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

1.1 Product identifier

<table>
<thead>
<tr>
<th>CHLORIDE</th>
<th>Pack Name</th>
<th>CL 120</th>
<th>CL 250</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cat. No.</td>
<td>XSYS0008</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reagent 1</td>
<td>10×12 ml</td>
<td>1×250 ml</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 Chloride in human serum, plasma and 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
Acute Tox. 4 H302
Acute Tox. 4 H312
Acute Tox. 4 H332
STOT SE 2 H371

Classification according to 67/548/EEC or 1999/45/EC
Xn R20/21/22
Xn R68/20/21/22
For a full text of R-phrases and H-statements see Section 16.

2.2 Label elements

Reagent 1

Pictogram:

Signal word: Warning

Hazard-determining components of labelling:
Methanol
Hazard statement(s):
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H332 Harmful if inhaled.
H371 May cause damage to organs (eyes).

Precautionary statement(s):
P260 Do not breathe vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection.
P301+P312 IF SWALLOWED: Call a doctor if you feel unwell.
P302+P352 IF ON SKIN: Wash with plenty of water and soap.

2.3 Other hazards
Reagent 1 is 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>Classification according to 1272/2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol*</td>
<td>&lt;6</td>
<td>67-56-1</td>
<td>603-001-00-X</td>
<td>F; R11 T; R23/24/25-39/23/24/25</td>
<td>Flam. Liq. 2 Acute Tox. 3 Acute Tox. 3 Acute Tox. 3 STOT SE 1</td>
<td>H225 H301 H331 H370</td>
</tr>
<tr>
<td></td>
<td></td>
<td>200-659-6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>603-001-00-X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ferric nitrate nonahydrate</td>
<td>1.5</td>
<td>7782-61-8</td>
<td>O; R8 Xi; R36/38</td>
<td>Ox. Sol. 3 Skin Irrit. 2 Eye Irrit. 2</td>
<td></td>
<td>H272 H315 H319</td>
</tr>
<tr>
<td>Nitric acid 65 %*</td>
<td>&lt;0.6</td>
<td>7697-37-2</td>
<td>O; R8 C; R35</td>
<td>Ox. Liq. 3 Skin Corr. 1A</td>
<td></td>
<td>H272 H314</td>
</tr>
<tr>
<td></td>
<td></td>
<td>231-714-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>007-004-00-1</td>
<td></td>
<td></td>
<td></td>
<td></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
When working with the mixture, take care of personal hygiene and prevent contamination of work clothing and skin. If you have any doubts or when symptoms persist, seek medical attention.

Exposure by inhalation
Discontinue the exposure, remove casualty to fresh air, keep at rest and seek medical advice.

Exposure by contact with skin
Take off all contaminated clothing. After contact with skin, wash immediately 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, transfer casualty to a specialist.
Exposure by ingestion
Drink 1/2 l of lukewarm water, and DO induce vomiting. Seek medical attention immediately.

4.2 Most important symptoms and effects, both acute and delayed
Irritant effects, respiratory paralysis, dermatitis, dizziness, narcosis, inebriation, euphoria, nausea, vomiting, risk of eye damage.

4.3 Indication of any immediate medical attention and special treatment needed
Symptoms of poisoning may even occur after several hours, therefore medical observation for at least 48 hours after the accident is recommended.

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
Unsuitable extinguishing media:
For mixture no unsuitable extinguishing media are known.

5.2 Special hazards arising from the substance or mixture
When burning, reagent may generate an explosive mixture of gas and air or toxic gases.

5.3 Advice for firefighters
Use breathing apparatus. Wear protective clothing.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment, see Section 8. Observe the principles of work safety in chemical laboratories. Do not eat, drink or smoke.

6.2 Environmental precautions
Do not discharge into the drains, surface waters and groundwater.

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 in dry and covered stores in tightly closed containers at a temperature between +2 °C and +8 °C.

7.3 Specific end use(s)
The kit is designed for in vitro diagnostic devices.
SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Control parameters of the mixture components 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>67-56-1</td>
<td>Methanol</td>
<td>250 mg/m³</td>
<td>1000 mg/m³</td>
<td>D</td>
<td>0.754</td>
</tr>
<tr>
<td>7697-37-2</td>
<td>Nitric acid</td>
<td>1 mg/m³</td>
<td>2.5 mg/m³</td>
<td>I</td>
<td>0.388</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></td>
<td></td>
<td>mg/m³</td>
<td>ppm</td>
</tr>
<tr>
<td>67-56-1</td>
<td>Methanol</td>
<td>260</td>
<td>200</td>
</tr>
<tr>
<td>7697-37-2</td>
<td>Nitric acid</td>
<td>–</td>
<td>–</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 according to Decree No 432/2003 Coll.

<table>
<thead>
<tr>
<th>Substance name</th>
<th>Indicator</th>
<th>Limit values</th>
<th>Sampling time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>Methanol</td>
<td>15 mg/l</td>
<td>0.47 mmol/l</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Appropriate engineering controls
Sufficient ventilation.

Personal protective equipment
a. Eye/face protection
   Safety goggles.
b. Hand protection
   Protective gloves - rubber, resistant to caustic substances.
c. Skin protection
   Protective clothing.
d. Respiratory protection
   Not required with adequate ventilation, otherwise breathing apparatus.
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 .......................................................... Clear yellow liquid
b. Odour .......................................................... Information not available
c. Odour threshold .................................................. Information not available
d. pH (at 20 °C) .................................................. <2
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 ..................................................... Information not available
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 .............................................. Information not available
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

The mixture is stable at normal temperature and pressure.

10.3 Possibility of hazardous reactions

Not known.

10.4 Conditions to avoid

Avoid exposure to heat of solar radiation.

10.5 Incompatible materials

Heavy metals, strong oxidizing agents and strong acids.

10.6 Hazardous decomposition products

No dangerous decomposition products known.
SECTION 11: Toxicological information

11.1 Information on toxicological effects

a) Acute toxicity
   The mixture is harmful if swallowed, in contact with skin and if inhaled.

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
   No data available.

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.

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
List of H, P-statements and R-phrases
H-statements: H225 Highly flammable liquid and vapour.
H272 May intensify fire; oxidizer.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H312 Harmful in contact with skin.
| H314 Causes severe skin burns and eye damage.  
| H315 Causes skin irritation.  
| H319 Causes serious eye irritation.  
| H331 Toxic if inhaled.  
| H332 Harmful if inhaled.  
| H370 Causes damage to organs (eyes).  
| H371 May cause damage to organs (eyes).  

**P-statements:**  
- P260 Do not breathe vapours/spray.  
- P280 Wear protective gloves/protective clothing/eye protection.  
- P301+P312 IF SWALLOWED: Call a doctor if you feel unwell.  
- P302+P352 IF ON SKIN: Wash with plenty of water and soap.  

**R-phrases:**  
- R8 Contact with combustible material may cause fire.  
- R11 Highly flammable.  
- R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.  
- R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.  
- R35 Causes severe burns.  
- R39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.  
- R68/20/21/22 Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.  

**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

CHLORIDE

<table>
<thead>
<tr>
<th>Pack Name</th>
<th>CL 120</th>
<th>CL 250</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cat. No.</td>
<td>XSYS0008</td>
<td>BLT00033</td>
</tr>
<tr>
<td>Reagent 2 STD</td>
<td>–</td>
<td>1x5 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 Chloride in human serum, plasma and 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.
Classification according to 67/548/EEC or 1999/45/EC
Mixture is not classified as dangerous.

2.2 Label elements

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

2.3 Other hazards

Reagent 2 STD is 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 no hazardous substances.

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
Unsuitable extinguishing media:
For mixture no unsuitable extinguishing media are known.

5.2 Special hazards arising from the substance or mixture
None.

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 Section 8. Observe the principles of work safety in chemical laboratories. Do not eat, drink or smoke.

6.2 Environmental precautions
Do not discharge into the drains, surface waters and groundwater.

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 in dry and covered stores in tightly closed containers at a temperature between +2 °C and +8 °C.

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Control parameters are not defined according to Government Decree No 361/2007 Coll.

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 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
Name of the mixture: CHLORIDE

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
The mixture is stable at normal temperature and pressure.

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
No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
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**
No data available.

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.

**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: –
Safety Data Sheet

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Name of the mixture: CHLORIDE

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
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.