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

1.1 Product identifier

<table>
<thead>
<tr>
<th>Pack Name</th>
<th>CA 100</th>
<th>CA 250</th>
<th>CA 120</th>
<th>CA 220 XL-1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cat. No.</td>
<td>BLT00015</td>
<td>BLT00016</td>
<td>XSYS0007</td>
<td>XSYS0092</td>
</tr>
<tr>
<td>Reagent 1</td>
<td>2x50 ml</td>
<td>1x250 ml</td>
<td>10x12 ml</td>
<td>10x22 ml</td>
</tr>
</tbody>
</table>

1.2 Relevant identified uses of the substance or mixture and uses advised against
Diagnostic reagent for quantitative *in vitro* determination of Calcium in human serum, plasma or urine.

1.3 Details of the supplier of the safety data sheet
Name of manufacturer: Erba Lachema s.r.o.
Place of business: Brno, Karásek 1d, postcode 621 00, CZ
ID no: 26918846
Phone: +420 517 077 111
E-mail: msds@erbalachema.com

1.4 Emergency telephone number
Erba Lachema s.r.o.
Phone: +420 517 077 556 (*service only during business hours*)
Toxicological Information Centre (TIS), Na Bojišti 1, 128 01 Prague 2
Phone: +420 224 919 293 or +420 224 915 402 (*service available 24 hours a day*)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Reagent 1
Classification according to Regulation (EC) No 1272/2008
Mixture is not classified as hazardous. However, it contains a low concentration of sodium hydroxide with exposure limit.
Classification according to 67/548/EEC or 1999/45/EC
Mixture is not classified as dangerous. However, it contains a low concentration of sodium hydroxide with exposure limit.

2.2 Label elements
The product does not need to be labelled in accordance with EC directives.

2.3 Other hazards
Mixture or components are not classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances
The product is a mixture.
3.2 Mixtures
Reagent 1 contains following hazardous substances:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>Content (% of weight)</th>
<th>CAS number</th>
<th>EC number</th>
<th>Index number</th>
<th>Classification according to 67/548/EEC</th>
<th>1272/2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide*</td>
<td>0.2</td>
<td>1310-73-2</td>
<td>215-185-5</td>
<td>011-002-00-6</td>
<td>C; R35</td>
<td>Skin Corr. 1A</td>
</tr>
</tbody>
</table>

*) Substance with exposure limits (exposure limits are listed in Section 8.1)
For a full text of R-phrases and H-statements see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures
No special measures required.

Exposure by inhalation
Discontinue the exposure.

Exposure by contact with skin
After contact with skin, wash with soap and water.

Exposure by contact with eyes
Rinse an open eye (hold eyelids with fingers) with plenty of water for about 15 minutes.

Exposure by ingestion
Rinse mouth with water, drink 1/2 l of lukewarm water.

4.2 Most important symptoms and effects, both acute and delayed
No data available.

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

SECTION 5: Firefighting measures
The mixture is not flammable. The measure should be adapted to burning substances in the surrounding area.

5.1 Extinguishing media
Suitable extinguishing media:
Use any extinguishing media appropriate to fire conditions.

5.2 Special hazards arising from the substance or mixture
None known.

5.3 Advice for firefighters
No special advice.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment, see item 8. Observe the principles of work safety in chemical laboratories. Do not eat, drink or smoke.
6.2 Environmental precautions  
Due to amount of chemical substances in a mixture, an impact on the environment is not expected.

6.3 Methods and material for containment and cleaning up  
Absorb spilled agent with a suitable inert material (sand, earth, vapex) and store contaminated material in containers for collection of hazardous waste. For waste disposal, see Section 13.

6.4 Reference to other sections  
See section 7, 8 and 13.

SECTION 7: Handling and storage  

7.1 Precautions for safe handling  
Observe the principles of work in laboratory. Observe the normal operating procedures for handling chemical substances and mixtures. Do not eat, drink or smoke. Use personal protective equipment, see Section 8.

7.2 Conditions for safe storage, including any incompatibilities  
Store at a temperature between +2 °C and +8 °C.

7.3 Specific end use(s)  
The kit is designed for *in vitro* diagnostic use.

SECTION 8: Exposure controls/personal protection  

8.1 Control parameters  

<table>
<thead>
<tr>
<th>CAS</th>
<th>Substance name</th>
<th>PEL</th>
<th>NPK-P</th>
<th>Note</th>
<th>Conversion factor for ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>1310-73-2</td>
<td>Sodium hydroxide</td>
<td>1 mg/m³</td>
<td>2 mg/m³</td>
<td>1</td>
<td>–</td>
</tr>
</tbody>
</table>

*PEL - Permissible exposure limits; NPK-P - the maximum permissible concentration; D - a significant penetration of the substance through the skin or a strong irritating effect on the skin during exposure; S - the substance has a sensitizing effect; P - serious late effects of the substance cannot be excluded; I – causes irritation of mucous membranes (eyes, respiratory system), resp. skin.* - the physico-chemical properties (e.g. explosiveness) are taken into account for NPK-P.

Exposure limit values in the workplace are not defined according to Directive No 2006/15/EC. Limit values for indicators of biological exposure tests are not defined according to Decree No 432/2003 Coll.

8.2 Exposure controls  

Appropriate engineering controls  
Not required.

Personal protective equipment  
a. Eye/face protection  
Not required.

b. Hand protection  
Not required.

c. Skin protection  
Not required.

d. Respiratory protection  
Not required.
e. Thermal hazards
None known.

**Environmental exposure controls**
To eliminate the emergency conditions, have pre-prepared a decontamination mixture and appropriate collection vessels for reaction residues. Dispose of reaction residues and decontaminated mixtures as hazardous waste water in accordance with relevant legal regulations.

**SECTION 9: Physical and chemical properties**

9.1 Information on basic physical and chemical properties

**Reagent 1**

a. Appearance ........................................... Dark purple liquid
b. Odour.................................................. Information not available
c. Odour threshold .................................... Information not available
d. pH (at 20 °C) ..................................... 7.7-7.9
e. Melting point/freezing point ........................ Information not available
f. Initial boiling point and boiling range (°C) .......................... Information not available
g. Flash point (°C) .................................... Information not available
h. Evaporation rate ..................................... Information not available
i. Flammability (solid, gas) ............................. Information not available
j. Upper/lower flammability or explosive limits ........................ Information not available
k. Vapour pressure (hPa) .............................. Information not available
l. Vapour density ....................................... Information not available
m. Relative density (kg m$^{-3}$) .......................... Information not available
n. Water solubility .................................... Soluble
o. Partition coefficient: n-octanol/water ................. Information not available
p. Autoignition temperature (°C) ...................... Information not available
q. Decomposition temperature (°C) ..................... Information not available
r. Viscosity .............................................. Information not available
s. Explosive properties ................................ Not explosive
t. Oxidizing properties ................................ Information not available

9.2 Other information
None.

**SECTION 10: Stability and reactivity**
Under normal conditions of use and storage the mixture is stable.

10.1 Reactivity
No data available.

10.2 Chemical stability
All components stable when stored in accordance with supplied specifications.

10.3 Possibility of hazardous reactions
Not known.

10.4 Conditions to avoid
No data available.
Safety Data Sheet

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Name of the mixture: CALCIUM

10.5 Incompatible materials
No data available.

10.6 Hazardous decomposition products
No data available.

SECTION 11: Toxicological information

a) Acute toxicity
Based on available data, the classification criteria are not met.

b) Irritability
Based on available data, the classification criteria are not met.

c) Corrosion
Based on available data, the classification criteria are not met.

d) Sensitization
Based on available data, the classification criteria are not met.

e) Repeated dose toxicity
Based on available data, the classification criteria are not met.

f) Carcinogenicity
Based on available data, the classification criteria are not met.

g) Mutagenicity
Based on available data, the classification criteria are not met.

h) Reproductive toxicity
Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1 Toxicity
The mixture is not classified as toxic to environmental.

12.2 Persistence and degradability
No data available.

12.3 Bioaccumulative potential
No data available.

12.4 Mobility in soil
No data available.

12.5 Results of PBT and vPvB assessment
The product does not have the properties of PBT and vPvB. Assessment based on the ingredients that do not have properties of PBT and vPvB.

12.6 Other adverse effects
There is no information about any special danger for environment if kit components are handled and disposed of with due care.
SECTION 13: Disposal considerations

13.1 Waste treatment methods
Dispose of in compliance with applicable regulations for hazardous waste management. Do not drain into the wastewater. The mixture should be discarded as a laboratory waste. Incinerate residues of the mixture in a hazardous waste incinerator. Contaminated packaging must be treated as hazardous waste.

SECTION 14: Transport information
Not governed by regulations for transport of dangerous goods (ADR).

14.1 UN number
Not specified.

14.2 UN proper shipping name
ADR/RID: –
IMDG: –
ICAO/IATA: –

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

14.4 Packing group
ADR/RID: –
IMDG: –
ICAO/IATA: –

14.5 Environmental hazards
The mixture is not hazardous to the environment during transport.

14.6 Special precautions for user
No data available.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not transported.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This safety data sheet complies with the requirements of Regulation (EC) No 1907/2006 (REACH) and Regulation (EC) No 1272/2008 (CLP).

15.2 Chemical safety assessment
Assessment was not carried out.
Safety Data Sheet

Name of the mixture: CALCIUM

SECTION 16: Other information

H-statements: H314 Causes severe skin burns and eye damage.

R-phrases: R35 Causes severe burns.

Recommended restrictions on use

This compound is designed for professional use. It should not be used for purposes other than those described in Section 1.2.

Information about data sources used to compile the Safety Data Sheet

Material Safety Data Sheets of raw material suppliers, ECHA (European Chemicals Agency), corporate documentation for products

Declaration

The safety data sheet contains basic data corresponding to the present state of our knowledge and experience, in accordance with applicable regulations. The foregoing information was gathered with the utmost care, but that does not mean that it is complete and should be used as the only correct information. Erba Lachema s.r.o. is not responsible for any damages caused by improper use and handling of the mixture.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

<table>
<thead>
<tr>
<th>Pack Name</th>
<th>CA 100</th>
<th>CA 250</th>
<th>CA 120</th>
<th>CA 220 XL-1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cat. No.</td>
<td>BLT00015</td>
<td>BLT00016</td>
<td>XSYS0007</td>
<td>XSYS0092</td>
</tr>
<tr>
<td>Reagent 2 STD</td>
<td>1×5 ml</td>
<td>1×5 ml</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

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

Diagnostic reagent for quantitative in vitro determination of Calcium in human serum, plasma or urine.

1.3 Details of the supplier of the safety data sheet

Name of manufacturer: Erba Lachema s.r.o.
Place of business: Brno, Karásek 1d, postcode 621 00, CZ
ID no: 26918846
Phone: +420 517 077 111
E-mail: msds@erbalachema.com

1.4 Emergency telephone number

Erba Lachema s.r.o.
Phone: +420 517 077 556 (service only during business hours)
Toxicological Information Centre (TIS), Na Bojišti 1, 128 01 Prague 2
Phone: +420 224 919 293 or +420 224 915 402 (service available 24 hours a day)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Reagent 2 STD
Classification according to Regulation (EC) No 1272/2008
Mixture is not classified as hazardous. However, it contains a low concentration of hydrochloric acid with exposure limit.
Classification according to 67/548/EEC or 1999/45/EC
Mixture is not classified as dangerous. However, it contains a low concentration of hydrochloric acid with exposure limit.

2.2 Label elements

The product does not need to be labelled in accordance with EC directives.

2.3 Other hazards

Mixture or components are not classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

The product is a mixture.
3.2 Mixtures
Reagent 2 STD contains following hazardous substances:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>Content (% of weight)</th>
<th>CAS number</th>
<th>EC number</th>
<th>Index number</th>
<th>Classification according to</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric acid 35–38 %*</td>
<td>&lt;1.0</td>
<td>7647-01-0</td>
<td>231-595-7</td>
<td>017-002-01-X</td>
<td>C; R34; Xi; R37</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Skin Corr. 1B; STOT SE 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>H314; H335</td>
</tr>
</tbody>
</table>

*) Substance with exposure limits (exposure limits are listed in Section 8.1)
For a full text of R-phrases and H-statements see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures
No special measures required.

Exposure by inhalation
Discontinue the exposure.

Exposure by contact with skin
After contact with skin, wash with soap and water.

Exposure by contact with eyes
Rinse an open eye (hold eyelids with fingers) with plenty of water for about 15 minutes.

Exposure by ingestion
Rinse mouth with water, drink 1/2 l of lukewarm water.

4.2 Most important symptoms and effects, both acute and delayed
No data available.

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

SECTION 5: Firefighting measures
The mixture is not flammable. The measure should be adapted to burning substances in the surrounding area.

5.1 Extinguishing media
Suitable extinguishing media:
Use any extinguishing media appropriate to fire conditions.

5.2 Special hazards arising from the substance or mixture
None known.

5.3 Advice for firefighters
No special advice.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment, see item 8. Observe the principles of work safety in chemical laboratories. Do not eat, drink or smoke.
6.2 Environmental precautions
Due to amount of chemical substances in a mixture, an impact on the environment is not expected.

6.3 Methods and material for containment and cleaning up
Absorb spilled agent with a suitable inert material (sand, earth, vapex) and store contaminated material in containers for collection of hazardous waste. For waste disposal, see Section 13.

6.4 Reference to other sections
See section 7, 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Observe the principles of work in laboratory. Observe the normal operating procedures for handling chemical substances and mixtures. Do not eat, drink or smoke. Use personal protective equipment, see Section 8.

7.2 Conditions for safe storage, including any incompatibilities
Store at a temperature between +2 °C and +8 °C.

7.3 Specific end use(s)
The kit is designed for in vitro diagnostic use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Control parameters according to Government Decree No 361/2007 Coll.

<table>
<thead>
<tr>
<th>CAS</th>
<th>Substance name</th>
<th>PEL</th>
<th>NPK-P</th>
<th>Note</th>
<th>Conversion factor for ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>7647-01-0</td>
<td>Hydrogen chloride</td>
<td>8 mg/m³</td>
<td>15 mg/m³</td>
<td>1</td>
<td>0.679</td>
</tr>
</tbody>
</table>

PEL - Permissible exposure limits; NPK-P - the maximum permissible concentration; D - a significant penetration of the substance through the skin or a strong irritating effect on the skin during exposure; S - the substance has a sensitizing effect; P - serious late effects of the substance cannot be excluded; I - causes irritation of mucous membranes (eyes, respiratory system), resp. skin.* - the physico-chemical properties (e.g. explosiveness) are taken into account for NPK-P.

Exposure limit values in the workplace according to Directive No 2006/15/EC.

<table>
<thead>
<tr>
<th>CAS</th>
<th>Substance name</th>
<th>Limit values</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>8 hrs</td>
<td>Short term</td>
</tr>
<tr>
<td>7647-01-0</td>
<td>Hydrogen chloride</td>
<td>8 mg/m³</td>
<td>5 ppm</td>
</tr>
</tbody>
</table>

The note “skin” attached to the exposure limit values in the workplace indicates the possibility of a serious penetration through the skin.

Limit values for indicators of biological exposure tests are not defined according to Decree No 432/2003 Coll.

8.2 Exposure controls

Appropriate engineering controls
Not required.

Personal protective equipment
a. Eye/face protection
Not required.
b. Hand protection
Not required.
c. Skin protection
Not required.

d. Respiratory protection
Not required.

e. Thermal hazards
None known.

**Environmental exposure controls**
To eliminate the emergency conditions, have pre-prepared a decontamination mixture and appropriate collection vessels for reaction residues. Dispose of reaction residues and decontaminated mixtures as hazardous waste water in accordance with relevant legal regulations.

**SECTION 9: Physical and chemical properties**

9.1 Information on basic physical and chemical properties

**Reagent 2 STD**

a. Appearance ........................................ Clear colourless liquid
b. Odour ........................................... Information not available
c. Odour threshold ................................ Information not available
d. pH (at 20 °C) ................................... Information not available
e. Melting point/freezing point ................... Information not available
f. Initial boiling point and boiling range (°C) Information not available
g. Flash point (°C) ................................ Information not available
h. Evaporation rate ................................ Information not available
i. Flammability (solid, gas) ....................... Information not available
j. Upper/lower flammability or explosive limits Information not available
k. Vapour pressure (hPa) ........................ Information not available
l. Vapour density ................................ Information not available
m. Relative density (kg m⁻³) ...................... Information not available
n. Water solubility ................................ Soluble
o. Partition coefficient: n-octanol/water ......... Information not available
p. Autoignition temperature (°C) ............... Information not available
q. Decomposition temperature (°C) .......... Information not available
r. Viscosity ....................................... Information not available
s. Explosive properties .......................... Not explosive
t. Oxidizing properties .......................... Information not available

9.2 Other information
None.

**SECTION 10: Stability and reactivity**
Under normal conditions of use and storage the mixture is stable.

10.1 Reactivity
No data available.

10.2 Chemical stability
All components stable when stored in accordance with supplied specifications.
10.3 Possibility of hazardous reactions
Not known.

10.4 Conditions to avoid
No data available.

10.5 Incompatible materials
No data available.

10.6 Hazardous decomposition products
Reagent may liberate hydrogen chloride.

SECTION 11: Toxicological information
a) Acute toxicity
Based on available data, the classification criteria are not met.

b) Irritability
Based on available data, the classification criteria are not met.

c) Corrosion
Based on available data, the classification criteria are not met.

d) Sensitization
Based on available data, the classification criteria are not met.

e) Repeated dose toxicity
Based on available data, the classification criteria are not met.

f) Carcinogenicity
Based on available data, the classification criteria are not met.

g) Mutagenicity
Based on available data, the classification criteria are not met.

h) Reproductive toxicity
Based on available data, the classification criteria are not met.

SECTION 12: Ecological information
12.1 Toxicity
The mixture is not classified as toxic to environmental.

12.2 Persistence and degradability
No data available.

12.3 Bioaccumulative potential
No data available.

12.4 Mobility in soil
No data available.

12.5 Results of PBT and vPvB assessment
The product does not have the properties of PBT and vPvB. Assessment based on the ingredients that do not have properties of PBT and vPvB.
12.6 Other adverse effects
There is no information about any special danger for environment if kit components are handled and disposed of with due care.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Dispose of in compliance with applicable regulations for hazardous waste management. Do not drain into the wastewater. The mixture should be discarded as a laboratory waste. Incinerate residues of the mixture in a hazardous waste incinerator. Contaminated packaging must be treated as hazardous waste.

SECTION 14: Transport information
Not governed by regulations for transport of dangerous goods (ADR).

14.1 UN number
Not specified.

14.2 UN proper shipping name
ADR/RID: –
IMDG: –
ICAO/IATA: –

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

14.4 Packing group
ADR/RID: –
IMDG: –
ICAO/IATA: –

14.5 Environmental hazards
The mixture is not hazardous to the environment during transport.

14.6 Special precautions for user
No data available.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not transported.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This safety data sheet complies with the requirements of Regulation (EC) No 1907/2006 (REACH) and Regulation (EC) No 1272/2008 (CLP).

15.2 Chemical safety assessment
Assessment was not carried out.
SECTION 16: Other information

H-statements:  
H314 Causes severe skin burns and eye damage.  
H335 May cause respiratory irritation.

R-phrases:  
R34 Causes burns.  
R37 Irritating to respiratory system.

Recommended restrictions on use
This compound is designed for professional use. It should not be used for purposes other than those described in Section 1.2.

Information about data sources used to compile the Safety Data Sheet
Material Safety Data Sheets of raw material suppliers, ECHA (European Chemicals Agency), corporate documentation for products

Declaration
The safety data sheet contains basic data corresponding to the present state of our knowledge and experience, in accordance with applicable regulations. The foregoing information was gathered with the utmost care, but that does not mean that it is complete and should be used as the only correct information. Erba Lachema s.r.o. is not responsible for any damages caused by improper use and handling of the mixture.