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

1.1 Product identifier

<table>
<thead>
<tr>
<th>THYMOL TURBIDITY TEST 300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pack Name</td>
</tr>
<tr>
<td>Catalog Number</td>
</tr>
<tr>
<td>Reagent 1</td>
</tr>
</tbody>
</table>

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

The sets are designed for performance of thymol turbidity test with serum. The mixture is intended for professional use.

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 Bojišťi 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 according to the substance or mixture

Reagent 1
Classification according to Regulation (EC) No 1272/2008
Flam. Liq. 2  H225
Skin Corr. 1  H314
Skin Sens. 1  H317
STOT SE 2  H371
Aq. Chronic 3  H412
Classification according to 67/548/EEC or 1999/45/EC
–  R10
C  R34
–  R43
–  R52-53
Xi  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: Danger
Hazard-determining components of labelling:
  Thymol, Maleic acid, Methanol
Hazard statement(s):
  H225 Highly flammable liquid and vapour.
  H314 Causes severe skin burns and eye damage.
  H317 May cause an allergic skin reaction.
  H371 May cause damage to organs.
  H412 Harmful to aquatic life with long lasting effects.
Precautionary statement(s):
  P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  P273 Avoid release to the environment.
  P280 Wear protective gloves/protective clothing/eye protection.
  P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  P309+P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor.

2.3 Other hazards

Reagent 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 dangerous substances:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>Content (% of weight)</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol*</td>
<td>54</td>
<td>64-17-5, 200-578-6, 603-002-00-5</td>
</tr>
<tr>
<td>Trimetamol</td>
<td>9</td>
<td>77-86-1, 201-064-4, –</td>
</tr>
<tr>
<td>Thymol</td>
<td>6.7</td>
<td>89-83-8, 201-944-8, 604-032-00-1</td>
</tr>
</tbody>
</table>
## 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**

Rinse mouth with water, drink 1/2 l of lukewarm water, seek medical attention immediately, and do not induce vomiting.

### 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

Reagent 1 is a flammable liquid.

### 5.1 Extinguishing media

**Suitable extinguishing media:**

Water spray, water fog, foam, universal powder, noble gases. Dilute sufficiently with water to extinguish the fire. Use water shower for cooling tanks.

**Unsuitable extinguishing media:**

Water jet.

### 5.2 Special hazards arising from the substance or mixture

Reagent may rapidly evaporate and develop explosive mixtures with air. The vapour is heavier than air. It accumulates at ground, in closed spaces. It may spread to large distances. Do not flush to sewer. When burning, it may emit toxic carbon monoxide. Tanks may explode due to excessive heat.
5.3 Advice for firefighters

Wear full protective clothing and self contained breathing apparatus. Protect rescue teams by water curtain.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Isolate and mark the spill site, order all the people out of the place, who do not participate in the rescue work. Remove all possible sources of ignition, turn off vehicle engines, do not smoke and avoid open flames, use non-sparking tools and lamps. Use all recommended personal protective equipment during rescue work.

6.2 Environmental precautions

Avoid release to sewer and water sources.

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. Sweep solid reagent and store 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

Provide sufficient ventilation. Do not eat, drink or smoke. No open flames. Prevent release to the environment. Use personal protective equipment, see Section 8.

7.2 Conditions for safe storage, including any incompatibilities

Store in dry and covered stores at a temperature between +2 °C and +25 °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>64-17-5</td>
<td>Ethanol</td>
<td>1000</td>
<td>3000</td>
<td>–</td>
<td>0.532</td>
</tr>
<tr>
<td>67-56-1</td>
<td>Methanol</td>
<td>250</td>
<td>1000</td>
<td>D</td>
<td>0.754</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>8 hrs Limit values</th>
<th>Short term Limit values</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>mg/m³ ppm</td>
<td>mg/m³ ppm</td>
<td></td>
</tr>
<tr>
<td>67-56-1</td>
<td>Methanol</td>
<td>260 200</td>
<td>– –</td>
<td>Skin</td>
</tr>
</tbody>
</table>
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.
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 ............................................................ Odour of thymol
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 ............................................... 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
Do not store near heat sources, sources of sparking and open flame. Avoid direct contact with fire. Vapour form explosive mixtures with air.

10.5 Incompatible materials
Vigorous reaction with oxidizing agents, alkali metals, halogens and their compounds, with acid anhydrides, acids, peroxides. Disruption of plastic surfaces.

10.6 Hazardous decomposition products
Hydrogen, carbon monoxide.

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
Reagents 1 is classified as corrosive to skin. It causes severe skin burns and eye damage.

d) Sensitization
Reagent 1 is classified as skin sensitizer. It may cause an allergic skin reaction.

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
Reagent 1 is classified as harmful to environmental with long lasting effects.

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.

Waste code 15 01 10 packaging containing residues of or contaminated by dangerous substances
16 05 06 laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals

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.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H370 Causes damage to organs.
H371 May cause damage to organs.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

P-statements:
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P309+P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor.

R-phrases:
R10 Flammable.
R11 Highly flammable.
R22 Harmful if swallowed.
R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
R34 Causes burns.
R36/37/38 Irritating to eyes, respiratory system and skin.
R39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
R43 May cause sensitisation by skin contact.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
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

<table>
<thead>
<tr>
<th>THYMOL TURBIDITY TEST 300</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pack Name</strong></td>
</tr>
<tr>
<td><strong>Catalog Number</strong></td>
</tr>
<tr>
<td><strong>Reagent 2</strong></td>
</tr>
</tbody>
</table>

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

The sets are designed for performance of thymol turbidity test with serum. The mixture is intended for professional use.

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
Classification according to Regulation (EC) No 1272/2008
Met. Corr. 1 H290
Skin Corr. 1A H314
Classification according to 67/548/EEC or 1999/45/EC
C R35
For a full text of R-phrases and H-statements see Section 16.

2.2 Label elements

Reagent 2

Pictogram:

Signal word: Danger
Hazard-determining components of labelling:
Sulphuric acid
Hazard statement(s):
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
Precautionary statement(s):
- P280 Wear protective gloves/protective clothing/eye protection.
- P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3 Other hazards
Reagent 2 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 contains following dangerous substances:

<table>
<thead>
<tr>
<th>Substance</th>
<th>Content (% of weight)</th>
<th>CAS number (EC number</th>
<th>Index number</th>
<th>Classification according to</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulphuric acid</td>
<td>25</td>
<td>7664-93-9 (231-639-5)</td>
<td>016-020-00-8</td>
<td>C; R35 Skin Corr. 1A H314</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. If available swab with polyethylene glycol 400. Call in physician immediately.

Exposure by contact with eyes
Rinse an open eye (hold eyelids with fingers) with plenty of water for about 15 minutes, immediately transfer casualty to an ophtalmologist.

Exposure by ingestion
Rinse mouth with water, drink 1/2 l of lukewarm water, seek medical attention immediately, and do not induce vomiting. Do not attempt to neutralise.

4.2 Most important symptoms and effects, both acute and delayed
Irritation and corrosion, cough, shortness of breath, nausea, vomiting, diarrhoea, pain, risk of blindness.

4.3 Indication of any immediate medical attention and special treatment needed
No data available.
SECTION 5: Firefighting measures
Reagent 2 is not flammable mixtures. The measure should be adapted to burning substances in the surrounding area.

5.1 Extinguishing media
Suitable extinguishing media:
No limitations are given.

5.2 Special hazards arising from the substance or mixture
Ambient fire may liberate hazardous vapours (sulphur oxides).

5.3 Advice for firefighters
Wear full protective clothing and self contained breathing apparatus. Protect rescue teams by water curtain.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Isolate and mark the spill site, order all the people out of the place, who do not participate in the rescue work. Remove all possible sources of ignition, turn off vehicle engines, do not smoke and avoid open flames, use non-sparking tools and lamps. Use all recommended personal protective equipment during rescue work.

6.2 Environmental precautions
Avoid release to sewer and water sources.

6.3 Methods and material for containment and cleaning up
Cover drains. Collect spills. 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. Sweep solid reagent and store 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
Provide sufficient ventilation. Do not eat, drink or smoke. Preventive skin protection. Wash hands and face after working with substance. Use personal protective equipment, see Section 8. Change contaminated clothing.

7.2 Conditions for safe storage, including any incompatibilities
Store in dry and covered stores at a temperature between +2 °C and +25 °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 mg/m³</th>
<th>NPK-P mg/m³</th>
<th>Note</th>
<th>Conversion factor for ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>7664-93-9</td>
<td>Sulphuric acid (mist)</td>
<td>0.05</td>
<td>–</td>
<td>1</td>
<td>–</td>
</tr>
<tr>
<td>7664-93-9</td>
<td>Sulphuric acid (SO₃)</td>
<td>1</td>
<td>2</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** 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 mg/m³</td>
<td>Short term mg/m³ ppm</td>
</tr>
<tr>
<td>7664-93-9</td>
<td>Sulphuric acid (mist)</td>
<td>0.05 ppm</td>
<td>–</td>
</tr>
</tbody>
</table>

**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**

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.

e. Thermal hazards
   Risk of fire.

**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. Do not empty into drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

**Reagent 2**

a. Appearance ............................................................ Clear yellow liquid

b. Odour ....................................................................... Odourless

c. Odour threshold .......................................................... Information not available

d. pH (at 20 °C) .............................................................. <0.5
Safety Data Sheet

Date of issue: 13.01.2015  Date of review: 12.05.2015  Page 14 of 24 pages  Version: 1.1

Name of the mixture: THYMOL TURBIDITY TEST 300

e. Melting point/freezing point............................... Information not available
f. Initial boiling point and boiling range (°C) ................. 103

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. Water solubility ......................................... Soluble (development of heat!)

9.2 Other information
May be corrosive to metals.

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

10.1 Reactivity
Reagent 2 has a corrosive effect. Strong oxidizing agent.

10.2 Chemical stability
The mixture is stable at normal temperature and pressure.

10.3 Possibility of hazardous reactions
Violent reaction with water, alkali metals, ammonia, aldehydes, acetonitrile, alkaline earth metals, alkalines, acids, metals, oxides of phosphorus, hydrides, permanganates, nitrates, carbides, combustible substances, organic solvent, peroxides, iron (III) compounds, amines.

10.4 Conditions to avoid
Avoid temperature increase above 30 °C and moisture (strongly hygroscopic)

10.5 Incompatible materials
Animal tissues, metals.

10.6 Hazardous decomposition products
Hydrogen, sulphur trioxide and sulphur dioxide.

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**
Reagent 2 is classified as corrosive to skin. It causes severe skin burns and eye damage.

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**
Reagent 2 forms corrosive mixtures with water even if diluted. Harmful effect due to pH shift.

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.

Waste code 15 01 10 packaging containing residues of or contaminated by dangerous substances
16 05 06 laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals

SECTION 14: Transport information

Not governed by regulations for transport of dangerous goods (ADR).

14.1 **UN number**
UN 2796
**14.2 UN proper shipping name**

<table>
<thead>
<tr>
<th>ADR/RID:</th>
<th>Sulphuric acid</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMDG:</td>
<td>Sulphuric acid</td>
</tr>
<tr>
<td>ICAO/IATA:</td>
<td>Sulphuric acid</td>
</tr>
</tbody>
</table>

**14.3 Transport hazard class(es)**

<table>
<thead>
<tr>
<th>ADR/RID:</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMDG:</td>
<td>8</td>
</tr>
<tr>
<td>ICAO/IATA:</td>
<td>8</td>
</tr>
</tbody>
</table>

**14.4 Packing group**

<table>
<thead>
<tr>
<th>ADR/RID:</th>
<th>II</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMDG:</td>
<td>II</td>
</tr>
<tr>
<td>ICAO/IATA:</td>
<td>II</td>
</tr>
</tbody>
</table>

**14.5 Environmental hazards**

The mixture is not hazardous to the environment during transport.

**14.6 Special precautions for user**

<table>
<thead>
<tr>
<th>ADR/RID:</th>
<th>Tunnel restriction code E</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMDG:</td>
<td>EmS F-A S-B</td>
</tr>
</tbody>
</table>

**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:**
- H290 May be corrosive to metals.
- H314 Causes severe skin burns and eye damage.

**P-statements:**
- P280 Wear protective gloves/protective clothing/eye protection.
- P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- 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-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>THYMOL TURBIDITY TEST 300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pack Name</td>
</tr>
<tr>
<td>Catalog Number</td>
</tr>
<tr>
<td>Reagent 3</td>
</tr>
</tbody>
</table>

1.2 Relevant identified uses of the substance or mixture and uses advised against
The sets are designed for performance of thymol turbidity test with serum. The mixture is intended for professional use.

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 3
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 3 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 3 contains following dangerous 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>Barium chloride</td>
<td>1.2</td>
<td>10361-37-2</td>
<td>233-788-1</td>
<td>056-004-00-8</td>
<td>T; R25</td>
<td>Acute Tox. 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>H301</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>H332</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
After contact with skin, wash immediately with soap and water. Consult a physician.

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
Rinse mouth with water and seek medical attention immediately.

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
Reagents 3 is not flammable mixtures. The measure should be adapted to burning substances in the surrounding area.

5.1 Extinguishing media

Suitable extinguishing media:
Use water spray, alcohol-resistant foam, carbon dioxide.

5.2 Special hazards arising from the substance or mixture
No data available.

5.3 Advice for firefighters
Wear full protective clothing and self contained breathing apparatus.
SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Isolate and mark the spill site, order all the people out of the place, who do not participate in the rescue work. Use all recommended personal protective equipment during rescue work. Avoid breathing vapours, mist or gas.

6.2 Environmental precautions
Avoid release to sewer and water sources.

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. Sweep solid reagent and store 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
Provide sufficient ventilation. Do not eat, drink or smoke. No open flames. Prevent release to the environment. Use personal protective equipment, see Section 8.

7.2 Conditions for safe storage, including any incompatibilities
Store in dry and covered stores at a temperature between +2 °C and +25 °C.

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
\textbf{Control parameters} are not defined according to Government Decree No 361/2007 Coll. 
\textbf{Exposure limit values in the workplace} are not defined according to Directive No 2006/15/EC. 
\textbf{Limit values for indicators of biological exposure tests} are not defined according to Decree No 432/2003 Coll.

8.2 Exposure controls

\textbf{Appropriate engineering controls}
Not required.

\textbf{Personal protective equipment}
\begin{itemize}
  \item Eye/face protection 
  Not required.
  \item Hand protection 
  Protective gloves - rubber, resistant to caustic substances.
  \item Skin protection 
  Not required.
  \item Respiratory protection 
  Not required with adequate ventilation.
\end{itemize}
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 3

a. Appearance ........................................... 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 .................................. 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
No data available.
10.5 Incompatible materials
Strong oxidizing agents.

10.6 Hazardous decomposition products
No data available.

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
Reagent is classified as skin sensititizer. It may cause an allergic skin reaction.
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: H301 Toxic if swallowed.
H332 Harmful if inhaled.
Safety Data Sheet


Date of issue: 13.01.2015  Date of review: 12.05.2015  Page 24 of 24 pages  Version: 1.1

Name of the mixture: THYMOL TURBIDITY TEST 300

R-phrases:
R20 Harmful by inhalation.
R25 Toxic 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.

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