Revision date: 05/18

SDS – 068
Revision number: 02
Rev. 05/18

SPOTCHEM™ II Basic Panel 2
Part Numbers: SE77127 and 77191
For use with the SPOTCHEM EZ Analyzer SP-4430

ARKRAY USA, Inc.
5182 West 76th Street
Minneapolis, Minnesota 55439

Technical Customer Service Phone:
1-855-646-3108
SAFETY DATA SHEET

SDS No.: 77127EU
Issue Date: 1 Nov. 2005
Revision Date: 31 Jan. 2017

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

1.1 Product identifier

Product name: SPOTCHEM II Basicpanel2

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

The product is applicable for the following purpose of use only. Use exclusive reagents for SPOTCHEM analyzer.

1.3 Details of the supplier of the safety data sheet

ARKRAY FACTORY, Inc.
Address: 1480 Koji, Konan-cho, Koka-shi, Shiga 520-3306, JAPAN
Phone: +81-748-86-6901
Facsimile: +81-748-86-5347

European representative

ARKRAY Europe, B. V.
Address: Prof. J. H. Bavincklaan 2, 1183 AT Amstelveen, THE NETHERLANDS
Phone: +31-20-545-2450
Facsimile: +31-20-545-2459

1.4 Emergency telephone number

Emergency phone: +31-20-545-2450

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

The product does not need to be labeled in accordance with EC directives or respective national laws.

2.3 Other hazards

May be harmful if ingested.
May cause eyes and skin irritation.

3. Composition/information on ingredients

3.2 Mixtures

GPT/ALT

<table>
<thead>
<tr>
<th>Component</th>
<th>Conc. [%]</th>
<th>Formula</th>
<th>EINECS No.</th>
<th>CAS No.</th>
<th>Classification Regulation(EC) 1272/2008 (CLP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L-Alanine</td>
<td>&lt; 0.1</td>
<td>C₃H₇NO₂</td>
<td>200-273-8</td>
<td>56-41-7</td>
<td>—</td>
</tr>
<tr>
<td>α-Ketoglutaric acid</td>
<td>&lt; 0.1</td>
<td>C₆H₆O₅</td>
<td>206-330-3</td>
<td>328-50-7</td>
<td>Skin Irrit. 2; H315, Eye Irrit. 2A; H319</td>
</tr>
<tr>
<td>Pyruvate oxidase (POP)</td>
<td>&lt; 0.1</td>
<td>—</td>
<td>232-644-5</td>
<td>9001-96-1</td>
<td>—</td>
</tr>
</tbody>
</table>
### 4-Aminoantipyrine (4-AAP)

<table>
<thead>
<tr>
<th>Component</th>
<th>Conc. [%]</th>
<th>Formula</th>
<th>EINECS No.</th>
<th>CAS No.</th>
<th>Classification</th>
<th>Regulation</th>
<th>Regulation (EC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium L-aspartate</td>
<td>&lt; 1.0</td>
<td>C₄H₇O₂Na·H₂O</td>
<td>223-264-0</td>
<td>3792-50-5</td>
<td>—</td>
<td>—</td>
<td>1272/2008(CLP)</td>
</tr>
<tr>
<td>α-Ketoglutaric acid</td>
<td>&lt; 0.1</td>
<td>C₅H₄O₅</td>
<td>206-330-3</td>
<td>328-50-7</td>
<td>Skin Irrit. 2; H315,</td>
<td>Eye Irrit. 2A; H319</td>
<td></td>
</tr>
<tr>
<td>Oxalacetic acid decarboxylase (OAC)</td>
<td>&lt; 0.01</td>
<td>—</td>
<td>—</td>
<td>9024-98-0</td>
<td>Skin Irrit. 2; H315,</td>
<td>Eye Irrit. 2A; H319</td>
<td></td>
</tr>
<tr>
<td>Pyruvate oxidase (POP)</td>
<td>&lt; 0.1</td>
<td>—</td>
<td>232-644-5</td>
<td>9001-96-1</td>
<td>—</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>4-Aminoantipyrine (4-AAP)</td>
<td>&lt; 0.01</td>
<td>C₁₁H₁₃N₃O</td>
<td>201-452-3</td>
<td>83-07-8</td>
<td>Acute Tox. (Oral) 4; H302,</td>
<td>Skin Irrit. 2; H315,</td>
<td>Eye Irrit. 2; H319</td>
</tr>
</tbody>
</table>

### N-Ethyl–N-(2-hydroxy-3-sulphopropyl)-3,5-dimethoxyniline sodium salt (DAOS)

<table>
<thead>
<tr>
<th>Component</th>
<th>Conc. [%]</th>
<th>Formula</th>
<th>EINECS No.</th>
<th>CAS No.</th>
<th>Classification</th>
<th>Regulation</th>
<th>Regulation (EC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium L-aspartate</td>
<td>&lt; 1.0</td>
<td>C₄H₇O₂Na·H₂O</td>
<td>223-264-0</td>
<td>3792-50-5</td>
<td>—</td>
<td>—</td>
<td>1272/2008(CLP)</td>
</tr>
<tr>
<td>α-Ketoglutaric acid</td>
<td>&lt; 0.1</td>
<td>C₅H₄O₅</td>
<td>206-330-3</td>
<td>328-50-7</td>
<td>Skin Irrit. 2; H315,</td>
<td>Eye Irrit. 2A; H319</td>
<td></td>
</tr>
<tr>
<td>Oxalacetic acid decarboxylase (OAC)</td>
<td>&lt; 0.01</td>
<td>—</td>
<td>—</td>
<td>9024-98-0</td>
<td>Skin Irrit. 2; H315,</td>
<td>Eye Irrit. 2A; H319</td>
<td></td>
</tr>
<tr>
<td>Pyruvate oxidase (POP)</td>
<td>&lt; 0.1</td>
<td>—</td>
<td>232-644-5</td>
<td>9001-96-1</td>
<td>—</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>4-Aminoantipyrine (4-AAP)</td>
<td>&lt; 0.01</td>
<td>C₁₁H₁₃N₃O</td>
<td>201-452-3</td>
<td>83-07-8</td>
<td>Acute Tox. (Oral) 4; H302,</td>
<td>Skin Irrit. 2; H315,</td>
<td>Eye Irrit. 2; H319</td>
</tr>
</tbody>
</table>

### GOT/AST

<table>
<thead>
<tr>
<th>Component</th>
<th>Conc. [%]</th>
<th>Formula</th>
<th>EINECS No.</th>
<th>CAS No.</th>
<th>Classification</th>
<th>Regulation</th>
<th>Regulation (EC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiamine pyrophosphate acid (TPP)</td>
<td>&lt; 0.01</td>
<td>C₁₂H₁₉ClN₄P₂S</td>
<td>205-836-1</td>
<td>154-87-0</td>
<td>—</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Magnesium chloride</td>
<td>&lt; 0.01</td>
<td>MgCl₂</td>
<td>232-094-6</td>
<td>7786-30-3</td>
<td>Skin Irrit. 3; 316,</td>
<td>Eye Irrit. 2A; 319</td>
<td></td>
</tr>
</tbody>
</table>

### Notes

- **Formula**: Chemical formula of the compound.
- **EINECS No.**: European Inventory of Existing Commercial Substances Number.
- **CAS No.**: Chemical Abstracts Service Number.
- **Classification**: Classification of the compound based on toxicological properties.
- **Regulation**: Regulation number and description.
<table>
<thead>
<tr>
<th>Component</th>
<th>Conc. [%]</th>
<th>Formula</th>
<th>EINECS No.</th>
<th>CAS No.</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peroxidase (POD)</td>
<td>&lt; 0.01</td>
<td></td>
<td>232-668-6</td>
<td>9003-99-0</td>
<td>Skin Irrit. 2; H315, Eye Irrit. 2; H319, Repr. 1B; H360, STOT SE (central nervous system, alimentary canal) 1; H370, STOT SE (respiratory tract irritation) 3; H335, STOT RE (kidney) 1; H372</td>
</tr>
<tr>
<td>Thiamine pyrophosphate acid (TPP)</td>
<td>&lt; 0.01</td>
<td>C_{12}H_{19}ClN_{4}O_{7}P_{2}S</td>
<td>205-836-1</td>
<td>154-87-0</td>
<td>—</td>
</tr>
<tr>
<td>Magnesium chloride</td>
<td>&lt; 0.01</td>
<td>MgCl_{2}</td>
<td>232-094-6</td>
<td>7786-30-3</td>
<td>Skin Irrit. 3; H316, Eye Irrit. 2A; H319</td>
</tr>
</tbody>
</table>

**ALP**

<table>
<thead>
<tr>
<th>Component</th>
<th>Conc. [%]</th>
<th>Formula</th>
<th>EINECS No.</th>
<th>CAS No.</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>p-Nitrophenyl phosphate di(2-amine-2-ethyl-1,3-propanediol) salt</td>
<td>&lt; 0.1</td>
<td>C_{16}H_{32}N_{3}O_{10}P</td>
<td>263-734-2</td>
<td>62796-28-5</td>
<td>—</td>
</tr>
</tbody>
</table>

**Total Protein**

<table>
<thead>
<tr>
<th>Component</th>
<th>Conc. [%]</th>
<th>Formula</th>
<th>EINECS No.</th>
<th>CAS No.</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper sulfate</td>
<td>&lt; 0.1</td>
<td>CuSO_{4}</td>
<td>231-847-6</td>
<td>7758-98-7</td>
<td>Acute Tox. (Oral) 4; H302, Skin Irrit. 2; H315, Eye Irrit. 2; H319, Aquatic Acute 1; H400, Aquatic Chronic 1; H410</td>
</tr>
</tbody>
</table>

**Total Bilirubin**

<table>
<thead>
<tr>
<th>Component</th>
<th>Conc. [%]</th>
<th>Formula</th>
<th>EINECS No.</th>
<th>CAS No.</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfanilic acid</td>
<td>&lt; 0.1</td>
<td>C_{6}H_{7}NO_{3}S</td>
<td>204-482-5</td>
<td>121-57-3</td>
<td>Skin Irrit. 2; H315, Eye Irrit. 2A; 319, Skin Sens. 1; H317</td>
</tr>
</tbody>
</table>
4. First aid measures

4.1 Description of first aid measures

Inhalation
Not applicable

Skin contact
Immediately wash thoroughly with water and soap. Immediately get medical attention if itchiness and inflammation occurs.

Eye contact
Immediately wash eyes with plenty of clean water for at least 15 minutes and get medical attention.

Ingestion
Rinse mouth. Give one or two glasses of water to drink

4.2 Most important symptoms and effects, both acute and delayed

No relevant information available

4.3 Indication of any immediate medical attention and special treatment needed

No relevant information available

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Water

Unsuitable extinguishing media
No relevant information available

5.2 Special hazards arising from the substance or mixture

No relevant information available

5.3 Advice for firefighters

No relevant information available
6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
No information available

For emergency responder
Wear protective gloves.

6.2 Environmental precautions
No relevant information available

6.3 Methods and material for containment and cleaning up
Pick up the product and wipe the contaminated area with damp cloth. Rinse the used cloth.

6.4 Reference to other sections
Not available

7. Handling and storage

7.1 Precautions for safe handling
Preventive measures (Exposure Control for handling personnel)
No relevant information available

7.2 Conditions for safe storage, including any incompatibilities
Store the product in a refrigerator at temperature of 2 - 8 °C.

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8. Exposure controls/personal protection

8.1 Control parameters
No data available

8.2 Exposure controls
Appropriate engineering controls
No information available

Individual protection measures, such as personal protective equipment
Eye/face protection
Use safety glasses, if necessary.

Skin protection

Hand protection
Use rubber gloves, if necessary

Other
Not necessary

Respiratory protection
Not necessary

Thermal hazards
No information available

Environmental exposure controls
No relevant information available
9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Solid</td>
</tr>
<tr>
<td>Odour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point and boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility in</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient:</td>
<td>No data available</td>
</tr>
<tr>
<td>n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2 Other information

No further relevant information

10. Stability and reactivity

10.1 Reactivity

Stable under normal conditions

10.2 Chemical stability

Stable under normal conditions

10.3 Possibility of hazardous reactions

None

10.4 Conditions to avoid

Sunlight, heat, and humidity

10.5 Incompatible materials

No information available

10.6 Hazardous decomposition products

None

11. Toxicological information

11.1 Information on toxicological effects

<table>
<thead>
<tr>
<th>Effect</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>No information available</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>No information available</td>
</tr>
</tbody>
</table>
12. Ecological information

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
No information available

12.6 Other adverse effects
No information available

13. Disposal considerations

13.1 Waste treatment methods

Product
Dispose of the product in accordance with regulations.

Contaminated packaging
Dispose as of unused product.

Others
If used product, ask a licensed disposal company.
Observe all federal, state, and local environmental regulation.

14. Transport information

14.1 UN number
ADR/RID: —          IMDG: —          IATA: —

14.2 UN proper shipping name
ADR/RID: —          IMDG: —          IATA: —

14.3 Transport hazard class(es)
ADR/RID: —          IMDG: —          IATA: —

14.4 Packing group
ADR/RID: —          IMDG: —          IATA: —

14.5 Environmental hazards
14.6 Special precautions for user

No relevant information available

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

No relevant information available

15. Regulatory information

The safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

No information available

15.2 Chemical safety assessment

No information available

16. Other information

The date of preparation and revision of the SDS

Prepared on 1 November 2005.
Revised on 8 January 2010: Changed Telephone number & Facsimile number of the Manufacturer in “Company information.”
Revised on 1 July 2010: Modified to fit with ISO11014-1.
Revised on 14 April 2016: Modified in accordance with the requirements of Regulation (EC) No. 1907/2006. European representative’s address has changed.
Revised on 31 January 2017: Corrected the wording in 15.1.
Clarified concentration in Composition/Information on ingredients.

Key literature references

Insert

Further information

The above information contained herein is based on the data available to us and is believed to be correct. However, ARKRAY, Inc. bears no warranty expresses or implies regarding the accuracy of these data or the results to be obtained from the use thereof.

ARKRAY, Inc. assumes no responsibility for injury caused from the use of the product described herein.