

Safety Data Sheet

according to Regulation 1907/2006/EC (REACH)
and 453/2010/EU

BQ-508-02

Date of issue: 02.02.2016



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SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

1.1 Product identifier

Product Name: ViroInspect® Extraction Kit

Components: 2 x 1.5 mL Proteinase K

1 x 35 mL Lysis Buffer RAV1

1 x 30 mL Wash Buffer RAW

1 x 12 mL Wash Buffer RAV3

1 x 13 mL Elution Buffer RE

1 x 13 mL PCR-grade water

2 x 340 µl Internal Positiv Control RNA (iPC RNA)

2 x 340 µl Internal Positiv Control DNA (iPC DNA)

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

Identified uses: The ViroInspect® Extraction Kit is for laboratory use only, not for drug, household or other purposes. The product is intended for professional users only trained in molecular biology techniques.

1.3 Details of the supplier of the safety data sheet

Company: Greiner Bio-One GmbH

Address: Maybachstrasse 2
D-72636 Frickenhausen
Germany

Phone: +49 (0)7022 948-0

E-mail: alexander.ganser@gbo.com

1.4 Emergency telephone

Outside Germany (DE): Call your regional Poisons Information Service or call local Life Saving Service.

DE: Poison information center Mainz; tel. +49 (0) 6131 1924

SECTION 2 HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to regulation 1272/2008/EC

Hazard identification	Hazard classes/categories
EUH031	Contact with acids liberates toxic gas.
H226	Flammable Liquid cat. 3
H302	Acute Tox. 4 oral
H317	Skin Sensitisation cat. 1A/1B
H412	Hazardous to the aquatic environment - chronic cat. 3

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2.2 Label elements

Labelling according to regulation 1272/2008/EC

Component	GHS pictograms	Hazard Identification
RAV1	 GHS07 WARNING	EUH031 not defined H302 Acute Tox. 4 oral H412 Hazardous to the aquatic environment - chronic cat. 3
RAV3	<i>no declaration necessary</i>	-
RAW	  GHS02 GHS07 WARNING	H226 Flammable Liquid cat. 3 H302 Acute Tox. 4 oral
RE	<i>no declaration necessary</i>	-
PCR-grade water	<i>no declaration necessary</i>	-
Liquid Proteinase K	 GHS07 WARNING	H317 Skin Sensitisation cat. 1A/1B P261 P280 P302+352 P333+313 P363
iPC DNA / iPC RNA	<i>no declaration necessary</i>	-

2.3 Other hazards

Flammable properties. Vapour forms explosive mixtures with air.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Description of the components

Component	Chemical substance	Concentration	Classification
RAV1	<i>Guanidinium thiocyanate</i> C ₂ H ₆ N ₄ S CAS No.: 593-84-0 EC N.: 209-812-1 RTECS: XL1225000 MFCD: 00013027 Indice No.: 615-004-00-3	30 - 60%	H302 H412 EUH031

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RAW	<i>Guanidinium hydrochloride</i> CH ₆ CIN ₃ CAS No.: 50-01-1 EC No.: 200-002-3 RTECS: MF4300000 MFCD: 00013026 Indice No.: 607-148-00-0	24 – 36%	H302
	<i>Ethanol (denatured)</i> C ₂ H ₆ O CAS No.: 64-17-5 EC No.: 200-578-6 RTECS: KQ6300000 MFCD: 00003568 Indice No.: 603-002-00-5	35 – 55%	H226
Liquid Proteinase K	<i>Proteinase K, liquid (origin: triturachium album)</i> CAS No.: 39450-01-6l EC No.: 254-457-8 RTECS: - MFCD: 00132129 Indice No.: 647-014-00-9	1 – 10%	H317

SECTION 4 FIRST AID MEASURES

4.1 Description of first aid measures

Place injured person out of danger zone to fresh air immediately. Ensure quiet, warmth, and provide resuscitation if necessary. If necessary contact medical advice. If there are breathing difficulties, take to a doctor, in a raised position.

After SKIN contact

Remove dust with wetted tissue. Remove contaminated clothing immediately. Rinse the affected skin or mucous membrane thoroughly for min. 15 minutes under running water. (If possible) use soap. Avoid neutralisation. Then apply a loose bandage.

After EYE contact

Rub dust with teardrops from eyes or: After contact with the eyes rinse thoroughly under running water for at least 15 minutes with the eyelid wide open with eye washing bottle, eye douche or running water (protect intact eye).

After INHALATION of vapours

Administer a Dexamethasone spray as soon as possible. Ensure quiet, warmth, and provide resuscitation if necessary. In the event of respiratory distress ensure that the patient inhales oxygen. Secure the breathing, heart and circulatory function. After inhalation of dust, foam or vapour fresh air should be inhaled. Keep airways free.

After ORAL intake

After oral intake lots of water should be drunk after it has been ingested.

4.2 Most important symptoms and effects, both acute and delayed

No data available.

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4.3 Indication of any immediate medical attention and special treatment needed

After SKIN CONTACT rinse with water for a long time. Apply glucocorticosteroides following inflammatory reactions. Inform patient respectively further measures and the possibility of long-term damages.

SECTION 5 FIRE-FIGHTING MEASURES

5.1 Suitable extinguishing media

Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area. All extinguishers like FOAM, WATER SPRAY, DRY POWDER, CARBON DIOXIDE can be used.

5.2 Special hazards arising from the substance or mixture

Formation of hazardous and caustic vapour-air mixtures possible.

Danger for environment **only in the event of a large-scale leakage** or formation of hazardous substances.

5.3 Advice for firefighters/protective equipment

No, for listed product. Product package burns like paper or plastic. For great amount - if necessary - protective breathing apparatus which is independent of the ambient air (isolated equipment), and sealed protective clothing is necessary in the event of a large-scale formation of toxic substances.

5.4 Additional information

None

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions

Avoid dusting. Do not breathe dust. Do not breathe vapours, mist or gas. Wear suitable protective gloves (see 8.2). Wear eye protection. Regular staff training is necessary, indicating hazards and precautions on the basis of operating instructions. Restrictions on activity must be observed.

6.2 Environmental precautions

No data available.

6.3 Methods and materials for containment and cleaning-up

Remove remaining dust with a vacuum cleaner. If there is no vacuum cleaner, wet dust well and remove mechanically (Inhalation protection). And dispose in accordance to local regulations for the disposal of hazardous chemicals. Clean any contaminated equipment and floors with plenty of water. Bind any escaping liquid with inert absorbent.

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SECTION 7 HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid dusting. Use only in well-ventilated working areas. When handling the product, usual precautions taken when handling chemicals should be observed. Wear gloves and eye protection. Handling in accordance with the test instruction that comes with the product.

7.2 Conditions for safe storage, including any incompatibilities

The original product package allows a safe storage at room temperature. Keep original product packages tightly closed during handling and storage.

The internal positive controls (iPC DNA, iPC RNA) have to be stored at $\leq -20^{\circ}\text{C}$.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Component	Chemical substance		
RAV1	<i>Guanidinium thiocyanate</i> CAS No.: 593-84-0	Australia NICNAS Canada CEPA 1999 Japan CSCL/PRTR Japan PDSCL Japan ISHL South Korea TCCA TSCA Inventory NIOSH OSHA California Proposition 65 List	not listed DSL yes not listed not listed not listed not listed listed not listed not listed not listed
RAW	<i>Guanidinium hydrochloride</i> CAS No.: 50-01-1	Australia NICNAS Canada CEPA 1999 Japan CSCL/PRTR Japan PDSCL Japan ISHL South Korea TCCA TSCA Inventory NIOSH OSHA California Proposition 65 List	not listed DSL yes not listed not listed not listed not listed listed not listed not listed not listed
	<i>Ethanol</i> CAS No.: 64-17-5	DNEL DNEL = Derived No-Effect Level (for workers) TRGS 900 (DE) Short-term exposure factor SUVA(CH) MAK value TRGS 905 (DE) Australia NICNAS Canada CEPA 1999 Japan CSCL/PRTR Japan PDSCL Japan ISHL	950 _{inh-sys} mg/m ³ 500 mL/m ³ / 960 mg/m <i>E/e respirable</i> 2 (II), Y <i>(Y: certainly excluded)</i> 500 ppm / 960 mg/m ³ K5, M5, R _F C not listed DSL yes not listed not listed Article 57-2

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Odour Threshold	No data available	No data available	No data available	No data available	No data available	No data available	No data available
pH	7.0-7.5	7.0-8,0	5.0-5.5	8.0-9.0	6.0-8.0	7.0-8.0	7.0-9.0
Specific gravity	1.12 g/cm ³	1.00 g/cm ³	0.98 g/cm ³	1.0 g/cm ³	1.0 g/cm ³	1.1 g/cm ³	
Melting point/freezing point	No data available	No data available	No data available	No data available	No data available	No data available	No data available
Initial boiling point and boiling range	No data available	No data available	No data available	No data available	No data available	No data available	No data available
Flash point	No data available	No data available	23°C	No data available	No data available	No data available	No data available
Evaporation rate	No data available	No data available	No data available	No data available	No data available	No data available	No data available
Flammability (solid, gas)	No data available	No data available	No data available	No data available	No data available	No data available	No data available
Upper/lower flammability or explosive limits	No data available	No data available	No data available	No data available	No data available	No data available	No data available
Vapour pressure	No data available	No data available	No data available	No data available	No data available	No data available	No data available
Vapour density	No data available	No data available	No data available	No data available	No data available	No data available	No data available
Relative density	No data available	No data available	No data available	No data available	No data available	No data available	No data available
Partition coefficient: n octanol/water	No data available	No data available	No data available	No data available	No data available	No data available	No data available
Water solubility	No data available	No data available	No data available	No data available	No data available	0-100%	Miscible with water
Autoignition temperature	No data available	No data available	No data available	No data available	No data available	No data available	No data available
Decomposition temperature	No data available	No data available	No data available	No data available	No data available	No data available	No data available
Viscosity	No data available	No data available	No data available	No data available	No data available	No data available	No data available
Explosive properties	No data available	No data available	No data available	No data available	No data available	No data available	No data available
Oxidizing properties	No data available	No data available	No data available	No data available	No data available	No data available	No data available

9.2 Other safety information

Not necessary

SECTION 10 STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

No data available

10.3 Possibility of hazardous reactions

No data available

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10.4 Conditions to avoid

If on label or when indicated in packing insert.

10.5 Incompatible materials

Can form very reactive substances with oxidizing agents. Avoid contact with strong acids or alkalines.

10.6 Hazardous decomposition products

In the original package all parts/all reagents are safely and separately stored. Decompositions are not observed during the expiration period under recommended conditions.

SECTION 11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Data on the toxicity of the mixtures in this product is not available. The following toxicological information is only valid for pure chemical substances.

Toxicological effects of pure chemical substance

Component	Chemical	LD/LC
RAV1	<i>Guanidinium thiocyanate</i> (CAS No.: 593-84-0)	LD50 _{orl rat} : 593 mg/kg LC50 _{drm rbt} : 2000 mg/m ³ LC50 _{ihl rat} : 5.319 ^{4h} mg/L LD50 _{ipr mus} : 300 mg/kg
RAW	<i>Guanidine hydrochloride</i> (CAS No.: 50-01-1)	LD50 _{orl rat} : 475 mg/kg LC50 _{ihl rat} : 5.3 ^{4h} mg/m ³ LD50 _{drm rbt} : >2000 mg/kg
	<i>Ethanol</i> (CAS No.: 64-17-5)	LD50 _{orl rat} : 6200 mg/kg LC _{Lowihl gpg} : 21.9 g/m ³ LC _{Loworl hmn} : 1400 mg/kg LC50 _{ihl mouse} : 39 ^{4h} g/m ³ LC50 _{ihl rat} : 20 ^{10h} g/m ³ LD50 _{drm rbt} : 20 000 mg/kg LD50 _{oral mouse} : 3450 mg/kg
5 mL Liquid Proteinase K	<i>Glycerol</i> (CAS No.: 56-81-5)	LD50 _{orl rat} : 12.6 g/kg LD50 _{drm rbt} : >18.7 g/kg

SECTION 12 ECOLOGICAL INFORMATION

Quantitative data on the ecotoxicity of the mixtures in this product are not available. The following information is only valid for pure chemical substances.

12.1 Toxicity

Component	Chemical	Classification
RAV1	<i>Guanidinium thiocyanate</i> (CAS No.: 593-84-0)	WGK (DE): 3 Storage class (VCI): 12
RAV3	<i>Chemicals/mixture < 1%</i>	WGK (DE): 1

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RAW	<i>Guanidine hydrochloride</i> (CAS No.: 50-01-1)	WGK (DE): 1 WGK No.: 0788 LC50 _{leuciscus idus/96h} : 1759 mg/L Storage class (VCI): 12
	<i>Ethanol</i> (CAS No.: 64-17-5)	PNEC _(sweet water) = 0.96 mg/L PNEC = Predicted No Effect Concentration LC50 _{daphnia magna/48h} : >100 mg/L LC50 _{pimephales promelas/96h} : 13400 - 15100 mg/L LC50 _{leuciscus idus/96h} : 8140 _{48h} mg/L LC50 _{fish/96h} : 13 g/L EC50 _{daphnia/48h} : 9.3-14.2 g/L IC50 _{scenedesmus quadricauda/72h} : 5000 _{7d} mg/L EC10 _{pseudomonas putita/16h} : EC5: 6500 mg/L WGK (DE): 1 WGK No.: 0096 Dispersion coefficient (o-w):-0,31 Storage class (VCI): 3
RE	<i>Chemicals/mixture < 1%</i>	WGK (DE): 1
PCR-grade water	<i>Water</i> (CAS No.: 7732-18-5)	Water
Liquid Proteinase K	<i>Proteinase K, liquid (origin: tritirachium album)</i> (CAS No.: 39450-01-6l)	WGK (DE): 1 Storage class (VCI): 13
	<i>Glycerol</i> (CAS No.: 56-81-5)	PNEC _(sweet water) = 0.885 mg/L PNEC = Predicted No Effect Concentration LC50 _{fish/96h} : >5000 _{24h} mg/L EC50 _{daphnia/48h} : >10 _{24h} g/L IC50 _{scenedesmus quadricauda/72h} : IC57d >10 g/L EC10 _{pseudomonas putita/16h} : EC5: >10 g/L WGK (DE): 0 Dispersion coefficient (o-w): -1,76 Storage class (VCI): 10

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

No data available

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SECTION 13 DISPOSAL CONSIDERATIONS

Do not collect in acidic waste. May form toxic gases.

Please follow local regulations for collection and disposal of hazardous waste and contact waste disposal company, where you will obtain information on laboratory waste disposal (waste code number 16 05 06).

Waste treatment methods

Normally it is possible to empty small amounts (diluted!) into drains.

SECTION 14 TRANSPORT INFORMATION

14.1 UN number

ADR/RID: 1993

IMDG: 1993

IATA: 1993

14.2 UN proper shipping name

ADR/RID: Flammable liquid, n.o.s. (Ethanol)

IMDG: Flammable liquid, n.o.s. (Ethanol)

IATA: Flammable liquid, n.o.s. (Ethanol)

14.3 Transport hazard class(es)

ADR/RID: 3

IMDG: 3

IATA: 3

14.4 Packaging group

ADR/RID: III

IMDG: III

IATA: -

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

14.6 Special precautions for user

Excepted quantities (≤ 30 mL/ $\Sigma \leq 1$ L)

SECTION 15 REGULATORY INFORMATION

This safety data sheet complies with the requirements of Regulation 1907/2006/EC.

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

German act governing protection from hazardous substances (Chemicals Act / Chemikaliengesetz- ChemG), revised on August 2013 German order governing protection from hazardous substances (Ordinance on Hazardous Substances / Gefahrstoffverordnung - GefStoffV), revised on November 2010, according to Directive 98/24/EC.

TRGS 200, German engineering rules governing the classification and labelling of hazardous substances, preparations and products, updated October 2011.

Announcement BekGS 220 (DE), Safety Data Sheet, June 2013.

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Harmful chemicals/mixtures with signal word: **WARNING** and highly flammable chemicals/mixtures must not be labelled with H and P statements **until 125 mL or 125 g**. This labelling exemption is NOT valid for sensibilizing substances.

15.2 Chemical safety assessment

Not necessary for these small amounts

SECTION 16 OTHER INFORMATION

16.1 List of H and P statements

List of relevant H statements

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.
EUH031	Contact with acids liberates toxic gas.

List of relevant P statements

P261	Avoid breathing dust/fume/gas/mist/vapours/spray
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+352	IF ON SKIN: Wash with plenty of water/...
P333+313	If skin irritation or a rash occurs: Get medical advice/attention.
P363	Wash contaminated clothing before reuse

16.2 Training advice

Regular safety training.

Multiple safety training of staffs about danger and protection by using hazards in working area. Additionally training and introduction of staffs for using these products.

16.3 Recommended restrictions on use

Only for professional user.

An individual package of this product or test kit has a moderate hazardous potentially for professional users.

Look about employee restrictions for young people (f. ex. 94/33/EC or DE § 22 JArbSchG)!

Look about employee restrictions for pregnant women and nursing women (f.ex. 92/85/EEC or DE §§ 4 und 5 MuSchRiV)!

16.4 Further information

You find our current versions of the Safety Data Sheet in Internet:
https://www.gbo.com/de_AT/know-how-services/download-center.html

Greiner Bio-One provides the information contained herein in good faith being up-to-date of own realizations at revision time. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product.

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