 1 Reverse Primer Lyophilized	No known significant effects or critical hazards.
	GAL 10 Forward Primer Lyophilized	No known significant effects or critical hazards.
	GAL 10 Reverse Primer Lyophilized	No known significant effects or critical hazards.
	pESC-LEU Vector	No known significant effects or critical hazards.
	pESC-TRP Vector	No known significant effects or critical hazards.
	pESC-URA Vector	No known significant effects or critical hazards.
	YPH 499 Yeast Strain	No known significant effects or critical hazards.
	YPH 500 Yeast Strain	No known significant effects or critical hazards.
	YPH 501 Yeast Strain	No known significant effects or critical hazards.
Ingestion	: pESC-HIS Vector	No known significant effects or critical hazards.
	GAL 1 Forward Primer Lyophilized	No known significant effects or critical hazards.
	GAL 1 Reverse Primer Lyophilized	No known significant effects or critical hazards.
	GAL 10 Forward Primer Lyophilized	No known significant effects or critical hazards.
	GAL 10 Reverse Primer Lyophilized	No known significant effects or critical hazards.
	pESC-LEU Vector	No known significant effects or critical hazards.

SECTION 11: Toxicological information

	pESC-TRP Vector	No known significant effects or critical hazards.
	pESC-URA Vector	No known significant effects or critical hazards.
	YPH 499 Yeast Strain	No known significant effects or critical hazards.
	YPH 500 Yeast Strain	No known significant effects or critical hazards.
	YPH 501 Yeast Strain	No known significant effects or critical hazards.
Skin contact	: pESC-HIS Vector	No known significant effects or critical hazards.
	GAL 1 Forward Primer Lyophilized	No known significant effects or critical hazards.
	GAL 1 Reverse Primer Lyophilized	No known significant effects or critical hazards.
	GAL 10 Forward Primer Lyophilized	No known significant effects or critical hazards.
	GAL 10 Reverse Primer Lyophilized	No known significant effects or critical hazards.
	pESC-LEU Vector	No known significant effects or critical hazards.
	pESC-TRP Vector	No known significant effects or critical hazards.
	pESC-URA Vector	No known significant effects or critical hazards.
	YPH 499 Yeast Strain	No known significant effects or critical hazards.
	YPH 500 Yeast Strain	No known significant effects or critical hazards.
	YPH 501 Yeast Strain	No known significant effects or critical hazards.
Eye contact	: pESC-HIS Vector	No known significant effects or critical hazards.
	GAL 1 Forward Primer Lyophilized	No known significant effects or critical hazards.
	GAL 1 Reverse Primer Lyophilized	No known significant effects or critical hazards.
	GAL 10 Forward Primer Lyophilized	No known significant effects or critical hazards.
	GAL 10 Reverse Primer Lyophilized	No known significant effects or critical hazards.
	pESC-LEU Vector	No known significant effects or critical hazards.
	pESC-TRP Vector	No known significant effects or critical hazards.
	pESC-URA Vector	No known significant effects or critical hazards.
	YPH 499 Yeast Strain	No known significant effects or critical hazards.
	YPH 500 Yeast Strain	No known significant effects or critical hazards.
	YPH 501 Yeast Strain	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	: pESC-HIS Vector	No specific data.
	GAL 1 Forward Primer Lyophilized	No specific data.
	GAL 1 Reverse Primer Lyophilized	No specific data.
	GAL 10 Forward Primer Lyophilized	No specific data.
	GAL 10 Reverse Primer Lyophilized	No specific data.
	pESC-LEU Vector	No specific data.
	pESC-TRP Vector	No specific data.
	pESC-URA Vector	No specific data.
	YPH 499 Yeast Strain	No specific data.
	YPH 500 Yeast Strain	No specific data.
	YPH 501 Yeast Strain	No specific data.
Ingestion	: pESC-HIS Vector	No specific data.
	GAL 1 Forward Primer Lyophilized	No specific data.
	GAL 1 Reverse Primer Lyophilized	No specific data.
	GAL 10 Forward Primer Lyophilized	No specific data.
	GAL 10 Reverse Primer Lyophilized	No specific data.
	pESC-LEU Vector	No specific data.
	pESC-TRP Vector	No specific data.
	pESC-URA Vector	No specific data.

SECTION 11: Toxicological information

	YPH 499 Yeast Strain	No specific data.
	YPH 500 Yeast Strain	No specific data.
	YPH 501 Yeast Strain	No specific data.
Skin contact	: pESC-HIS Vector	No specific data.
	GAL 1 Forward Primer Lyophilized	No specific data.
	GAL 1 Reverse Primer Lyophilized	No specific data.
	GAL 10 Forward Primer Lyophilized	No specific data.
	GAL 10 Reverse Primer Lyophilized	No specific data.
	pESC-LEU Vector	No specific data.
	pESC-TRP Vector	No specific data.
	pESC-URA Vector	No specific data.
	YPH 499 Yeast Strain	No specific data.
	YPH 500 Yeast Strain	No specific data.
	YPH 501 Yeast Strain	No specific data.
Eye contact	: pESC-HIS Vector	No specific data.
	GAL 1 Forward Primer Lyophilized	No specific data.
	GAL 1 Reverse Primer Lyophilized	No specific data.
	GAL 10 Forward Primer Lyophilized	No specific data.
	GAL 10 Reverse Primer Lyophilized	No specific data.
	pESC-LEU Vector	No specific data.
	pESC-TRP Vector	No specific data.
	pESC-URA Vector	No specific data.
	YPH 499 Yeast Strain	No specific data.
	YPH 500 Yeast Strain	No specific data.
	YPH 501 Yeast Strain	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

General	: pESC-HIS Vector	No known significant effects or critical hazards.
	GAL 1 Forward Primer Lyophilized	No known significant effects or critical hazards.
	GAL 1 Reverse Primer Lyophilized	No known significant effects or critical hazards.
	GAL 10 Forward Primer Lyophilized	No known significant effects or critical hazards.
	GAL 10 Reverse Primer Lyophilized	No known significant effects or critical hazards.
	pESC-LEU Vector	No known significant effects or critical hazards.
	pESC-TRP Vector	No known significant effects or critical hazards.
	pESC-URA Vector	No known significant effects or critical hazards.
	YPH 499 Yeast Strain	No known significant effects or critical hazards.
	YPH 500 Yeast Strain	No known significant effects or critical hazards.
	YPH 501 Yeast Strain	No known significant effects or critical hazards.

SECTION 11: Toxicological information

Carcinogenicity	:	pESC-HIS Vector	No known significant effects or critical hazards.	
		GAL 1 Forward Primer Lyophilized	No known significant effects or critical hazards.	
		GAL 1 Reverse Primer Lyophilized	No known significant effects or critical hazards.	
		GAL 10 Forward Primer Lyophilized	No known significant effects or critical hazards.	
		GAL 10 Reverse Primer Lyophilized	No known significant effects or critical hazards.	
		pESC-LEU Vector	No known significant effects or critical hazards.	
		pESC-TRP Vector	No known significant effects or critical hazards.	
		pESC-URA Vector	No known significant effects or critical hazards.	
		YPH 499 Yeast Strain	No known significant effects or critical hazards.	
		YPH 500 Yeast Strain	No known significant effects or critical hazards.	
		YPH 501 Yeast Strain	No known significant effects or critical hazards.	
	Mutagenicity	:	pESC-HIS Vector	No known significant effects or critical hazards.
			GAL 1 Forward Primer Lyophilized	No known significant effects or critical hazards.
			GAL 1 Reverse Primer Lyophilized	No known significant effects or critical hazards.
		GAL 10 Forward Primer Lyophilized	No known significant effects or critical hazards.	
		GAL 10 Reverse Primer Lyophilized	No known significant effects or critical hazards.	
		pESC-LEU Vector	No known significant effects or critical hazards.	
		pESC-TRP Vector	No known significant effects or critical hazards.	
		pESC-URA Vector	No known significant effects or critical hazards.	
		YPH 499 Yeast Strain	No known significant effects or critical hazards.	
		YPH 500 Yeast Strain	No known significant effects or critical hazards.	
		YPH 501 Yeast Strain	No known significant effects or critical hazards.	
Teratogenicity		:	pESC-HIS Vector	No known significant effects or critical hazards.
			GAL 1 Forward Primer Lyophilized	No known significant effects or critical hazards.
			GAL 1 Reverse Primer Lyophilized	No known significant effects or critical hazards.
		GAL 10 Forward Primer Lyophilized	No known significant effects or critical hazards.	
		GAL 10 Reverse Primer Lyophilized	No known significant effects or critical hazards.	
		pESC-LEU Vector	No known significant effects or critical hazards.	
		pESC-TRP Vector	No known significant effects or critical hazards.	
		pESC-URA Vector	No known significant effects or critical hazards.	
		YPH 499 Yeast Strain	No known significant effects or critical hazards.	
		YPH 500 Yeast Strain	No known significant effects or critical hazards.	
		YPH 501 Yeast Strain	No known significant effects or critical hazards.	
	Developmental effects	:	pESC-HIS Vector	No known significant effects or critical hazards.
			GAL 1 Forward Primer Lyophilized	No known significant effects or critical hazards.
			GAL 1 Reverse Primer Lyophilized	No known significant effects or critical hazards.
		GAL 10 Forward Primer Lyophilized	No known significant effects or critical hazards.	
		GAL 10 Reverse Primer Lyophilized	No known significant effects or critical hazards.	
		pESC-LEU Vector	No known significant effects or critical hazards.	
		pESC-TRP Vector	No known significant effects or critical hazards.	
		pESC-URA Vector	No known significant effects or critical hazards.	
		YPH 499 Yeast Strain	No known significant effects or critical hazards.	
		YPH 500 Yeast Strain	No known significant effects or critical hazards.	
		YPH 501 Yeast Strain	No known significant effects or critical hazards.	

SECTION 11: Toxicological information

Fertility effects	:	pESC-HIS Vector	No known significant effects or critical hazards.
		GAL 1 Forward Primer	No known significant effects or critical hazards.
		Lyophilized	
		GAL 1 Reverse Primer	No known significant effects or critical hazards.
		Lyophilized	
		GAL 10 Forward Primer	No known significant effects or critical hazards.
		Lyophilized	
		GAL 10 Reverse Primer	No known significant effects or critical hazards.
		Lyophilized	
		pESC-LEU Vector	No known significant effects or critical hazards.
		pESC-TRP Vector	No known significant effects or critical hazards.
		pESC-URA Vector	No known significant effects or critical hazards.
		YPH 499 Yeast Strain	No known significant effects or critical hazards.
		YPH 500 Yeast Strain	No known significant effects or critical hazards.
		YPH 501 Yeast Strain	No known significant effects or critical hazards.

SECTION 12: Ecological information**12.1 Toxicity**

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

Not available.

12.4 Mobility in soil

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

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

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

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Product**

Methods of disposal : 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.

Hazardous waste : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : 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

ADR/RID / IMDG / IATA : Not regulated.

14.6 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.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code : Not available.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	: pESC-HIS Vector	Not applicable.
	GAL 1 Forward Primer	Not applicable.
	Lyophilized	
	GAL 1 Reverse Primer	Not applicable.
	Lyophilized	
	GAL 10 Forward Primer	Not applicable.
	Lyophilized	
	GAL 10 Reverse Primer	Not applicable.
	Lyophilized	
	pESC-LEU Vector	Not applicable.
	pESC-TRP Vector	Not applicable.
	pESC-URA Vector	Not applicable.
YPH 499 Yeast Strain	Not applicable.	
YPH 500 Yeast Strain	Not applicable.	
YPH 501 Yeast Strain	Not applicable.	

Other EU regulations

Europe inventory : All components are listed or exempted.

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

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.

SECTION 15: Regulatory information

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

International lists

National inventory

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

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments might still be required.

SECTION 16: Other information

✔ Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Not classified.	

Full text of abbreviated H statements

Not applicable.

Full text of classifications [CLP/GHS]

Not applicable.

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Date of previous issue : No previous validation.

Version : 1

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