MATERIAL SAFETY DATA SHEET


1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Product number 10011

Product name

M30 Apoptosense® ELISA

Relevant identified uses of the substance or mixture and uses advises against

For in vitro use only. See Instruction for use for information and intended use of this product.

Details of the supplier of the safety data sheet

Vivalavida AB
Hästholmsvägen 32
131 30 Nacka
Sweden

Phone +46 (0)8 122 053 00
Email: info@vlvbio.com
Website: www.vlvbio.com

Emergency telephone number
+46 (0)8 122 053 00 (08:30 to 17:00, CET)

2. HAZARDS IDENTIFICATION

Classification according to Regulation (EC) No. 1272/2008 (CLP) according to Directives 67/548/EEC or 1999/45/EC

Kathon CG: Hazardous components are 5-chloro-2 methyl-2H-isothiazol-3-one (EC No. 247-500-7) and 2-methyl-2H -isothiazol-3-one (EC No. 220-239-6) as a mixture, 1:3 (CAS No. 55965-84-9), conc. 1–2.5 %. Concentration of the dangerous substances in component numbers 2–5: ≤ 0.004 %.

0.0015 % ≤ conc. < 0.06 %

Classification of the substance or mixture
Skin Sens. Category 1 (H317)

H317: May cause an allergic skin reaction.

R43: May cause sensitization by skin contact.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P302 + P352: IF ON SKIN: Wash with plenty of water and soap.

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

P314: Get medical advice/attention if you feel unwell.

S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Sulphuric acid: EC No. 231-639-5, CAS No. 7664-93-9

Concentration of the dangerous substance in component number 7: 5.5 %

5 % ≤ conc. < 15 %

Classification of the substance or mixture
Eye Irrit. Category 2 (H319)

P302 + P352: IF ON SKIN: Wash with plenty of water and soap.

S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Precautionary statement(s)

Classification

R43

Labelling

Hazard symbol: N/A

R-phrase(s)

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

S28: After contact with skin wash immediately with plenty of water and soap.

S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S-phrase(s)

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P302 + P352: IF ON SKIN: Wash with plenty of water and soap.

P314: Get medical advice/attention if you feel unwell.

P314: Get medical advice/attention if you feel unwell.

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

S28: After contact with skin wash immediately with plenty of water and soap.

S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Labelling

Hazard symbol

Xi Irritant
Hazard statement(s)
H290: May be corrosive to metals.
H315: Causes skin irritation.
H319: Causes serious eye irritation.

Precautionary statement(s)
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P302 + P352: IF ON SKIN: Wash with plenty of water and soap. P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

R-phrase(s)
R36/38: Irritating to eyes and skin.

S-phrase(s)
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

3,3',5,5' Tetramethylbenzidin: EC No. 259-364-6, CAS No. 54827-17-7
Component number 6: conc. ≤ 0.05 %
Not applicable or no information (concentration < 0.1 %).

Tartrazin: EC No. 217-699-5, CAS No. 1934-21-0
Component numbers 4–5: conc. ≤ 0.01 %
Not applicable or no information (concentration < 0.1 %).

Material of animal origin
Should be considered as potentially infectious. Components 1–5 contain material of animal origin.

Other hazards: Not known

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

<table>
<thead>
<tr>
<th>Component number</th>
<th>Component Name</th>
<th>Hazard</th>
<th>Classification (pure form) according to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M30 Coated Microstrips</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>2</td>
<td>M30 HRP Conjugate</td>
<td>Kathon CG(1)</td>
<td>H331, H311, H301, H314, H317, H400, H410</td>
</tr>
<tr>
<td>3</td>
<td>M30 Conjugate Dilution Buffer</td>
<td>Kathon CG(1)</td>
<td>See component 2</td>
</tr>
<tr>
<td>4</td>
<td>M30 Standard A</td>
<td>0 U/L</td>
<td>Kathon CG(1)</td>
</tr>
<tr>
<td>4</td>
<td>M30 Standard B</td>
<td>75 U/L</td>
<td>Kathon CG(1)</td>
</tr>
<tr>
<td>4</td>
<td>M30 Standard C</td>
<td>150 U/L</td>
<td>Tartrazin</td>
</tr>
<tr>
<td>4</td>
<td>M30 Standard D</td>
<td>250 U/L</td>
<td>Tartrazin</td>
</tr>
<tr>
<td>4</td>
<td>M30 Standard E</td>
<td>500 U/L</td>
<td>Tartrazin</td>
</tr>
<tr>
<td>4</td>
<td>M30 Standard F</td>
<td>750 U/L</td>
<td>Tartrazin</td>
</tr>
<tr>
<td>4</td>
<td>M30 Standard G</td>
<td>1 000 U/L</td>
<td>Tartrazin</td>
</tr>
<tr>
<td>5</td>
<td>M30 Control Low</td>
<td>Kathon CG(1)</td>
<td>See component 2 and 4</td>
</tr>
<tr>
<td>5</td>
<td>M30 Control High</td>
<td>Tartrazin</td>
<td>See component 2 and 4</td>
</tr>
<tr>
<td>6</td>
<td>TMB Substrate</td>
<td>3,3',5,5' Tetramethylbenzidin</td>
<td>H315, H319, H335</td>
</tr>
<tr>
<td>7</td>
<td>Stop Solution</td>
<td>Sulphuric acid(2)</td>
<td>H314</td>
</tr>
<tr>
<td>8</td>
<td>Wash Tablet</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>9</td>
<td>Sealing Tape</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

(1) Not applicable or no information (concentration < 0.1 %).
(2) Not applicable or no information (concentration < 0.1 %).
According to Regulation (EC) No. 1272/2008 (CLP), (pure form)

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Acute toxicity 3</td>
<td>Classification Code(s)</td>
</tr>
<tr>
<td>1) Skin Corrosive 1B</td>
<td>T  Toxic</td>
</tr>
<tr>
<td>1) Skin Sensitisation 1</td>
<td>N  Dangerous for the environment</td>
</tr>
<tr>
<td>1) Acute aquatic hazard 1</td>
<td>C  Corrosive</td>
</tr>
<tr>
<td>1) Chronic aquatic (long term) hazard 1</td>
<td>Xi  Irritant</td>
</tr>
<tr>
<td>2) Skin Corrosive 1A</td>
<td>Xn  Harmful</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazard statement(s)</th>
<th>R-phrase(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H331 Toxic if inhaled.</td>
<td>R23/24/25  Toxic by inhalation, in contact with skin and if swallowed.</td>
</tr>
<tr>
<td>H311 Toxic in contact with skin.</td>
<td>R34 Causes burns.</td>
</tr>
<tr>
<td>H301 Toxic if swallowed.</td>
<td>R43 May cause sensitization by skin contact.</td>
</tr>
<tr>
<td>H314 Causes severe skin burns and eye damage.</td>
<td>R50–53 Very toxic to aquatic organisms may cause long term adverse effects in the aquatic environment.</td>
</tr>
<tr>
<td>H317 May cause an allergic skin reaction.</td>
<td>R42/43 May cause sensitization by inhalation and skin contact.</td>
</tr>
<tr>
<td>H400 Very toxic to aquatic life.</td>
<td>R36/37/38 Irritating to eyes, respiratory system and skin.</td>
</tr>
<tr>
<td>H410 Very toxic to aquatic life with long lasting effects.</td>
<td>R35 Causes severe burns</td>
</tr>
<tr>
<td>H315 Causes skin irritation.</td>
<td></td>
</tr>
<tr>
<td>H319 Causes serious eye irritation.</td>
<td></td>
</tr>
<tr>
<td>H335 May cause respiratory irritation.</td>
<td></td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

**Description of first aid measures**

**After inhalation**
- Remove the victim to fresh air.
- If breathing is difficult, give oxygen.
- If not breathing, give artificial respiration.
- Seek medical advice if needed.

**After eye contact**
- After contact with eyes, flush cautiously with water for several minutes.
- Remove contact lenses, if present and easy to do. Continue rinsing.
- If eye irritation persists: Get medical advice/attention.

**After swallowing**
- Flush mouth with plenty of water (do not swallow), drink a couple of glasses of water. Do not induce vomiting.
- Never give anything to drink to an unconscious person.
- Seek medical advice if needed.

**After skin contact**
- After contact with skin, wash with plenty of water and soap.
- If skin irritation occurs: Get medical advice/attention.
- Take off contaminated clothing and wash before reuse.

**Others**
- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**Most important symptoms and effects, both acute and delayed**
- Causes skin irritation.
- Causes serious eye irritation.

**Indication of any immediate medical attention and special treatment needed**
- No data available.

5. FIREFIGHTING MEASURES

**Extinguishing media**

**Suitable extinguishing media**
- Use fire extinguishing media appropriate for site conditions, preferably water spray, carbon dioxide, powder or foam.

**Unsuitable extinguishing media**
- No restrictions.

**Special hazards arising from the substance or mixture**
- In case of fire may be liberated: Sulphur oxides.

**Advise for firefighters**
- No risk of fire or explosion.
- No generation of hazardous or toxic gases in dangerous quantities.
- Wear self-contained breathing apparatus and protective clothing to avoid all contact with skin and eyes.
6. ACCIDENTAL RELEASE MEASURES

Personal precautions protective equipment and emergency procedures

For non-emergency personal
Use suitable personal protective equipment as required, protective gloves (nitrile gloves)/protective clothing/eye protection/face protection.

For emergency responders
Use suitable personal protective equipment as required, protective gloves (nitrile gloves)/protective clothing/eye protection/face protection.

Environmental precautions
Prevent soil and water pollution.

Methods and material for containment and cleaning up
Absorb spills with absorbent material. Clean contaminated areas.

Reference to other sections
Personal protective equipment, see section 8.
Dispose, see section 13.

7. HANDLING AND STORAGE

Precautions for safe handling
Ensure good ventilation.
Avoid spills.
Do not eat and smoke in work areas.
Avoid contact with skin and eyes.
Wash hands after use.
Remove contaminated clothing and protective equipment before entering eating areas.

Conditions for safe storage, including any incompatibilities
Store in well closed original container at 2–8 °C.
Do not freeze.
Protect from light (components 2 and 6).

Specific end use(s)
See Instructions for use for intended use of this product.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
No data available.

Exposure controls
Appropriate engineering controls
Ensure of good ventilation.

Personal protective equipment
Eye/face protection
Wear safety glasses.

Body protection
Wear suitable protective clothing. Take off contaminated clothing and wash before use.

Hand protection
Wear protective gloves (nitrile gloves).

Respiratory protection
Not relevant.

Thermal hazards
Not relevant.

Environmental exposure controls
Not applicable
### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Component number</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4-5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td>Solid (Microstrip)</td>
<td>Liquid</td>
<td>Liquid</td>
<td>Liquid</td>
<td>Liquid</td>
<td>Liquid</td>
<td>Solid (Tablet)</td>
<td>Solid (Tape)</td>
</tr>
<tr>
<td><strong>Colour</strong></td>
<td>Colourless</td>
<td>Light red brown</td>
<td>Blue</td>
<td>Yellow</td>
<td>Colourless to light yellow</td>
<td>Colourless</td>
<td>White</td>
<td>Colourless</td>
</tr>
<tr>
<td><strong>Odour</strong></td>
<td>No smell</td>
<td>No smell</td>
<td>No smell</td>
<td>No smell</td>
<td>No smell</td>
<td>No smell</td>
<td>No smell</td>
<td>No smell</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>N/A</td>
<td>7.0</td>
<td>7.0 ± 0.1</td>
<td>7.0 ± 0.1</td>
<td>3.55 ± 0.20</td>
<td>≤ 1</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Melting point/freezing point</strong></td>
<td>N/A</td>
<td>0 °C</td>
<td>0 °C</td>
<td>0 °C</td>
<td>0 °C</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>Initial boiling point and boiling range</strong></td>
<td>N/A</td>
<td>100 °C</td>
<td>100 °C</td>
<td>100 °C</td>
<td>101 °C</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>Evaporation rate</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Upper/lower flammability or explosive limits</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Vapour pressure</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Vapour density</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Relative density</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>1.03 g/cm³ (20 °C)</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Solubility in water</strong></td>
<td>N/A</td>
<td>soluble</td>
<td>soluble</td>
<td>soluble</td>
<td>soluble</td>
<td>soluble</td>
<td>soluble</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Partition coefficient: n-octanol/water</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Auto-ignition temperature</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Viscosity</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Explosive properties</strong></td>
<td>Not explosive</td>
<td>Not explosive</td>
<td>Not explosive</td>
<td>Not explosive</td>
<td>Not explosive</td>
<td>Not explosive</td>
<td>Not explosive</td>
<td>Not explosive</td>
</tr>
<tr>
<td><strong>Oxidising properties</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>0.0 g/cm² (20 °C)</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Other information</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### 10. STABILITY AND REACTIVITY

**Reactivity**
May be corrosive to metals (component number 7).

**Chemical Stability**
Stable until expiry date stated on label if stored under specified conditions.

**Possibility of hazardous reactions**
No hazardous reactions at normal usage and storage.

**Conditions to avoid**
No data available.

**Incompatible materials**
None

**Hazardous decomposition products**
None

### 11. TOXICOLOGICAL INFORMATION

**Information on toxicological effects**

**Acute Toxicity**
Acute inhalation toxicity LC₅₀ rat: 510 mg/m³, 2 h (refers to pure substance, sulphuric acid, component number 7, IUCLID).

**Irritation**
Irritating to eyes and skin (component numbers 6 and 7).

**Corrosivity**
No data available.

**Sensitisation**
Skin sensitizer due to the content of Kathon CG (components number 2–5).

**Repeated dose toxicity**
No data available.

**Carcinogenicity**
No data available.

**Mutagenicity**
No data available.

**Toxicity for reproduction**
No data available.
12. ECOLOGICAL INFORMATION

Toxicity
Refers to pure substance, sulphuric acid, component 7, (IUCLID).
LC50 Gambusia affinis (fish): 42 mg/L; 96 h
EC50 Daphnia magna (Water flea): 29 mg/L; 24 h

Persistence and degradability
No data available.

Bioaccumulative potential
No data available.

Mobility in soil
No data available.

Results of PBT and vPvB assessment
No data available.

Other adverse effects
No data available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods
All kit components and tested specimen should be considered as bio hazardous/infectious and should be disposed of in accordance with federal, state and local environmental regulations.

14. TRANSPORT INFORMATION

The product is not classified as dangerous goods.

<table>
<thead>
<tr>
<th>UN-number</th>
<th>ADR/RID</th>
<th>ADN/ADNR</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transport hazadn class(es)</th>
<th>ADR/RID</th>
<th>ADN/ADNR</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Packing group</th>
<th>ADR/RID</th>
<th>ADN/ADNR</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Environmental hazards</th>
<th>ADR/RID</th>
<th>ADN/ADNR</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Special precautions for users</th>
<th>ADR/RID</th>
<th>ADN/ADNR</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

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

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture
The product has been labelled in accordance with Regulation (EC) No. 1272/2008 (CLP).

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

16. OTHER INFORMATION

A key or legend to abbreviations and acronyms in the safety data sheet
N/A = Not applicable or no information.

Training advice
Provide adequate information, instruction and training for operators.
See instructions for use for this product.

All material of animal origin has been collected from healthy animals.
The information provided in this MSDS is to information and belief at the date of the publication the best of our knowledge.