



1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

1.1 Product identifier

Reference Number	Product Name	Product Components
465060	PapilloCheck®	DNA Chips MasterMix Hybridisation Buffer Buffer A Buffer B iPCR (only CytolInspect™)
505060	PapilloCheck® high risk	
464060	CytolInspect™	
464070		
460010	ParoCheck®	
460020		
462030	CarnoCheck®	

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

Product Name	Intended Use
PapilloCheck®	Qualitative detection and differentiation of 24 types of Human Papillomavirus in DNA-preparations from human cervical smears.
PapilloCheck® high risk	Qualitative detection and differentiation of 14 high-risk types of Human Papillomavirus in DNA-preparations from human cervical smears.
CytolInspect™	Qualitative detection and differentiation of 40 species of Mycoplasmas in DNA preparations from cell cultures and biologicals.
ParoCheck®	Qualitative detection and differentiation of 10 or 20 periodontitis associated pathogens.
CarnoCheck®	Qualitative detection and differentiation of 8 animal constituents in meat food products

Relevant Identified uses: Laboratory Chemicals (PC21)

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



2 HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to regulation EC No 1272/2008

Hybridization Buffer	Buffer B
acute toxicity, oral (category 4) acute toxicity, inhalation (category 4) chronic aquatic toxicity (category 3)	skin irritation (category 2) serious eye damage (category 1)

2.2 Label elements

Hybridization Buffer (guanidine thiocyanate solution, 25-50%, CAS No. 593-84-0)	Buffer B (sodium dodecyl sulfate solution, 10-20%, CAS No. 151-21-3)
	
<p>Signal word WARNING</p> <p>Hazard statements: H302 Harmful if swallowed. H332 Harmful if inhaled. H412 Harmful to aquatic life with long lasting effects .</p> <p>Precautionary statements: P273 Avoid release to the environment.</p> <p>Supplemental hazard information (EU): EUH032 Contact with acids liberates very toxic gas.</p>	<p>Signal word DANGER</p> <p>Hazard statements: H315 Causes skin irritation. H318 Causes serious eye damage.</p> <p>Precautionary statements: P280 Wear protective gloves/eye protection/face protection. P305+ P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p>

2.3 Other hazards

none

3 COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Description of the components

Component	Chemical substance	Classification/Statements according to Regulation (EC) No 1272/2008 for pure chemical substance	Concentration
DNA chips		non hazardous no declaration necessary	
MasterMix		non hazardous no declaration necessary	
Hybridization Buffer	guanidinium thiocyanate CAS No. 593-84-0 EC-No. 209-812-1	acute toxicity (category 4) skin corrosion (category 1c) chronic aquatic toxicity (category 3) H 302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled. H314 Causes severe skin burns and eye damage. H412 Harmful to aquatic life with long lasting effects. EUH 032 Contact with acids liberates very toxic gas.	25-50%
Buffer A		non hazardous no declaration necessary	
Buffer B	sodium dodecyl sulfate CAS No. 151-21-3 EC No. 205-788-7	flammable solids (category 1) acute toxicity, oral (category 4) acute toxicity, dermal (category 3) skin irritation (category 2) serious eye damage (category 1) specific target organ toxicity - single exposure (category 3) H228 Flammable solid. H302 Harmful if swallowed. H311 Toxic in contact with skin. H315 Causes skin irritation. H318 Causes serious eye damage. H335 May cause respiratory irritation.	10-20%
iPCR		non hazardous no declaration necessary	

4 FIRST AID MEASURES

4.1 Description of first aid measures

Consult a physician. Show this safety data sheet to the doctor in attendance. Place insured person out of danger zone to fresh air immediately. Ensure quiet, warmth, and provide resuscitation if necessary

After SKIN contact

Remove contaminated clothing. Rinse the affected skin or mucous membrane thoroughly under running water. (If possible) use soap.

After EYE contact

After contact with the eyes rinse thoroughly under running water with the eyelid wide open with eye washing bottle, eye douche or running water (protect intact eye).

After INHALATION of vapours

After inhalation fresh air should be inhaled. Keep airways free.

After ORAL intake

Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

4.3 Indication of any immediate medical attention and special treatment needed

No additional recommendations.

5 FIRE-FIGHTING MEASURES

5.1 Suitable extinguishing media

Dry powder

5.2 Special hazards arising from the substance or mixture

Carbon oxides, nitrogen oxides, sulphur oxides, sodium oxides

5.3 Advice for firefighters/protective equipment

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

Product package burns like paper or plastic.

6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning-up

Soak up with inert absorbent material and dispose of as hazardous waste. Do not flush with water. Keep in suitable, closed containers for disposal.

7 HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

7.2 Conditions for safe storage, including any incompatibilities

The original product package allows a safe storage at 4-8°C in a dark place. Keep original product packages tightly closed during handling and storage. Do not store together with acids.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

8.2 Exposure controls

Good ventilation and extraction system in the room, floor resistant to chemicals with floor drainage and washing facilities. The highest level of cleanliness must be maintained at the workplace.

Respiratory protection

Required only when dust/vapours are generated (Filter P3 according to DIN 3181). If used according to product's instructions for use no vapours or dust should be generated.

Hand protection

Use protective gloves complying with the specifications of EC directive 89/686/EEC and the resultant standard EN 374.

Eye protection

Use safety glasses with side-shields according EN 166.

Skin protection

Wear a laboratory coat and complete clothing protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

General hygiene

Avoid contact with the skin, eyes and clothing. Immediately change contaminated clothing. Wash hands thoroughly after working with substance. Keep away from food beverages and animal feeding stuff.

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Property	Hybridization Buffer	Buffer B
Appearance Form	liquid	liquid
Colour	colourless	colourless
Odour	odourless	no data available
Odour Threshold	no data available	no data available
pH	7.0-8.5	no data available
Melting point/freezing point	no data available	no data available
Initial boiling point and boiling range	no data available	no data available
Flash point	not applicable	not applicable
Evaporation rate	no data available	no data available
Flammability (solid, gas)	not applicable	not applicable
Upper/lower flammability or explosive limits	not applicable	not applicable
Vapour pressure	no data available	no data available
Vapour density	no data available	no data available
Relative density	1.06-1.12 g/cm ³	1.010 g/cm ³
Partition coefficient: n octanol/water	no data available	no data available
Water solubility	not applicable	not applicable
Autoignition temperature	not applicable	not applicable
Decomposition temperature	no data available	no data available
Viscosity	no data available	no data available
Explosive properties	not explosive	not explosive
Oxidizing properties	none	no data available

9.2 Other safety information

No data available

10 STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

No data available

10.3 Possibility of hazardous reactions

Heating to decomposition or contact of Hybridization Buffer with acids or strong oxidizing reagents can liberate poisonous cyanide vapours.

Buffer B can react with strong oxidizing reagents.

10.4 Conditions to avoid

Heating (decomposition), light

10.5 Incompatible materials

Strong oxidizing agents. Avoid contact with strong acids.

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.

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	Hybridization Buffer	Buffer B
Chemical substance	guanidine thiocyanate	sodium dodecyl sulfate
Acute toxicity	LD50 Oral - rat - 593 mg/kg LD50 Intraperitoneal - mouse - 300 mg/kg	LD50 Oral - rat - 1.288 mg/kg LC50 Inhalation - rat - 1 h - > 3.900 mg/m ³ LD50 Dermal - rabbit - 580 mg/kg
Skin corrosion/irritation	no data available	Skin - rabbit - Skin irritation - 24 h
Serious eye damage/eye irritation	no data available	Eyes - rabbit - Risk of serious damage to eyes. - OECD Test Guideline 405
Respiratory or skin sensitization	no data available	Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.
Germ cell mutagenicity	no data available	no data available
Carcinogenicity	IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.	
Reproductive toxicity	no data available	no data available
Specific target organ toxicity - single exposure	no data available	Inhalation - May cause respiratory irritation.
Specific target organ toxicity - repeated exposure	no data available	no data available
Aspiration hazard	no data available	no data available

Potential health effects of mixtures/components of this product

	Hybridization Buffer	Buffer B
Inhalation	Harmful if inhaled. May cause respiratory tract irritation.	May be harmful if inhaled. Causes respiratory tract irritation.

Ingestion	Harmful if swallowed.	May be harmful if swallowed.
Skin	May be harmful if absorbed through skin. May cause skin irritation.	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	May cause eye irritation.	Causes serious eye irritation.

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

Hybridization Buffer

chemical substance: guanidine thiocyanate

Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia - 42,4 mg/l - 48 h

Buffer B

chemical substance: sodium dodecyl sulfate

Toxicity to fish

mortality NOEC - *Oncorhynchus mykiss* (rainbow trout)
- 19,5 mg/l - 96 h
mortality LOEC - *Pimephales promelas* (fathead minnow)
- 4,6 mg/l - 8 d
LC50 - *Oncorhynchus mykiss* (rainbow trout)
- 3,6 mg/l - 96 h

Toxicity to algae

Growth inhibition LOEC - *Pseudokirchneriella subcapitata*
- 2,68 mg/l - 6 d

12.2 Persistence and degradability

no data available

90 % - readily biodegradable.

12.3 Bioaccumulative potential

no data available

Cyprinus carpio (Carp) - 72 h
Bioconcentration factor (BCF): 3,9 - 5,3

12.4 Mobility in soil

no data available

no data available

12.5 Results of PBT and vPvB assessment

no data available

no data available

12.6 Other adverse effects

Harmful to aquatic life.

Toxic to aquatic life.

13 DISPOSAL CONSIDERATIONS

Please observe 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). Dispose of contents/container to regulated waste treatment.

14 TRANSPORT INFORMATION

All components are classified as not dangerous goods according to ADR/RID, IMDG, IATA.

15 REGULATORY INFORMATION

This safety data sheet complies with the requirements of regulation EC No. 1907/2006.

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



No data available

15.2 Chemical safety assessment

No data available

16 OTHER INFORMATION

16.1 Classification and labeling according to EU directives 67/548/EEC or 1999/45/EC

Hybridization Buffer (guanidine thiocyanate solution, 25-50%, CAS No. 593-84-0)	Buffer B (sodium dodecyl sulfate solution, 10-20%, CAS No. 151-21-3)
 <p>Harmful Xn</p>	 <p>Harmful Xn</p>
R20/21/22 Harmful by inhalation, in contact with skin and if swallowed. R32 Contact with acids liberates very toxic gas. R52/R53 Harmful to aquatic organisms may cause long-term adverse effects in the aquatic environment. S13 Keep away from food, drink, and animal feeding stuffs. S61 Avoid release to the environment. Refer to special instructions/safety data sheet.	R20/22 Harmful by inhalation and if swallowed R38 Irritating to skin Notes: Substance hazardous to water and ground water

Special permission has been granted in accordance with EU Directive 88/379, Article 9, which permits small packages of up to 125 ml or g containing materials that are harmful to health or irritant to be unlabelled with the hazard identification information given in the safety data sheet.

16.2 Revision

This is the fifth edition of the safety data sheet with revised content and layout.

16.3 Training advice

Regular safety training.

16.4 Recommended restrictions on use

Only for professional users.

16.5 Further information

You find our current versions of SDS in Internet: http://www.greinerbioone.com/biochips_download
 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. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.
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