




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

- **Product identifier**
- **Trade name:** *Lysis Buffer 1 (component of: chemagic DNA Blood Kit special, CMG-1074)*
- **Article number:** *CMG-1074 (LB1)*
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use -**
- **Application of the substance / the mixture** *Product for analytical use*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
*PerkinElmer chemagen Technologie GmbH
Arnold-Sommerfeld-Ring 2
52499 BAESWEILER
DEUTSCHLAND
e-mail: service@perkinelmer.com*
- **Further information obtainable from:** *Abteilung Produktsicherheit*
- **Emergency telephone number:**
*CHEMTREC (within U.S.) 800 424-9300
CHEMTREC (from outside U.S) +1-703-672-3887*

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
 -  **Harmful**
Harmful if swallowed.
 -  **Irritant**
Irritating to eyes and skin.
- **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
- **Label elements**
- **Labelling according to EU guidelines:**
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.
- **Code letter and hazard designation of product:**
 -  **Harmful**
- **Hazard-determining components of labelling:**
guanidinium chloride
- **Risk phrases:**
*Harmful if swallowed.
Irritating to eyes and skin.*
- **Information concerning particular hazards for human and environment:**
- **Safety phrases:**
*Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Wear suitable protective clothing and gloves.*

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 06.05.2015

Version number 10

Revision: 06.05.2015

Trade name: Lysis Buffer 1 (component of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 1)

- This material and its container must be disposed of as hazardous waste.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterisation: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

50-01-1	guanidinium chloride	40-60%
9002-93-1	Polyethylene glycol octylphenol ether	1-1.5%

· **SVHC**

9002-93-1	Polyethylene glycol octylphenol ether
-----------	---------------------------------------

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

(Contd. on page 3)

Trade name: Lysis Buffer 1 (component of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 2)

- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

(Contd. on page 4)

Trade name: Lysis Buffer 1 (component of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 3)

· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· Form:	Fluid
· Colour:	According to product specification
· Odour:	Characteristic
· Odour threshold:	Not determined.

· **pH-value at 20 °C:** 7

· **Change in condition**

· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	Undetermined.

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:**

· **Decomposition temperature:** Not determined.

· **Self-igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

· Lower:	Not determined.
· Upper:	Not determined.

· **Vapour pressure at 20 °C:** 23 hPa

· Density at 20 °C:	1.14 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.

· **Solubility in / Miscibility with water:** Fully miscible.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

· Dynamic:	Not determined.
· Kinematic:	Not determined.

· **Solvent content:**

· **Water:** 50.5 %

· **Other information** No further relevant information available.

Trade name: Lysis Buffer 1 (component of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 4)

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**

· **LD/LC50 values relevant for classification:**

50-01-1 guanidinium chloride

Oral	LD50	475 mg/kg (rat)
------	------	-----------------

- **Primary irritant effect:**
- **Skin corrosion/irritation** Irritant to skin and mucous membranes.
- **Serious eye damage/irritation** Irritating effect.
- **Respiratory or skin sensitisation** No sensitising effects known.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful
Irritant

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 06.05.2015

Version number 10

Revision: 06.05.2015

Trade name: Lysis Buffer 1 (component of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 5)

· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

- | | |
|--|-----------------|
| · UN-Number | |
| · ADG, ADN, IMDG, IATA | not regulated |
| · UN proper shipping name | |
| · ADG, ADN, IMDG, IATA | not regulated |
| · Transport hazard class(es) | |
| · ADG, ADN, IMDG, IATA | |
| · Class | not regulated |
| · Packing group | |
| · ADG, IMDG, IATA | not regulated |
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |

15 Regulatory information

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

· **Australian Inventory of Chemical Substances**

All ingredients are listed.

· **Standard for the Uniform Scheduling of Medicines and Poisons**

77-86-1 trometamol

S4

· **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

· **Code letter and hazard designation of product:**



Harmful

· **Hazard-determining components of labelling:**
guanidinium chloride

· **Risk phrases:**

Harmful if swallowed.
Irritating to eyes and skin.

· **Safety phrases:**

Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Wear suitable protective clothing and gloves.
This material and its container must be disposed of as hazardous waste.

(Contd. on page 7)

-AU-

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 06.05.2015

Version number 10

Revision: 06.05.2015

Trade name: Lysis Buffer 1 (component of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 6)

- **National regulations:**
- **Other regulations, limitations and prohibitive regulations**
- **Substances of very high concern (SVHC) according to REACH, Article 57**

9002-93-1	Polyethylene glycol octylphenol ether
-----------	---------------------------------------

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing MSDS:** Abteilung Produktion
- **Contact:** -
- *** Data compared to the previous version altered.**

AU

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

- **Product identifier**
- **Trade name:** *Binding Buffer 2 (component of: chemagic DNA Blood Kit special, CMG-1074)*
- **Article number:** *CMG-1074 (BB2)*
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use -**
- **Application of the substance / the mixture** *Product for analytical use*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
*PerkinElmer chemagen Technologie GmbH
Arnold-Sommerfeld-Ring 2
52499 BAESWEILER
DEUTSCHLAND
e-mail: service@perkinelmer.com*
- **Further information obtainable from:** *Abteilung Produktsicherheit*
- **Emergency telephone number:**
*CHEMTREC (within U.S.) 800 424-9300
CHEMTREC (from outside U.S) +1-703-672-3887*

2 Hazards identification

- **Classification of the substance or mixture**
 - **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
Flammable.
 - **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
 - **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
-
- **Label elements**
 - **Labelling according to EU guidelines:**
*Observe the general safety regulations when handling chemicals.
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.*
 - **Risk phrases:**
Flammable.
 - **Information concerning particular hazards for human and environment:**
 - **Safety phrases:**
*Keep container tightly closed.
Keep away from sources of ignition - No smoking.
Take off immediately all contaminated clothing.
This material and its container must be disposed of as hazardous waste.*
 - **Other hazards**
 - **Results of PBT and vPvB assessment**
 - **PBT:** *Not applicable.*
 - **vPvB:** *Not applicable.*

3 Composition/information on ingredients

- **Chemical characterisation:** *Mixtures*
- **Description:** *Mixture of substances listed below with nonhazardous additions.*

(Contd. on page 2)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 06.05.2015

Version number 14

Revision: 06.05.2015

Trade name: Binding Buffer 2 (component of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 1)

· Dangerous components:

64-17-5	ethanol	40-60%
7601-89-0	sodium perchlorate	20-<25%
64-19-7	acetic acid	1-1.5%

· Additional information: For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.

(Contd. on page 3)

Trade name: Binding Buffer 2 (component of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 2)

- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

- **Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

64-17-5 ethanol

NES Long-term value: 1880 mg/m³, 1000 ppm

64-19-7 acetic acid

NES Short-term value: 37 mg/m³, 15 ppm

Long-term value: 25 mg/m³, 10 ppm

- **Additional information:** The lists valid during the making were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

- **Respiratory protection:** Not required.

- **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Fluid

Colour: Clear

- **Odour:** Characteristic

- **Odour threshold:** Not determined.

- **pH-value at 20 °C:** 5.6

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 06.05.2015

Version number 14

Revision: 06.05.2015

Trade name: Binding Buffer 2 (component of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 3)

· Change in condition Melting point/Melting range: Boiling point/Boiling range:	Undetermined. > 78 °C
· Flash point:	23 °C
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	425 °C
· Decomposition temperature:	Not determined.
· Self-igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits: Lower: Upper:	3.5 Vol % 15.0 Vol %
· Vapour pressure at 20 °C:	59 hPa
· Density at 20 °C: · Relative density · Vapour density · Evaporation rate	1.056 g/cm ³ Not determined. Not determined. Not determined.
· Solubility in / Miscibility with water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity: Dynamic: Kinematic:	Not determined. Not determined.
· Solvent content: Organic solvents: Water: · Other information	40 - 60 % 21.0 % No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
- **Primary irritant effect:**
- **Skin corrosion/irritation** No irritant effect.
- **Serious eye damage/irritation** No irritating effect.

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 06.05.2015

Version number 14

Revision: 06.05.2015

Trade name: Binding Buffer 2 (component of: chemagic DNA Blood Kit special, CMG-1074)

· **Respiratory or skin sensitisation** No sensitising effects known.

(Contd. of page 4)


12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

- | | |
|---|------------------------------|
| · UN-Number | UN1170 |
| · ADG, IMDG, IATA | |
| · UN proper shipping name | 1170 ETHANOL (ETHYL ALCOHOL) |
| · ADG | ETHANOL (ETHYL ALCOHOL) |
| · IMDG | ETHANOL |
| · IATA | |
| · Transport hazard class(es) | |
| · ADG, IMDG, IATA | |
|  | |
| · Class | 3 Flammable liquids. |
| · Label | 3 |
| · Packing group | III |
| · ADG, IMDG, IATA | |
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · Special precautions for user | Warning: Flammable liquids. |

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 06.05.2015

Version number 14

Revision: 06.05.2015

Trade name: Binding Buffer 2 (component of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 5)

· Danger code (Kemler):	30
· EMS Number:	F-E,S-D
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

15 Regulatory information

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

· **Australian Inventory of Chemical Substances**

All ingredients are listed.

· **Standard for the Uniform Scheduling of Medicines and Poisons**

64-19-7	acetic acid	S2, S5, S6
77-86-1	trometamol	S4

· **Labelling according to EU guidelines:**

Observe the general safety regulations when handling chemicals.

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

· **Risk phrases:**

Flammable.

· **Safety phrases:**

Keep container tightly closed.

Keep away from sources of ignition - No smoking.

Take off immediately all contaminated clothing.

This material and its container must be disposed of as hazardous waste.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing MSDS:** Abteilung Produktion

· **Contact:** -

· *** Data compared to the previous version altered.**

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

- **Product identifier**
- **Trade name:** Wash Buffer 3 and Wash Buffer 4 (component of: chemagic DNA Blood Kit special, CMG-1074)
- **Article number:** CMG-1074(WB3/4)
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use** -
- **Application of the substance / the mixture** Product for analytical use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
PerkinElmer chemagen Technologie GmbH
Arnold-Sommerfeld-Ring 2
52499 BAESWEILER
DEUTSCHLAND
e-mail: service@perkinelmer.com
- **Further information obtainable from:** Abteilung Produktsicherheit
- **Emergency telephone number:**
CHEMTREC (within U.S.) 800 424-9300
CHEMTREC (from outside U.S) +1-703-672-3887

2 Hazards identification

- **Classification of the substance or mixture**



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS08 health hazard

Carc. 1A H350 May cause cancer.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
Flammable.
- **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

- **Label elements**
- **GHS label elements**
The product is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**



GHS02 GHS08

- **Signal word** Danger
- **Hazard-determining components of labelling:**
ethanol
- **Hazard statements**
Flammable liquid and vapour.

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 06.05.2015

Version number 10

Revision: 06.05.2015

Trade name: Wash Buffer 3 and Wash Buffer 4 (component of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 1)

May cause cancer.

· Precautionary statements

Use explosion-proof electrical/ventilating/lighting/equipment.

Wear protective gloves / eye protection / face protection.

Ground/bond container and receiving equipment.

Keep container tightly closed.

Use only non-sparking tools.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

Store locked up.

Store in a well-ventilated place. Keep cool.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· Information concerning particular hazards for human and environment:

· Safety phrases:

Keep container tightly closed.

Keep away from sources of ignition - No smoking.

Take off immediately all contaminated clothing.

This material and its container must be disposed of as hazardous waste.

· Other hazards

· Results of PBT and vPvB assessment

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures

· **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

64-17-5	ethanol	25-40%
7601-89-0	sodium perchlorate	10-<20%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

· Description of first aid measures

· **General information:** Immediately remove any clothing soiled by the product.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Generally the product does not irritate the skin.

· **After eye contact:** Rinse opened eye for several minutes under running water.

· **After swallowing:** If symptoms persist consult doctor.

· Information for doctor:

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Firefighting measures

· Extinguishing media

· Suitable extinguishing agents:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **Special hazards arising from the substance or mixture** No further relevant information available.

(Contd. on page 3)

Trade name: Wash Buffer 3 and Wash Buffer 4 (component of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 2)

- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

64-17-5 ethanol

NES | Long-term value: 1880 mg/m³, 1000 ppm

- **Additional information:** The lists valid during the making were used as basis.

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
- **Respiratory protection:** Not required.
- **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

(Contd. on page 4)

Trade name: Wash Buffer 3 and Wash Buffer 4 (component of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 3)

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· Form:	Fluid
· Colour:	Clear
· Odour:	Characteristic
· Odour threshold:	Not determined.

· **pH-value at 20 °C:** 5.5

· **Change in condition**

· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	> 78 °C

· **Flash point:** 23 °C

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 425 °C

· **Decomposition temperature:** Not determined.

· **Self-igniting:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Explosion limits:**

· Lower:	3.5 Vol %
· Upper:	15.0 Vol %

· **Vapour pressure at 20 °C:** 59 hPa

· Density at 20 °C:	1.3 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.

· **Solubility in / Miscibility with water:** Fully miscible.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

· Dynamic:	Not determined.
· Kinematic:	Not determined.

(Contd. on page 5)

Trade name: Wash Buffer 3 and Wash Buffer 4 (component of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 4)

- **Solvent content:**
 - Organic solvents:** 20 - 40 %
 - Water:** 49.0 %
- **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
- **Primary irritant effect:**
- **Skin corrosion/irritation** No irritant effect.
- **Serious eye damage/irritation** No irritating effect.
- **Respiratory or skin sensitisation** No sensitising effects known.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
Carc. 1A

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 06.05.2015

Version number 10


Revision: 06.05.2015

Trade name: Wash Buffer 3 and Wash Buffer 4 (component of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 5)

· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

· UN-Number	UN1170
· ADG, IMDG, IATA	
· UN proper shipping name	1170 ETHANOL (ETHYL ALCOHOL) mixture
· ADG	ETHANOL (ETHYL ALCOHOL) mixture
· IMDG	ETHANOL mixture
· IATA	
· Transport hazard class(es)	
· ADG, IMDG, IATA	
	
· Class	3 Flammable liquids.
· Label	3
· Packing group	III
· ADG, IMDG, IATA	
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Flammable liquids.
· Danger code (Kemler):	30
· EMS Number:	F-E,S-D
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN1170, ETHANOL (ETHYL ALCOHOL) mixture, 3, III

15 Regulatory information

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

· Australian Inventory of Chemical Substances

All ingredients are listed.

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 06.05.2015

Version number 10

Revision: 06.05.2015

Trade name: Wash Buffer 3 and Wash Buffer 4 (component of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 6)

· **Standard for the Uniform Scheduling of Medicines and Poisons**

None of the ingredients is listed.

· **GHS label elements**

The product is classified and labelled according to the Globally Harmonised System (GHS).

· **Hazard pictograms**



GHS02 GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labelling:**

ethanol

· **Hazard statements**

Flammable liquid and vapour.

May cause cancer.

· **Precautionary statements**

Use explosion-proof electrical/ventilating/lighting/equipment.

Wear protective gloves / eye protection / face protection.

Ground/bond container and receiving equipment.

Keep container tightly closed.

Use only non-sparking tools.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

Store locked up.

Store in a well-ventilated place. Keep cool.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing MSDS:** *Abteilung Produktion*

· **Contact:** *-*

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

Flam. Liq. 3: Flammable liquids, Hazard Category 3

Carc. 1A: Carcinogenicity, Hazard Category 1A

· *** Data compared to the previous version altered.**

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

- **Product identifier**
- **Trade name:** Wash Buffer 5 (component of: chemagic DNA Blood Kit special, CMG-1074)
- **Article number:** CMG-1074 (WB5)
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use -**
- **Application of the substance / the mixture** Product for analytical use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
PerkinElmer chemagen Technologie GmbH
Arnold-Sommerfeld-Ring 2
52499 BAESWEILER
DEUTSCHLAND
e-mail: service@perkinelmer.com
- **Further information obtainable from:** Abteilung Produktsicherheit
- **Emergency telephone number:**
CHEMTREC (within U.S.) 800 424-9300
CHEMTREC (from outside U.S) +1-703-672-3887

2 Hazards identification

- **Classification of the substance or mixture**
 - **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
Flammable.
 - **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
 - **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
-
- **Label elements**
 - **Labelling according to EU guidelines:**
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.
 - **Risk phrases:**
Flammable.
 - **Information concerning particular hazards for human and environment:**
 - **Safety phrases:**
Keep container tightly closed.
Keep away from sources of ignition - No smoking.
This material and its container must be disposed of as hazardous waste.
 - **Other hazards**
 - **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterisation:** Mixtures
- **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

64-17-5	ethanol	
---------	---------	--

		60-80%
--	--	--------

(Contd. on page 2)

Trade name: Wash Buffer 5 (component of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 1)

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

-AU-

(Contd. on page 3)

Trade name: Wash Buffer 5 (component of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 2)

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

64-17-5 ethanol

NES Long-term value: 1880 mg/m³, 1000 ppm

· **Additional information:** The lists valid during the making were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:** Wash hands before breaks and at the end of work.

· **Respiratory protection:** Not required.

· **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Fluid

Colour: According to product specification

· **Odour:** Characteristic

· **Odour threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 78 °C

· **Flash point:** 21 °C

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 425 °C

· **Decomposition temperature:** Not determined.

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 06.05.2015

Version number 12

Revision: 06.05.2015

Trade name: Wash Buffer 5 (component of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 3)

· Self-igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits:	
Lower:	3.5 Vol %
Upper:	15.0 Vol %
· Vapour pressure at 20 °C:	59 hPa
· Density at 20 °C:	0.88 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	60 - 80 %
Water:	30.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
- **Primary irritant effect:**
- **Skin corrosion/irritation** No irritant effect.
- **Serious eye damage/irritation** No irritating effect.
- **Respiratory or skin sensitisation** No sensitising effects known.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.

(Contd. on page 5)

Trade name: Wash Buffer 5 (component of: chemagic DNA Blood Kit special, CMG-1074)


(Contd. of page 4)

- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

- | | |
|---|--|
| · UN-Number | UN1170 |
| · ADG, IMDG, IATA | |
| · UN proper shipping name | 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION) |
| · ADG | ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION) |
| · IMDG | ETHANOL SOLUTION |
| · IATA | |
| · Transport hazard class(es) | |
| · ADG, IMDG, IATA | |
|  | |
| · Class | 3 Flammable liquids. |
| · Label | 3 |
| · Packing group | II |
| · ADG, IMDG, IATA | |
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · Special precautions for user | Warning: Flammable liquids. |
| · Danger code (Kemler): | 33 |
| · EMS Number: | F-E,S-D |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · Transport/Additional information: | |
| · ADG | |
| · Limited quantities (LQ) | 1L |

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 06.05.2015

Version number 12

Revision: 06.05.2015

Trade name: Wash Buffer 5 (component of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 5)

- | | |
|---|---|
| · Excepted quantities (EQ) | Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml |
| · Transport category | 2 |
| · Tunnel restriction code | D/E |
| <hr style="border-top: 1px dashed black;"/> | |
| · IMDG | |
| · Limited quantities (LQ) | 1L |
| · Excepted quantities (EQ) | Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml |

15 Regulatory information

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

- **Australian Inventory of Chemical Substances**

All ingredients are listed.

- **Standard for the Uniform Scheduling of Medicines and Poisons**

None of the ingredients is listed.

- **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

- **Risk phrases:**

Flammable.

- **Safety phrases:**

Keep container tightly closed.

Keep away from sources of ignition - No smoking.

This material and its container must be disposed of as hazardous waste.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing MSDS:** Abteilung Produktion

- **Contact:** -

- *** Data compared to the previous version altered.**

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

- **Product identifier**
- **Trade name:** Magnetic Beads, Wash Buffer 6 and Elution Buffer 7 (components of: chemagic DNA Blood Kit special, CMG-1074)
- **Article number:** CMG-1074 (WB6)
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use** -
- **Application of the substance / the mixture** Product for analytical use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
PerkinElmer chemagen Technologie GmbH
Arnold-Sommerfeld-Ring 2
52499 BAESWEILER
DEUTSCHLAND
e-mail: service@perkinelmer.com
- **Further information obtainable from:** Abteilung Produktsicherheit
- **Emergency telephone number:**
CHEMTREC (within U.S.) 800 424-9300
CHEMTREC (from outside U.S) +1-703-672-3887

2 Hazards identification

- **Classification of the substance or mixture**
 - **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Not applicable.
 - **Information concerning particular hazards for human and environment:**
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
 - **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
-
- **Label elements**
 - **Labelling according to EU guidelines:**
Observe the general safety regulations when handling chemicals.
The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).
 - **Other hazards**
 - **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterisation: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.
- **Dangerous components:** Void
- **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 06.05.2015

Version number 10

Revision: 06.05.2015

Trade name: Magnetic Beads, Wash Buffer 6 and Elution Buffer 7 (components of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 1)

- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special measures required.
- **Information about fire - and explosion protection:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 06.05.2015

Version number 10

Revision: 06.05.2015

Trade name: Magnetic Beads, Wash Buffer 6 and Elution Buffer 7 (components of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 2)

- **Respiratory protection:** Not required.
- **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Goggles recommended during refilling

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Fluid
Colour:	According to product specification
Odour:	Characteristic
Odour threshold:	Not determined.
- **pH-value:** Not determined.
- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C
- **Flash point:** Not applicable.
- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:**
- **Decomposition temperature:** Not determined.
- **Self-igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.
- **Vapour pressure at 20 °C:** 23 hPa
- **Density:** Not determined.
- **Relative density** Not determined.
- **Vapour density** Not determined.
- **Evaporation rate** Not determined.
- **Solubility in / Miscibility with water:** Fully miscible.
- **Partition coefficient (n-octanol/water):** Not determined.

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 06.05.2015

Version number 10

Revision: 06.05.2015

Trade name: Magnetic Beads, Wash Buffer 6 and Elution Buffer 7 (components of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 3)

· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Water:	50.0 %
Solids content:	50.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
- **Primary irritant effect:**
- **Skin corrosion/irritation** No irritant effect.
- **Serious eye damage/irritation** No irritating effect.
- **Respiratory or skin sensitisation** No sensitising effects known.
- **Additional toxicological information:**
The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.
When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

AU

(Contd. on page 5)

Trade name: Magnetic Beads, Wash Buffer 6 and Elution Buffer 7 (components of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 4)

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation** Smaller quantities can be disposed of with household waste.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

- | | |
|--|-----------------|
| · UN-Number | |
| · ADG, ADN, IMDG, IATA | not regulated |
| · UN proper shipping name | |
| · ADG, ADN, IMDG, IATA | not regulated |
| · Transport hazard class(es) | |
| · ADG, ADN, IMDG, IATA | |
| · Class | not regulated |
| · Packing group | |
| · ADG, IMDG, IATA | not regulated |
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |

15 Regulatory information

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

· **Australian Inventory of Chemical Substances**

All ingredients are listed.

· **Standard for the Uniform Scheduling of Medicines and Poisons**

77-86-1 trometamol

S4

- **Labelling according to EU guidelines:**

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information




This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing MSDS:** Abteilung Produktion
- **Contact:** -
- *** Data compared to the previous version altered.**

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

- **Product identifier**
- **Trade name:** *Protease (component of: chemagic DNA Blood Kit special, CMG-1074)*
- **Article number:** *CMG-1074 (P)*
- **CAS Number:**
39450-01-6
- **EC number:**
254-457-8
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use -**
- **Application of the substance / the mixture** *Product for analytical use*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
*PerkinElmer chemagen Technologie GmbH
Arnold-Sommerfeld-Ring 2
52499 BAESWEILER
DEUTSCHLAND
e-mail: service@perkinelmer.com*
- **Further information obtainable from:** *Abteilung Produktsicherheit*
- **Emergency telephone number:**
*CHEMTREC (within U.S.) 800 424-9300
CHEMTREC (from outside U.S) +1-703-672-3887*

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
 -  **Irritant**
Irritating to eyes, respiratory system and skin.
 -  **Sensitising**
May cause sensitisation by inhalation.
- **Information concerning particular hazards for human and environment:** *Not applicable.*
- **Label elements**
- **Labelling according to EU guidelines:**
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.
- **Code letter and hazard designation of product:**
 -  **Harmful**
- **Risk phrases:**
*Irritating to eyes, respiratory system and skin.
May cause sensitisation by inhalation.*
- **Information concerning particular hazards for human and environment:**
- **Safety phrases:**
*Do not breathe dust.
Avoid contact with skin.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Wear suitable protective clothing and gloves.*

(Contd. on page 2)

Trade name: Protease (component of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 1)

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterisation: Substances**
- **CAS No. Description**
39450-01-6 Proteinase, Tritirachium album serine
- **Identification number(s)**
- **EC number:** 254-457-8

4 First aid measures

- **Description of first aid measures**
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of dust.

(Contd. on page 3)

Trade name: Protease (component of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 2)

- **Information about fire - and explosion protection:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
Form: Solid

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 06.05.2015

Version number 10

Revision: 06.05.2015

Trade name: Protease (component of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 3)

Colour:	Not determined.
· Odour:	Characteristic
· Odour threshold:	Not determined.
· pH-value:	Not applicable.
· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Ignition temperature:	
Decomposition temperature:	Not determined.
· Self-igniting:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapour pressure:	Not applicable.
· Density at 20 °C:	1.1 g/cm ³
· Relative density	Not determined.
· Vapour density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with water:	Insoluble.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· Solvent content:	
Solids content:	100.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
- **Primary irritant effect:**
- **Skin corrosion/irritation** Irritant to skin and mucous membranes.

(Contd. on page 5)

Trade name: Protease (component of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 4)

- **Serious eye damage/irritation** Irritating effect.
- **Respiratory or skin sensitisation** Sensitisation possible through inhalation.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|--|-----------------|
| · UN-Number | |
| · ADG, ADN, IMDG, IATA | not regulated |
| · UN proper shipping name | |
| · ADG, ADN, IMDG, IATA | not regulated |
| · Transport hazard class(es) | |
| · ADG, ADN, IMDG, IATA | |
| · Class | not regulated |
| · Packing group | |
| · ADG, IMDG, IATA | not regulated |
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Australian Inventory of Chemical Substances**
Substance is not listed.

(Contd. on page 6)

Trade name: Protease (component of: chemagic DNA Blood Kit special, CMG-1074)

(Contd. of page 5)

· **Standard for the Uniform Scheduling of Medicines and Poisons**

Substance is not listed.

· **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

· **Code letter and hazard designation of product:**



Harmful

· **Risk phrases:**

Irritating to eyes, respiratory system and skin.
May cause sensitisation by inhalation.

· **Safety phrases:**

Do not breathe dust.
Avoid contact with skin.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Wear suitable protective clothing and gloves.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing MSDS:** Abteilung Produktion

· **Contact:** -

· * **Data compared to the previous version altered.**