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

1.1 Product identifiers

Product name: Detection Reagent B; part of 'Total Collagen Assay Kit'

Catalog number: QZBTOTCOL – Detection Reagent B

Brand: QuickZyme Biosciences

Index-No.: not applicable

Cas-No.: not applicable

EC-No.: not applicable

Reach number: No registration number available annual tonnage does not require registration.

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

Identified uses: Component of Assay kit for laboratory use, research use only

1.3 Details of the supplier of the safety data sheet:

Supplier:
Name: QuickZyme Biosciences B.V.
Address: Sylviusweg 71
2333 BE Leiden
The Netherlands

Information contact: +3188866 6024
E-Mail: info@quickzyme.com

1.4 EMERGENCY TELEPHONE NUMBER:

In the EU call emergency number 112, outside EU call local emergency number.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition: Mixture

Classification according to Regulation (EC) No 1272/2008 (CLP/GHS)
Serious eye damage / eye irritation (2), H319
Specific target organ systemic toxicity (3)
Flammable liquids (2)

Full text of H-Statements: see SECTION 16.
2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Reduced Labeling (<= 125 ml)

Hazard pictograms:

- Signal word: Danger

Hazard statement(s):
- H271 May cause fire or explosion; strong oxidizer.
- H314 Causes severe skin burns and eye damage.
- H318 Causes serious eye damage.

Precautionary statement(s):
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.
- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard information (EU): none

2.3 Other hazards

This substance / mixture is not considered to be persistent, bioaccumulating and toxic (PBT). This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher

SECTION 3. Composition/information on ingredients

Substance/mixture: mixture

Product/ingredient name Identifiers (ECI No. Type 1272/2008 (CLP)
- Formula: HClO4
- Molecular weight: 149.19 g/mol
- CAS-No.: 7601-90-3
- EC-No.: 231-512-4
Component Classification Ox. Liq. 1; Met. Corr. 1; Acute Tox. 4; Skin Corr. 1A; Eye Dam. 1; STOT RE 2; H271, H290, H302, H314, H318, H373
Component Classification Concentration < 30%

Perchloric acid

Formula: C3H8O
Molecular weight: 60.1 g/mol
CAS-No.: 71-23-8
EC-No.: 200-746-9
Index-No.: 603-003-00-0
Component Classification Flam. Liq. 2; Eye Dam. 1; STOT SE 3; H318
Component Classification Concentration < 100%

1-propanol

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

Eye contact: In case of contact with eyes, rinse immediately with plenty of water. Remove contact lenses. Get medical attention immediately.

Inhalation: If inhaled, remove to fresh air. Get medical attention.

Skin contact: Remove contaminated clothing. Wash with water. Get medical attention immediately.

If swallowed: Drink water (two glasses at most). Get medical attention immediately. Do not attempt to neutralize. Get medical attention.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms can be found in section 2.2 and/or section 11

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

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Use extinguishing measures that are suitable for the local circumstances and the surrounding environment.

Unsuitable extinguishing media
None known

Hazardous combustion products
5.2 Special hazards arising from the substance or mixture
No special hazards.

5.3 Advise for firefighters
In the event of fire, wear self-contained breathing apparatus and suitable protective clothing

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate the danger area. Provide adequate ventilation. Observe emergency procedures. Avoid substance contact.

6.2 Environmental precautions
Do not let product enter drains

6.3 Methods and materials for containment and cleaning up
Stop leak if without risk. Move containers from spill area. Absorb with an inert dry material and place in on appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

6.4 Reference to other sections
See section 1 for emergency contact information.
See section 8 for appropriate personal protection equipment.
See section 13 for additional disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures
Work under a hood or in well ventilated location, do not inhale substance / mixture, avoid formation of aerosols or vapours.

Hygiene measures
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities
Store according to local regulations, in closed containers, dry and well ventilated away from heat and sources of ignition.

7.3 Specific end uses
Research and development
See section 1.2.
SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Exposure limits
No exposure limit value known.

8.2 Exposure controls

Personal protective equipment
Eye/face protection
Use approved and tightly fitting safety goggles
Skin protection
Use Nitrile rubber gloves
Body protection
Wear protective laboratory clothing
Respiratory protection
Work in well ventilated room or use a hood.

Environmental exposure controls
Do not let product enter drains

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>transparent colorless</td>
</tr>
<tr>
<td>Odour</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting/freezing point</td>
<td>Not available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Considered to be flammable</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Soluble in water</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2 Other Information
No additional information

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available
10.2 Chemical Stability
The product is stable under standard ambient conditions

10.3 Possibility of hazardous reactions
Under normal conditions of storage and use hazardous reactions will not occur.

10.4 Conditions to avoid
Heat, sources of ignition

10.5 Incompatible materials
No specific data

10.6 Hazardous decomposition products
Under normal conditions of storage hazardous decomposition products should not be formed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
Acute toxicity estimate Oral - 1.834 mg/kg (Calculation method)
Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.
Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract
Dermal: No data available

Skin corrosion/ irritation
Causes severe burns.

Serious eye damage / eye irritation
Causes severe eye damage. Risk of blindness.

Sensitisation
No data available

Mutagenicity
No effects known

Carcinogenicity
No data available

Reproductive toxicity
No data available

Teratogenicity
No data available

11.2 Additional information

Potential acute health effects

Inhalation
Ingestion

Skin contact
SECTION 12: Ecological information

12.1 Toxicity
The preparation is toxic to aquatic life.

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
PBT Not applicable
vPvB Not applicable

12.6 Endocrine disruptive properties
No adverse effects known

12.7 Other adverse effects
Environmental contamination should be avoided

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
Avoid generation of waste as much as possible. Disposal of this product should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless compliant with requirements of local jurisdiction.

Packaging
Avoid generation of waste as much as possible. Disposal of this product should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless compliant with requirements of local jurisdiction.

SECTION 14: Transport information

| 14.1 UN No. | 3316 | 3316 | 3316 | 3316 |
| 14.2 UN Proper shipping name | Chemical Kit | Chemical Kit | Chemical Kit | Chemical Kit |
| 14.3 Transport hazard class(es) | 9 | 9 | 9 | 9 |
| 14.4 Packing group | II | II | II | II |
| 14.5 Environmental hazards | no | no | no | no |
14.6 Special precautions for user

No specific precautions

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

Authorizations and / or restrictions on use

Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII): Not applicable

National legislation


Other regulations

Not listed.

15.2 Chemical Safety Assessment

The main substances of this product have been subjected to a chemical safety assessment.

SECTION 16: Other information

Full text of H-statements:

H271 May cause fire or explosion; strong oxidizer.
H314, H318, H319 Causes severe skin burns and eye damage.

Further information:

The information provided in this document is believed to be correct, but is possibly not all inclusive and is only intend to be used as a guide. QuickZyme Biosciences B.V. shall not be held liable for any damage resulting from using this kit component, or from contact with this kit component.