

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

Printing date 02.12.2011

Version number 1

Revision: 02.12.2011

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

### 1.1. Product identifier

· Trade name: Solution E for Silver Staining Kit

· Article number: 43813

· CAS Number:  
10102-17-7

· EC number:  
231-867-5

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

· Application of the substance / the preparation Laboratory chemicals

### 1.3. Details of the supplier of the safety data sheet

#### · Manufacturer/Supplier:

SERVA Electrophoresis GmbH

Carl-Benz-Str. 7

D-69115 Heidelberg

Tel.: +49 6221 13840-0

FAX: +49 6221 13840-10

msds.info@serva.de

· Information department: Product Safety department Tel.: +49 6221 13840-35

· 1.4. Emergency telephone number: +49 6131 19240 (university hospital Mainz)

**SERVA**  
Electrophoresis

## 2 Hazards identification

### 2.1. Classification of the substance or mixture

· Classification according to Regulation (EC) No 1272/2008

The substance is not classified according to the CLP regulation.

· 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 was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.

### 2.2. Label elements

· Labelling according to Regulation (EC) No 1272/2008 Void

· Hazard pictograms Void

· Signal word Void

· Hazard statements Void

### 2.3. Other hazards

· Results of PBT and vPvB assessment

· PBT: PBT - assessment not available.

· vPvB: vPvB - assessment not available.

## 3 Composition/information on ingredients

### 3.1. Chemical characterization: Substances

· CAS No. Description:

10102-17-7 Sodium Thiosulfate pentahydrate

· Identification number(s):

· EC number: 231-867-5

· Description:

· Empirical formula:  $\text{Na}_2\text{S}_2\text{O}_3 \cdot 5\text{H}_2\text{O}$

(Contd. on page 2)

GB

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(Contd. of page 1)

· **MW:** 248,2 g/mol

#### 4 First aid measures

- **4.1. 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** Immediately rinse with water.
- **After eye contact**  
Rinse opened eye for several minutes under running water. Remove present contact lenses, if easy to do, and continue rinsing.
- **After swallowing** If symptoms persist consult doctor.
- **Information for doctor**
- **4.2. Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **4.3. Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

#### 5 Firefighting measures

- **5.1. Extinguishing media**
- **Suitable extinguishing agents**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2. Special hazards arising from the substance or mixture**  
In case of fire, the following can be released:  
Sulphur dioxide (SO<sub>2</sub>)  
Sodium oxides
- **5.3. Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

#### 6 Accidental release measures

- **6.1. Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **6.2. Environmental precautions:**  
Do not allow product to reach sewage system or any water course.  
Dilute with plenty of water.
- **6.3. Methods and material for containment and cleaning up:**  
Pick up mechanically.  
Dispose contaminated material as waste according to item 13.
- **6.4. 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**
- **7.1. Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** No special measures required.
- **7.2. 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.

(Contd. on page 3)

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Revision: 02.12.2011

Trade name: *Solution E for Silver Staining Kit*

(Contd. of page 2)

- **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.
- **7.3. Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **8.1. Control parameters**
  - **Components with limit values that require monitoring at the workplace:** Not required.
  - **Additional information:** The lists that were valid during the creation were used as basis.
- **8.2. 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.
    - **Breathing equipment:** Suitable respiratory protective device recommended.
    - **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.
      - 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.
    - **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**
      - Natural rubber, NR
  - **Eye protection:** Safety glasses
  - **Body protection:** Protective work clothing.

## 9 Physical and chemical properties

- **9.1. Information on basic physical and chemical properties**
  - **General Information**
    - **Appearance:**
      - Form:** Crystalline
      - Colour:** Colourless
    - **Odour:** Odourless
    - **Odour threshold:** Not determined.
  - **pH-value (100 g/l) at 20°C:** 7.2
  - **Change in condition**
    - Melting point/Melting range:** 48°C
    - Boiling point/Boiling range:** undetermined
  - **Flash point:** Not applicable

(Contd. on page 4)

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(Contd. of page 3)

· <b>Flammability (solid, gaseous)</b>	Not applicable.
· <b>Ignition temperature:</b>	
<b>Decomposition temperature:</b>	Not determined.
· <b>Self igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
· <b>Vapour pressure:</b>	Not determined.
· <b>Density at 20°C:</b>	1.73 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with Water:</b>	Fully miscible
· <b>Segregation coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>dynamic:</b>	Not determined.
<b>kinematic:</b>	Not determined.
<b>Organic solvents:</b>	0.0 %
· <b>VOC %:</b>	0.00 %
· <b>9.2. Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **10.1. Reactivity** No further relevant informations available
- **10.2. Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3. Possibility of hazardous reactions** No dangerous reactions known
- **10.4. Conditions to avoid** No further relevant information available.
- **10.5. Incompatible materials:** Avoid contact with: acids, strong oxidizers
- **10.6. Hazardous decomposition products:**  
Sulphur oxides (SO<sub>x</sub>)  
Sodium oxides

## 11 Toxicological information

- **11.1. Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing 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 according to our experience and the information provided to us.

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(Contd. on page 5)

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(Contd. of page 4)

### 12 Ecological information

- **12.1. Toxicity**
- **Acquatic toxicity:** No further relevant information available.
- **12.2. Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **12.3. Bioaccumulative potential** No further relevant information available.
- **12.4. Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.
- **12.5. Results of PBT and vPvB assessment**
- **PBT:** PBT - assessment not available.
- **vPvB:** vPvB - assessment not available.
- **12.6. Other adverse effects** No further relevant information available.

### 13 Disposal considerations

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

### 14 Transport information

- |                                                                                                                                    |                                                      |
|------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| · <b>14.1. UN-Number</b><br>· <b>ADR, ADN, IMDG, IATA</b>                                                                          | Void                                                 |
| · <b>14.2. UN proper shipping name</b><br>· <b>ADR, ADN, IMDG, IATA</b>                                                            | Void                                                 |
| · <b>14.3. Transport hazard class(es)</b><br>· <b>ADR, IMDG, IATA</b><br>· <b>Class</b><br>· <b>Label</b><br>· <b>ADN/R Class:</b> | Void<br>-<br>Void                                    |
| · <b>14.4. Packing group</b><br>· <b>ADR, IMDG, IATA</b>                                                                           | Void                                                 |
| · <b>14.5. Environmental hazards:</b><br>· <b>Marine pollutant:</b>                                                                | No                                                   |
| · <b>14.6. Special precautions for user</b>                                                                                        | Not applicable.                                      |
| · <b>14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>                                             | Not applicable.                                      |
| · <b>Transport/Additional information:</b>                                                                                         | Not dangerous according to the above specifications. |
| · <b>UN "Model Regulation":</b>                                                                                                    | -                                                    |

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(Contd. on page 6)

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(Contd. of page 5)

**15 Regulatory information**

- **15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
- **Water hazard class:** Generally not hazardous for water.
- **15.2. 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:** Product safety department
- **Contact:** +49 6221 13840-35
- **Abbreviations and acronyms:**
  - PBT: persistent, bioaccumulative, toxic substance (REACH)
  - vPvB: very persistent, very bioaccumulative substance (REACH)
  - REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
  - CLP: Regulation on classification, labelling and packaging of substances and mixtures
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - ICAO: International Civil Aviation Organization
  - GHS: Globally Harmonized System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
- **\* Data compared to the previous version altered.**

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