

SAFETY DATA SHEET

According to Regulation (EC) No 1272/2008

Date of issue version 6.01 10th November 2021

1. IDENTIFICATION OF THE SUBSTANCE

Product name: genesigEASY DNA/RNA Extraction Kit

Synonyms: nucleic acid extraction kit

2. HAZARD IDENTIFICATION

Classification of the complete product:

GHS pictograms

GHS02



GHS07



GHS08



Signal word

DANGER

Hazard Identification

Hazard classes/categories

H226

Flam. Liq.3

H302

Acute Tox. 4 oral

H315

Skin irritation 2

H319

Eye irritation 2

H334

Resp. sens. 1

H412

Aquatic Chronic 3

Classification of the substance or mixture:

CLP Directive 1272/2008/EC

2 x 6mg Proteinase K

GHS07



GHS08



DANGER

Hazard Identification

Hazard classes/categories

H315

Skin irritation 2

H319

Eye irritation 2

H334

Resp. sens 1

15ml Lysis Buffer

GHS07

WARNING



Hazard Identification

Hazard classes/categories

H302
H319

Acute tox 4 oral
Eye irritation 2

40ml Binding Buffer

GHS02

GHS07

WARNING



Hazard Identification

Hazard classes/categories

H226
H302

Flam. liquid 3
Acute toxicity 4 oral

40ml Wash Buffer 1

GHS02

GHS07

WARNING



Hazard Identification

Hazard classes/categories

H226
H302

Flam. liquid 3
Acute toxicity 4 oral

40ml Wash Buffer 2

GHS02

GHS07

WARNING



Hazard Identification

Hazard classes/categories

H226
H302

Flam. Liquid 3
Acute toxicity 4 oral

30ml 80% Ethanol

GHS02



GHS07



DANGER

Hazard Identification

H225
H319

Hazard classes/categories

Highly flammable liquid and vapour 2
Eye irritation 2

0.5ml carrier RNA buffer

GHS07



WARNING

Hazard Identification

H302
H412

Hazard classes/categories

Acute Tox 4 oral
Aquatic chronic 3

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Ingredient</u>	<u>Concentration</u>	<u>CAS No.</u>	<u>Hazard phrases</u>
1. 2 x 6mg Proteinase K (lyophilised) Chemical: Proteinase K	90-<100%	39450-01-6	H315, H319, H334
1a. 8ml Proteinase K buffer Chemical: Glycerol	10-<50%	56-81-5	-
2. 15ml Lysis buffer Chemical: Guanidinium hydrochloride	36-<50%	50-01-1	H302, H315, H319
Chemical: polyoxyethylene sorbitan monolaurate	10-<20%	9005-64-5	-
3. 40ml Binding buffer Chemical: Ethanol (denatured)	35-<55%	64-17-5	H225, H226
Chemical: Sodium perchlorate	15-<40%	7601-89-0	H302, H319, H373
3a. Magnetic beads Chemical: magnetic particles	1-<15%	-	-

4. 40ml Wash buffer 1

Chemical: Ethanol (denatured)	20-<35%	64-17-5	H225, H226
Chemical: Sodium perchlorate	15-<40%	7601-89-0	H302, H319, H373

5. 40ml Wash buffer 2

Chemical: Ethanol (denatured)	20-<35%	64-17-5	H225, H226,
Chemical: Sodium perchlorate	15-<40%	7601-89-0	H302, H319, H373

6. 30ml 80% Ethanol

Chemical: Ethanol (denatured)	80%	64-17-5	H225, H319
-------------------------------	-----	---------	------------

7. 13ml Elution Buffer

Chemical: mixture	<1%	-	-
-------------------	-----	---	---

8. Carrier RNA (lyophilised)

Chemical: Carrier RNA	90-<100 %	26763-19-6	-
-----------------------	-----------	------------	---

8a. Carrier RNA buffer

Chemical: guanidinium thiocyanate	30-<45 %	593-84-0	H302, H312, H314, H332, H412
-----------------------------------	----------	----------	------------------------------

9. 30ml Sample prep solution

Chemical: Potassium chloride	0.02%	7447-40-7	-
Chemical: Phosphate buffer	-	-	-
Chemical: Sodium chloride	0.8%	7647-14-5	-

List of associated H and P phrases: see section 16

4. FIRST AID MEASURES

Eye:	In case of contact, immediately flush eyes with copious amounts of water. If necessary seek medical attention.
Skin:	Flush contaminated skin with plenty of water for 15 minutes. Remove contaminated clothing and shoes. Avoid neutralisation. Apply a loose bandage. If necessary seek medical attention.
Inhalation:	If inhaled, remove to fresh air and seek medical attention. If not breathing give artificial respiration. If breathing is difficult, give oxygen. If necessary seek medical attention.
Ingestion:	If swallowed, wash out mouth with water provided person is conscious. If necessary seek medical attention.

5. FIRE-FIGHTING MEASURES

General information

As in any fire wear a self-contained breathing apparatus if necessary.

Extinguishing Media

Water spray, Carbon dioxide, dry chemical powder & alcohol-resistant foam.

Special hazards arising from the substance or mixture

WARNING: Flammable. May form explosive vapour-air mixtures. Formation of hazardous and caustic vapour-air mixtures possible.

6. ACCIDENTAL RELEASE MEASURES

General information

Use proper protective equipment.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling: Avoid contact with the eyes, skin and clothing.

User exposure: Avoid inhalation. Use personal protective equipment including lab coat, impermeable gloves and safety glasses.

Conditions for safe storage: Keep container unopened in a dry and well ventilated place. Recommended storage temperature: 18 to 25 °C.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Wear personal protective equipment including lab coat, impermeable gloves and safety glasses. Use in a ventilated laboratory.

Wash hands after use.

9. PHYSICAL AND CHEMICAL PROPERTIES

	Colour	Odour	Appearance
6mg Proteinase K (lyophilised)	slightly grey	odourless	solid
8ml Proteinase K buffer	colourless	alcoholic	liquid
15ml Lysis buffer	slightly yellow	odourless	liquid
40ml Binding buffer	colourless	alcoholic	liquid
Magnetic beads	colourless	odourless	liquid
40ml Wash buffer 1	colourless	alcoholic	liquid
40ml Wash buffer 2	colourless	alcoholic	liquid
30ml 80% Ethanol	colourless	alcoholic	liquid
13ml Elution Buffer	colourless	odourless	liquid
30ml Sample prep solution	colourless	odourless	liquid
300µg carrier RNA (lyophilised)	colourless	odourless	solid
0.5ml carrier RNA buffer	colourless	fusty, mouldy	liquid

10. STABILITY AND REACTIVITY

Stable under normal storage conditions. Avoid contact with strong acids or alkalines and oxidising agents.

Carrier RNA buffer. Note: Can form very reactive substances with oxidizing agents. Possible: Contact with acids liberates toxic gas. No further data available.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Following information is valid for pure substances. Quantitative data on the toxicity of this product are not available.

Magnetic beads

Chemical: *magnetic particles, suspended in water*

1.2 x 6mg Proteinase K (lyophilised)

Chemical:	proteinase K (origin: tritirachium album)	CAS no: 9450-01-6
TSCA Inventory:	listed (CAS 102925-54-2)	
Japan CSCL/PRTR:	not listed	
Japan ISHL:	not listed	
Korea Exist. Chem. Inventory:	not listed	

Acute effects: cause after impairments of health when ingested in small quantities

Chronic effects: may cause sensitisation by skin contact, also in repeated contact of small amount. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

8ml Proteinase K buffer

Chemical:	glycerol
TSCA Inventory:	listed (1,2,3-Propanetriol)
Exposure Routes:	Inhalation, skin and/or eye contact
Target Organs:	Eyes, skin, respiratory system, kidneys
Symptoms:	Irritation eyes, skin, respiratory system, headache nausea, vomiting, kidney injury

Japan CSCL/PRTR:	not listed, Japan PDSCL; not listed
Japan ISHL:	not listed
Korea Exist. Chem Inventory:	KE-29297
LD50 _{orl rat} :	12.6 g/kg
LD50 _{drm rbt} :	>18.7g/kg
TRGS 905 (DE):	R _F C

15ml Lysis buffer

Chemical:	guanidine hydrochloride CAS No.:50-01-1	
TSCA Inventory:	listed	California Proposition 65 List: not listed
Australia NICNAS	not listed	Canada CEPA 1999: DSL Yes
Japan CSCL/PRTR	not listed, Jaan PDSCL: not listed	
Japan ISHL:	not listed	
South Korea TCCA	not listed	
Korea Exist. Chem. Inventory:	KE-18111	
LD50 _{orl rat} :	475-907mg/kg	
LD50 _{ihl mus} :	[4h] 3181-7655 µg/m ³	
Acute Effects:	Cause after oral intake, impairments of health when ingested in small quantities	

Chemical:	polyoxyethylene sorbitan monolaurate (Tween® 20)	CAS No.: 9005-64-5
TCSA inventory:	listed	
Korea Exist. Chem. Inventory:	KE-31681	

40ml Binding Buffer

<i>Chemical:</i>	<i>ethanol</i>	CAS No.: 64-17-5
TSCA Inventory: listed	listed	California Proposition 65 List: not listed
ACGIH	1000ppm	
Exposure Routes:	Inhalation, ingestion, skin and/or eye contact	
Target organs: reproductive system	Eyes, skin, respiratory system, entral nervous system, liver, blood,	
Symptoms:	Irritation eyes, skin, nose, headache, drowsiness, lassitude (weakness, exhaustion), narcosis, cough, liver damage, anemia, reproductive, teratogenic	
Australia NICNAS:	not listed	Canada CEPA 1999: DSL yes
Japan CSCL/PRTR:	not listed, Japan PDSCL: not listed	
Japan ISHL:	listed $\geq 0.1\%$ / $\geq 0.1\%$, Article 57-2 (SDS required)	
South Korea TCCA:	not listed	
Korea Exist.Chem. Inventory:	KE-13217	
LD50 _{orl rat} :	6200 mg/kg	
LC _{Low} _{ihl gpg} :	21.9g/m ³	
LC _{Low} _{orl hmn} :	1400mg/kg	
LC50 _{ihl mouse}	[4h] 39 g/m ³	
LC50 _{ihl rat}	[10h] 20 g/m ³	
LD50 _{drm rbt}	20000 mg/kg	
LD50 _{oral mouse}	3450 mg/kg	
TRGS 905 (DE)	K5, M5, R _F C	

Chemical:	Sodium Perchlorate	CAS No. 7601-89-0
TSCA Inventory	listed	California Proposition 65 List: not listed
Australia NICNAS	not listed	Canada CEPA 1999: DSL yes
Japan CSCL/PRTR	not listed, Japan PDSCL: not listed	
Japan ISHL:	not listed	
South Korea TCCA:	not listed	
Korea Exist. Chem. Inventory:	KE-31569	
LD50 _{orl rat} :	2100 mg/kg	
LD50 _{lpr mus} :	551 mg/kg	

Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.

40ml Wash Buffer 1

Chemical:	ethanol	CAS No.:64-17-5
TSCA Inventory:	listed	California Proposition 65 List: not listed
ACGIH:	1000 ppm	
Exposure routes:	inhalation, ingestion, skin and/or eye contact	
Target Organs:	Eyes, skin, respiratory system, central nervous system, liver, blood, reproductive system	
Symptoms:	irritation eyes, skin, nose; headache, drowsiness, lassitude (weakness, exhaustion), narcosis; cough, liver damage, anemia, reproductive, teratogenic	
Australia NICNAS:	not listed	Canada CEPA 1999: DSL yes
Japan CSCL/PRTR	not listed, Japan PDSCL: not listed	
Japan ISHL:	listed ≥0.1%/≥0.1%, Article 57-2 (SDS required)	
South Korea TCCA:	not listed	

Korea Exist. Chem. Inventory: KE-13217

LD50 _{orl rat} :	6200 mg/kg
LC _{Low} _{ihl gpg} :	21.9g/m ³
LC _{Low} _{orl hmn} :	1400mg/kg
LC50 _{ihl mouse}	[4h] 39 g/m ³
LC50 _{ihl rat}	[10h] 20 g/m ³
LD50 _{drm rbt}	20000 mg/kg
LD50 _{oral mouse}	3450 mg/kg
TRGS 905 (DE)	K5, M5, R _F C

Chemical:	Sodium Perchlorate	CAS No. 7601-89-0
TSCA Inventory	listed	California Proposition 65 List: not listed
Australia NICNAS	not listed	Canada CEPA 1999: DSL yes
Japan CSCL/PRTR	not listed, Japan PDSCL: not listed	
Japan ISHL:	not listed	
South Korea TCCA:	not listed	

Korea Exist. Chem. Inventory: KE-31569

LD50 _{orl rat} :	2100 mg/kg
LD50 _{lpr mus} :	551 mg/kg

Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.

40ml Wash Buffer 2

Chemical:	ethanol	CAS No.:64-17-5
TSCA Inventory:	listed	California Proposition 65 List: not listed
ACGIH:	1000 ppm	
Exposure routes:	inhalation, ingestion, skin and/or eye contact	
Target Organs:	Eyes, skin, respiratory system, central nervous system, liver, blood, reproductive system	
Symptoms:	irritation eyes, skin, nose; headache, drowsiness, lassitude (weakness, exhaustion), narcosis; cough, liver damage, anemia, reproductive, teratogenic	
Australia NICNAS:	not listed	Canada CEPA 1999: DSL yes
Japan CSCL/PRTR	not listed, Japan PDSCL: not listed	
Japan ISHL:	listed $\geq 0.1\%/\geq 0.1\%$, Article 57-2 (SDS required)	
South Korea TCCA:	not listed	
Korea Exist. Chem. Inventory:	KE-13217	
LD50 _{orl rat} :	6200 mg/kg	
LC _{Low} _{ihl gpg} :	21.9g/m ³	
LC _{Low} _{orl hmn} :	1400mg/kg	
LC50 _{ihl mouse}	[4h] 39 g/m ³	
LC50 _{ihl rat}	[10h] 20 g/m ³	
LD50 _{drm rbt}	20000 mg/kg	
LD50 _{oral mouse}	3450 mg/kg	
TRGS 905 (DE)	K5, M5, R _F C	

Chemical:	Sodium Perchlorate	CAS No. 7601-89-0
TSCA Inventory	listed	California Proposition 65 List: not listed
Australia NICNAS	not listed	Canada CEPA 1999: DSL yes
Japan CSCL/PRTR	not listed, Japan PDSCL: not listed	
Japan ISHL:	not listed	
South Korea TCCA:	not listed	
Korea Exist. Chem. Inventory:	KE-31569	
LD50 _{ori rat} :	2100 mg/kg	
LD50 _{lpr mus} :	551 mg/kg	

Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.

300µg Carrier RNA lyophilised

Chemical: carrier RNA	CAS no:26763-19-6
TSCA Inventory:	listed (CAS 9001-99-4)
Japan CSCL/PRTR:	not listed, Japan PDSCL: not listed
Japan ISHL:	not listed
Korea Exist. Chem Inventory:	KE-30341

13ml Elution buffer

Chemical:	chemicals/mixture <1%	CAS No.:-
TSCA Inventory:	all listed, <1%	
Korea Exist. Chem. Inventory:	listed	

12. ECOLOGICAL INFORMATION

Carrier RNA buffer. Following information is valid for pure substances

Chemical: *guanidinium thiocyanate* CAS No.: 593-84-0

Harmful to aquatic life with long lasting effects. Avoid contact of substance/mixture to environment.

13. DISPOSAL CONSIDERATIONS

Dispose of according to local/regional disposal instructions.

Carrier RNA buffer. Do not collect in acidic waste. May form toxic gases.

14. TRANSPORT INFORMATION

UN number: 1993 **UN proper shipping name :** Flammable liquid, n.o.s. (ethanol mixture)

Class: 3 **Packaging group:** III

Road Transport

Classification code: F1

Limited quantity: 5L Tunnel restriction code: E

Excepted Quantity: E1 Special Instructions: 640E

Air Transport

PAX: 356 Max weight PAX: 60L

CAO: 366 Max weight CAO: 220L

Maritime Transport

EmS: F-E, S-E Storage Category: A

Environmental hazards

None, contains only small quantities of hazardous substances, contains only small amounts of these substances

Special precautions for user

Not necessary

Transport in bulk according to Annex II of MARPOL and the IBC code

Not applicable

15. REGULATORY INFORMATION

According to CLP Directive 1272/2008/EC

16. OTHER INFORMATION

List of relevant H phrases

H225	Extremely flammable liquid and vapour
H226	Flammable liquid and vapour
H302	Harmful if swallowed
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H319	Causes serious eye irritation
H332	Harmful if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H373	May cause damage to organs through prolonged or repeated exposure
H412	Harmful to aquatic life with long lasting effects

Primerdesign Ltd,
York House, School
Lane, Chandler's Ford,
Southampton, SO53 4DG

Tel: +44 (0) 2380 748 830
Fax: +44 (0) 8708 362 155
enquiry@primerdesign.co.uk
www.primerdesign.co.uk

Registered Office:
Unit 1 Watchmoor Point, Watchmoor Road,
Camberley, Surrey, England, GU15 3AD
Registered Number: 5228545

List of relevant P phrases

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P261sh	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264W	Wash with water thoroughly after handling
P273	Avoid release to the environment
P280sh	Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P304 + 340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing
P330	Rinse mouth.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P403 + P235	Store in a well-ventilated place. Keep cool.

The above information is believed to be correct and should only be used as a guide. Primerdesign Ltd shall not be held liable for any damage resulting from handling, contact or inappropriate use of the product. Please refer to the instructions for use. This formation should be used in conjunction with an end-user assessment of risk.