

## SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date 27.03.2020

Version 1.2

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### SECTION 1. Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

Catalogue No.	636064
Product name	Montage DNA gel extraction kit
	Modified TAE Buffer Concentrate (50X) (Modified Tris-Acetate EDTA buffer)
REACH Registration Number	This product is a mixture. REACH Registration Number see section 3.

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

Identified uses	Biochemical research/analysis For additional information on uses please refer to the Merck Chemicals portal ( <a href="http://www.merckgroup.com">www.merckgroup.com</a> ).
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#### 1.3 Details of the supplier of the safety data sheet

Company	Merck KGaA * 64271 Darmstadt * Germany * Phone: +49 6151 72-0
Responsible Department	LS-QHC * e-mail: <a href="mailto:prodsafe@merckgroup.com">prodsafe@merckgroup.com</a>

#### 1.4 Emergency telephone number

**Please contact the regional company representation in your country.**

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### SECTION 2. Hazards identification

#### 2.1 Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

#### 2.2 Label elements

##### Labelling.(REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

Safety data sheet available on request.

#### 2.3 Other hazards

None known.

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## SECTION 3. Composition/information on ingredients

Chemical nature Aqueous solution of organic compounds.

### 3.1 Substance

Not applicable

### 3.2 Mixture

#### Hazardous components (REGULATION (EC) No 1272/2008)

*Chemical name (Concentration)*

CAS-No.	Registration number	Classification
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acetic acid ( $\geq 5\%$  -  $< 10\%$ )

*Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.*

64-19-7	01-2119475328-30-XXXX	
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Flammable liquid, Category 3, H226  
Skin corrosion, Category 1A, H314

For the full text of the H-Statements mentioned in this Section, see Section 16.

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## SECTION 4. First aid measures

### 4.1 Description of first aid measures

After inhalation: fresh air.

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

After eye contact: rinse out with plenty of water. Remove contact lenses.

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

### 4.2 Most important symptoms and effects, both acute and delayed

irritant effects, Nausea, Vomiting, Convulsions, Diarrhoea

### 4.3 Indication of any immediate medical attention and special treatment needed

No information available.

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## SECTION 5. Firefighting measures

### 5.1 Extinguishing media

*Suitable extinguishing media*

Water, Foam, Carbon dioxide (CO<sub>2</sub>), Dry powder

*Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

### 5.2 Special hazards arising from the substance or mixture

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Mixture with combustible ingredients.  
Development of hazardous combustion gases or vapours possible in the event of fire.  
Fire may cause evolution of:  
nitrogen oxides

## 5.3 Advice for firefighters

*Special protective equipment for firefighters*

In the event of fire, wear self-contained breathing apparatus.

*Further information*

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## SECTION 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

### 6.2 Environmental precautions

Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

### 6.4 Reference to other sections

Indications about waste treatment see section 13.

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## SECTION 7. Handling and storage

### 7.1 Precautions for safe handling

*Advice on safe handling*

Observe label precautions.

*Hygiene measures*

Change contaminated clothing. Wash hands after working with substance.

### 7.2 Conditions for safe storage, including any incompatibilities

*Storage conditions*

Tightly closed.

Recommended storage temperature see product label.

The data applies to the entire pack.

### 7.3 Specific end use(s)

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Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

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## SECTION 8. Exposure controls/personal protection

### 8.1 Control parameters

#### Derived No Effect Level (DNEL)

##### *acetic acid (64-19-7)*

Worker DNEL, acute	Local effects	inhalation	25 mg/m <sup>3</sup>
Worker DNEL, longterm	Local effects	inhalation	25 mg/m <sup>3</sup>
Consumer DNEL, acute	Local effects	inhalation	25 mg/m <sup>3</sup>
Consumer DNEL, longterm	Local effects	inhalation	25 mg/m <sup>3</sup>

#### Predicted No Effect Concentration (PNEC)

##### *acetic acid (64-19-7)*

PNEC Fresh water	3,058 mg/l
PNEC Fresh water sediment	11,36 mg/kg
PNEC Marine water	0,3058 mg/l
PNEC Marine sediment	1,136 mg/kg
PNEC Aquatic intermittent release	30,58 mg/l
PNEC Sewage treatment plant	85 mg/l

### 8.2 Exposure controls

#### Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

#### Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

##### *Eye/face protection*

Safety glasses

##### *Hand protection*

full contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	480 min

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splash contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

#### *Respiratory protection*

required when vapours/aerosols are generated.

Recommended Filter type: filter E-(P2)

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

#### **Environmental exposure controls**

Do not let product enter drains.

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## **SECTION 9. Physical and chemical properties**

### **9.1 Information on basic physical and chemical properties**

Form	liquid
Colour	coloured
Odour	No strong odour known.
Odour Threshold	No information available.
pH	No information available.
Melting point	No information available.
Boiling point	No information available.
Flash point	No information available.
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.

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Upper explosion limit	No information available.
Vapour pressure	No information available.
Relative vapour density	No information available.
Density	No information available.
Relative density	No information available.
Water solubility	soluble
Partition coefficient: n-octanol/water	No information available.
Auto-ignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	none

## 9.2 Other data

none

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## SECTION 10. Stability and reactivity

### 10.1 Reactivity

See section 10.3

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### 10.3 Possibility of hazardous reactions

Violent reactions possible with:

Oxidizing agents, Bases

### 10.4 Conditions to avoid

no information available

### 10.5 Incompatible materials

no information available

### 10.6 Hazardous decomposition products

in the event of fire: See section 5.

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## SECTION 11. Toxicological information

### 11.1 Information on toxicological effects

#### Mixture

##### *Acute oral toxicity*

This information is not available.

##### *Acute inhalation toxicity*

This information is not available.

##### *Acute dermal toxicity*

This information is not available.

##### *Skin irritation*

Possible damages: slight irritation

##### *Eye irritation*

Possible damages: slight irritation

##### *Sensitisation*

This information is not available.

##### *Germ cell mutagenicity*

This information is not available.

##### *Carcinogenicity*

This information is not available.

##### *Reproductive toxicity*

This information is not available.

##### *Teratogenicity*

This information is not available.

##### *Specific target organ toxicity - single exposure*

This information is not available.

##### *Specific target organ toxicity - repeated exposure*

This information is not available.

##### *Aspiration hazard*

This information is not available.

### 11.2 Further information

After uptake of large quantities:

Diarrhoea, Nausea, Vomiting, Convulsions

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

Handle in accordance with good industrial hygiene and safety practice.

#### Components

##### *acetic acid*

###### *Acute oral toxicity*

LD50 Rat: 3.310 mg/kg (RTECS)

###### *Acute inhalation toxicity*

LCLO Rat: 39,95 mg/l; 4 h (RTECS)

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#### *Skin irritation*

Rabbit  
Result: Causes burns.  
(IUCLID)

#### *Eye irritation*

Rabbit  
Result: Causes burns.  
(IUCLID)

#### *Germ cell mutagenicity*

##### *Genotoxicity in vitro*

Ames test  
Salmonella typhimurium  
Result: negative  
Method: OECD Test Guideline 471

Mutagenicity (mammal cell test): chromosome aberration.

Result: negative  
Method: OECD Test Guideline 473

#### *Teratogenicity*

Did not show teratogenic effects in animal experiments. (IUCLID)

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## SECTION 12. Ecological information

### Mixture

#### 12.1 Toxicity

No information available.

#### 12.2 Persistence and degradability

No information available.

#### 12.3 Bioaccumulative potential

No information available.

#### 12.4 Mobility in soil

No information available.

#### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

#### 12.6 Other adverse effects

Discharge into the environment must be avoided.

### Components

#### *acetic acid*

##### *Toxicity to fish*

semi-static test LC50 *Oncorhynchus mykiss* (rainbow trout): > 300,8 mg/l; 96 h  
OECD Test Guideline 203

##### *Toxicity to daphnia and other aquatic invertebrates*

EC50 *E.sulcatum*: 78 mg/l; 72 h neutral (maximum permissible toxic concentration) (Lit.)

EC50 *Daphnia magna* (Water flea): 47 mg/l; 24 h (Lit.)



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#### *Toxicity to algae*

IC50 *Scenedesmus quadricauda* (Green algae): 4.000 mg/l; 16 h (maximum permissible toxic concentration) (Lit.)

#### *Toxicity to bacteria*

EC50 *Pseudomonas putida*: 2.850 mg/l; 16 h neutral (maximum permissible toxic concentration) (Lit.)

microtox test EC50 *Photobacterium phosphoreum*: 11 mg/l; 15 min (IUCLID)

#### *Biodegradability*

99 %; 30 d

OECD Test Guideline 301D

(HSDB)

Readily biodegradable

95 %; 5 d

OECD Test Guideline 302B

Readily eliminated from water

#### *Biochemical Oxygen Demand (BOD)*

880 mg/g (5 d)

(Lit.)

#### *Ratio BOD/ThBOD*

BOD5 76 %

(IUCLID)

#### *Partition coefficient: n-octanol/water*

log Pow: -0,17 (25 °C)

(experimental)

(ECHA) Bioaccumulation is not expected.

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

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## **SECTION 13. Disposal considerations**

### *Waste treatment methods*

See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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## **SECTION 14. Transport information**

### **Land transport (ADR/RID)**

#### **14.1 - 14.6**

Not classified as dangerous in the meaning of transport regulations.

### **Inland waterway transport (ADN)**

Not relevant

### **Air transport (IATA)**

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**14.1 - 14.6** Not classified as dangerous in the meaning of transport regulations.

### Sea transport (IMDG)

**14.1 - 14.6** Not classified as dangerous in the meaning of transport regulations.

### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

THIS TRANSPORT DATA APPLIES TO THE ENTIRE PACK!

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## SECTION 15. Regulatory information

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

#### EU regulations

Major Accident Hazard Legislation	96/82/EC Directive 96/82/EC does not apply
	SEVESO III Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer not regulated

Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC not regulated

Substances of very high concern (SVHC) This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of  $\geq 0.1\%$  (w/w).

#### National legislation

Storage class 10 - 13  
The data applies to the entire pack.

### 15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

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## SECTION 16. Other information

### Full text of H-Statements referred to under sections 2 and 3.

H226	Flammable liquid and vapour.
H314	Causes severe skin burns and eye damage.

### Training advice

Provide adequate information, instruction and training for operators.

### Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

Millipore Ref.	LSKGEL050
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### Regional representation

This information is given on the authorised Safety Data Sheet for your country.

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*The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.*