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Safety data sheet

ELISA kit

1. Identification of the product (substance or mixture) and supplier/company

1.1 Product identifiers

Product: ELISA kit

Catalogue no.: Please see section 16 for the exact products for which this safety data sheet (SDS) applies.

Brand: U-CyTech biosciences

REACH no.: The components of this product are mixtures. A registration number is not available for these substances as the substances or their uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

1.2 Relevant identified uses of the product and uses advised against

Identified uses: Laboratory chemicals. To be used in U-CyTech ELISA systems.
For professional (R&D) use only, not for food, drug, household or other uses.

1.3 Details of the supplier of the safety data sheet

Supplier: U-CyTech biosciences
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Phone: +31 85 073 1460
E-mail: info@ucytech.com

1.4 Emergency telephone number

Contact your local emergency number.

2. Hazard identification

2.1 Classification of the components in this product (substance or mixture)

The components in this product are no hazardous substances or mixtures according to Regulation (EC) no. 1272/2008 and its amendments.

2.2 Label elements

The components in this product are no hazardous substances or mixtures according to Regulation (EC) no. 1272/2008 and its amendments.

2.3 Other hazards

Tween-20 and TMB substrate contain no components considered to be either persistent, bio-accumulative and toxic (PBT), or very persistent and very bio-accumulative (vPvB) at levels of 0.1%

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or higher. TMB substrate is not identified as having endocrine disrupting properties in accordance with the criteria set out in Regulation (EC) no. 2017/2100 or Regulation 2018/605.

3. Composition/information on ingredients

3.2 Mixtures

Product name: ELISA kit

Synonyms: -

Components:

Cas no.	EC no.	Index no.	Classification	Concentration
Coating antibody (lyophilized)				
-	-	-	-	-
Standard (lyophilized)				
-	-	-	-	-
Detection antibody (biotinylated, lyophilized)				
-	-	-	-	-
Streptavidin-HRP conjugate (lyophilized)				
-	-	-	-	-
BSA stock solution (10%)				
-	-	-	-	-
Cytokine stabilization buffer (CSB)				
-	-	-	-	-
Tween®-20 ($C_{58}H_{114}O_{26}$)*				
9005-64-5	500-018-3	-	-	100%
TMB substrate (synonym: 3,3',5,5'-Tetramethylbenzidine substrate)				
-	-	-	-	-
Stop solution (0.175 M H_2SO_4; synonym: sulfuric acid)				
-	-	-	-	-

*) Tween is a registered trade mark of Uniqema, a business unit of ICI Americas Inc.

For (hazardous) ingredients of the components, see section 16 of this SDS.

4. First aid measures

4.1 Description of first aid measures

General advice: In case of skin or eye irritation, if breathing becomes difficult or feeling unwell or concerned, consult physician and show this SDS.

After contact with skin: Remove contaminated clothing and shoes. Wash contaminated area with water / shower.

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After swallowing:	Stop solution: Do NOT induce vomiting. If the person is conscious rinse mouth with plenty of water. Consult a physician immediately. Other components: If the person is conscious, rinse mouth with plenty of water and make the person drink water (two glasses at most). Consult a physician if not feeling well.
After contact with eyes:	Rinse continuously with plenty of water for several minutes. Confirm adequate flushing by separating the eyelids. Remove contact lenses if present and easy to do – continue rinsing.
After inhalation:	Provide fresh air. Not expected to be an inhalation hazard under anticipated conditions of normal use of this material. Consult a physician if necessary.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in section 2 and 11.

4.3 Indication of any immediate medical attention and special treatment needed

No further data available. Note to physician: treat symptomatically.

5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media: Water spray, foam, carbon dioxide (CO_2), dry powder.

Unsuitable extinguishing media: No limitations of extinguishing agents are given.

5.2 Special hazards arising from substance or mixture

Hazardous combustion products:

Tween-20:	Carbon oxides. Development of hazardous combustion gases or vapor possible in event of fire. Vapor is heavier than air and may spread along floors.
Stop solution:	Sulfur oxides.
Other components:	No data available.

5.3 Advice for fire fighters

Stay in danger area only with self-contained breathing apparatus and protective clothing.

5.4 Further information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment to avoid exposure (section 8). Follow general safety rules for laboratories. Evacuate personnel to safe areas in case of an emergency.

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Stop solution: Avoid breathing vapor, mist or gas. Ensure adequate ventilation.

6.2 Environmental precautions

Do not let mixtures enter surface water, (sub)soil or drains. Prevent further leakage if safe to do so. If large amounts of the mixtures contaminate drains, inform appropriate authorities in accordance with local regulation.

6.3 Methods and materials for containment and cleaning up

Cover drains. Contain spillage. Observe possible material restrictions (sections 7 and 10).

Coating antibody, standard, detection antibody and Streptavidin-HRP conjugate:
Take up dry. Dispose of properly (section 13). Clean up affected area. Avoid generation of dust.

Other components (and above-mentioned components when reconstituted):
Take up with inert absorbent material and keep in suitable, closed containers for disposal (section 13).

7. Handling and storage

7.1 Precautions for safe handling

Safe handling: For laboratory use only. Ensure adequate ventilation. Handle and open containers with care. Always close containers tightly after removal of product. Keep containers upright to prevent leakage.

Stop solution: avoid inhalation of vapor or mist.

Hygiene measures: Follow general safety rules for laboratories. Wear personal protective equipment to avoid (prolonged or repeated) exposure (section 2.2 and 8). Immediately change contaminated clothing. Wash hands before breaks and after work.

7.2 Conditions for safe storage, including any incompatibilities

Safe storage: Store product in a well-ventilated place. Keep containers tightly closed and upright to prevent leakage.

Streptavidin-HRP conjugate:	Store at -32 to -18°C. Keep away from light.
Tween-20:	Store at ambient temperature: 20-26 °C. Keep away from light.
Other components:	Store at 2-8 °C.

7.3 Specific end use(s)

Use in laboratories.

8. Exposure controls/personal protection

8.1 Control parameters

Stop solution contains sulfuric acid (cas. no. 7664-93-9):

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Limit value (mist): 0.05 mg/m^3 air (measured or calculated in relation to a reference period of 8 hours time-weighted average (TWA) according to Commission Directive 2009/161/EU.

Other components: these mixtures do not contain substances above concentration limits fixing an occupational exposure limit.

8.2 Exposure controls

General protective and hygiene measures

Facilities storing or utilizing this product should be equipped with an eyewash facility, a safety shower and mechanical exhaust. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday. Immediately change contaminated clothing. Keep away from food and beverages.

Personal protective equipment

Eye protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166 (EU). Use tightly fitting safety goggles.

Skin and body protection

Wear appropriate protective gloves and a lab coat to prevent skin exposure.
Protective gloves must satisfy the specifications of Regulation (EU) 2016/425 and the standard EN374 derived from it. Observe the instructions regarding permeability and breakthrough time which are provided by the suppliers of the gloves. Make sure the gloves are suitable for the task regarding chemical compatibility, dexterity, operational conditions and user susceptibility (e.g. sensation effects). Take also the specific local conditions under which the product is used into consideration (e.g. danger of cuts).
Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
This recommendation applies only to the product stated in this SDS and for the designed use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves.

Respiratory protection

Required when aerosols are generated, when workers are facing concentrations above the exposure limits or where risk assessment shows air-purifying respirators are appropriate.
Use respirators and components tested and approved under appropriate government standards such as NIOHS (US) or CEN (EU).
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly.

Control of environmental expose

Do not let mixtures enter drains.

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9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Coating antibody, standard, detection antibody and Streptavidin-HRP conjugate

A. Appearance (at 20 °C):	Solid, white (lyophilized).
B. Odor:	No data available.
C. Odor threshold:	No data available.
D. pH (at 20°C):	No data available.
E. Melting/freezing point:	No data available.
F. Initial boiling and boiling range:	No data available.
G. Flash point:	No data available.
H. Evaporation rate:	No data available.
I. Flammability (solid, gas):	No data available.
J. Upper/lower flammability or explosive limits:	No data available.
K. Vapor pressure:	No data available.
L. Vapor density:	No data available.
M. Relative density:	No data available.
N. Solubility(ies):	Soluble in water.
O. Partition coefficient: n-octanol/water:	No data available.
P. Auto-ignition temperature:	No data available.
Q. Decomposition temperature:	No data available.
R. Viscosity:	No data available.
S. Explosive properties:	No data available.
T. Oxidizing properties:	No data available.

BSA stock solution and Cytokine stabilization buffer:

A. Appearance (at 20 °C):	Light yellow liquid (transparent).
B. Odor:	No data available.
C. Odor threshold:	No data available.
D. pH (at 20°C):	No data available.
E. Melting/freezing point:	No data available.
F. Initial boiling and boiling range:	No data available.
G. Flash point:	No data available.
H. Evaporation rate:	No data available.
I. Flammability (solid, gas):	No data available.
J. Upper/lower flammability or explosive limits:	No data available.
K. Vapor pressure:	No data available.
L. Vapor density:	No data available.
M. Relative density:	No data available.
N. Solubility(ies):	Does not apply, mixture is an aqueous solution.
O. Partition coefficient: n-octanol/water:	No data available.
P. Auto-ignition temperature:	No data available.
Q. Decomposition temperature:	No data available.
R. Viscosity:	No data available.
S. Explosive properties:	No data available.
T. Oxidizing properties:	No data available.

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Tween-20:

A. Appearance (at 20 °C):	Yellow liquid (viscous).
B. Odor:	Odorless.
C. Odor threshold:	No data available.
D. pH (at 20°C):	7.
E. Melting/freezing point:	Melting point: 98.9 °C.
F. Initial boiling and boiling range:	> 100 °C.
G. Flash point:	275 °C at ca. 1,013 hPa.
H. Evaporation rate:	No data available.
I. Flammability (solid, gas):	No data available.
J. Upper/lower flammability or explosive limits:	No data available.
K. Vapor pressure:	< 1.4 hPa at 20 °C.
L. Vapor density:	No data available.
M. Relative density:	1,095 g/ml at 25 °C.
N. Solubility(ies):	In water: 0.0002 g/l at 20 °C.
O. Partition coefficient: n-octanol/water:	No data available.
P. Auto-ignition temperature:	No data available.
Q. Decomposition temperature:	No data available.
R. Viscosity:	No data available.
S. Explosive properties:	No data available.
T. Oxidizing properties:	No data available.

TMB substrate:

A. Appearance (at 20 °C):	Colorless liquid (transparent) (at 20 °C).
B. Odor:	Odorless.
C. Odor threshold:	Does not apply, mixture is odorless.
D. pH (at 20°C):	No data available.
E. Melting/freezing point:	No data available.
F. Initial boiling and boiling range:	~100 °C
G. Flash point:	Does not apply.
H. Evaporation rate:	No data available.
I. Flammability (solid, gas):	Does not apply.
J. Upper/lower flammability or explosive limits:	Does not apply, mixture is not flammable.
K. Vapor pressure:	~2.3 hPa (at 20 °C).
L. Vapor density:	No data available.
M. Relative density:	~1 (at 20 °C).
N. Solubility(ies):	Does not apply, mixture is an aqueous solution.
O. Partition coefficient: n-octanol/water:	No data available.
P. Auto-ignition temperature:	Does not apply.
Q. Decomposition temperature:	No data available.
R. Viscosity:	No data available.
S. Explosive properties:	Does not apply, mixture is not explosive.
T. Oxidizing properties:	No data available.

Stop solution:

A. Appearance (at 20 °C):	Liquid (transparent).
B. Odor:	No data available.

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C. Odor threshold:	No data available.
D. pH (at 20°C):	~1.
E. Melting/freezing point:	< 3 °C.
F. Initial boiling and boiling range:	No data available.
G. Flash point:	Does not apply.
H. Evaporation rate:	No data available.
I. Flammability (solid, gas):	No data available.
J. Upper/lower flammability or explosive limits:	No data available.
K. Vapor pressure:	No data available.
L. Vapor density:	No data available.
M. Relative density:	No data available.
N. Solubility(ies):	Does not apply, mixture is an aqueous solution.
O. Partition coefficient: n-octanol/water:	No data available.
P. Auto-ignition temperature:	No data available.
Q. Decomposition temperature:	No data available.
R. Viscosity:	No data available.
S. Explosive properties:	No data available.
T. Oxidizing properties:	No data available.

9.2 Other information

No additional information relevant to safe use of the mixtures.

10. Stability and reactivity

10.1 Reactivity

Tween-20 forms explosive mixtures with air on intense heating. A range from approximately 15 Kelvin below the flash point is to be rated as critical.
Other components: no specific test data related to reactivity available for these mixtures or their ingredients.

10.2 Chemical stability

The mixtures are chemically stable under recommended conditions of storage, use and temperature.

10.3 Possibility of hazardous reactions

No hazardous reaction when handled and stored according to recommended conditions of storage, use and temperature.

10.4 Conditions to avoid

Tween-20:	Strong heating.
TMB substrate:	Excessive heating and freezing.
Other components:	No data available.

10.5 Incompatible materials

Cytokine stabilization buffer and Tween-20: Strong oxidizing agents.

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Stop solution: Bases, halides, organic materials, carbides, fulminates, nitrates, picrates, cyanides, chlorates, alkali halides, zinc salts and permanganates (for example potassium permanganate), hydrogen peroxide, azides, perchlorates, nitromethane and phosphorous. Reacts violently with: cyclopentadiene, cyclopentanone oxime, nitroaryl amines, hexalithium disilicide, phosphorous(III)oxide and powdered metals.
Other components: No data available.

10.6 Hazardous decomposition products

Tween-20: Hazardous decomposition products formed under fire conditions - carbon oxides.
Stop solution: Hazardous decomposition products formed under fire conditions - sulfur oxides.
Other components: Does not decompose when used for intended uses (section 1.2).

11. Toxicological information

11.1 Information on toxicological effects

Tween-20

Acute toxicity: LD50 oral - rat - 38,900 mg/kg.
LD50 inhalation - rat - male and female - 4h - >5.1 mg/l.
Skin corrosion/irritation: Skin - rabbit - result: no skin irritation - 4h.
Serous eye damage/irritation: No data available.
Respiratory/skin sensitization: Guinea pig: does not cause skin sensitization.
Germ cell mutagenicity: Ames test - Escherichia coli/Salmonella typhimurium - result: negative.
Carcinogenicity: No component of this ingredient is present at levels higher than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity: No data available.
Specific target organ toxicity (single and repeated): No data available.
Aspiration hazard: No data available.

Other mixtures

Acute toxicity: No data available.
Skin corrosion/irritation: No data available.
Serous eye damage/irritation: No data available.
Respiratory/skin sensitization: No data available.
Germ cell mutagenicity: No data available.
Carcinogenicity: No data available.
Reproductive toxicity: No data available.
Specific target organ toxicity (single and repeated): No data available.
Aspiration hazard: No data available.

11.2 Additional information

Signs and symptoms of exposure:
To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

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Potential health effects:

Inhalation: May be harmful if inhaled and may cause respiratory tract irritation.
Skin: May be harmful if absorbed through skin and may cause skin irritation.
Eyes: May cause eye irritation.
Ingestion: May be harmful if swallowed.
Hazardous properties cannot be excluded but are unlikely when the product is handled with the care usual when dealing with chemicals.

(Hazardous) ingredients of coating antibody, detection antibody and Streptavidin-HRP conjugate (section 16):

Proteins (antibodies, cytokines or streptavidin - horseradish peroxidase polymer) and phosphate-buffered saline:

Acute toxicity:	There is no evidence available indicating acute toxicity.
Skin corrosion/irritation:	No data available.
Serous eye damage/irritation:	No data available.
Respiratory/skin sensitization:	No data available.
Germ cell mutagenicity:	No data available.
Carcinogenicity:	No data available.
Reproductive toxicity:	No data available.

Specific target organ toxicity (single and repeated): No data available.
Aspiration hazard: No data available.

Serum albumin *(this ingredient is no part of coating antibody)*:

Acute toxicity:	No data available.
Skin corrosion/irritation:	No data available.
Serous eye damage/irritation:	No data available.
Respiratory/skin sensitization:	No data available.
Germ cell mutagenicity:	No data available.
Carcinogenicity:	No component of this ingredient is present at levels higher than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity:	No data available.

Specific target organ toxicity (single and repeated): No data available.
Aspiration hazard: No data available.

Trehalose, dihydrate:

Acute toxicity:	LD50 oral - rat - male and female - >16,000 mg/kg.
Skin corrosion/irritation:	Skin - rabbit: result: no skin irritation.
Serous eye damage/irritation:	Eyes - rabbit: result: no eye irritation.
Respiratory/skin sensitization:	Human - result: negative.
Germ cell mutagenicity:	*In vitro* mammalian cell gene mutation test - Chinese hamster fibroblast - with and without metabolic activation - result: negative.

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	Mammalian bone marrow sister chromatid exchange - mouse - result: negative.
Carcinogenicity:	No data available.
Reproductive toxicity:	No data available.

Specific target organ toxicity (single and repeated): No data available.

Aspiration hazard:	No data available.

(Hazardous) ingredients of BSA stock solution (10%) (section 16):

Serum albumin:

Acute toxicity:	No data available.
Skin corrosion/irritation:	No data available.
Serous eye damage/irritation:	No data available.
Respiratory/skin sensitization:	No data available.
Germ cell mutagenicity:	No data available.
Carcinogenicity:	No component of this ingredient is present at levels higher than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity:	No data available.

Specific target organ toxicity (single and repeated): No data available.

Aspiration hazard:	No data available.

Streptomycin sulfate:

Acute toxicity:	LD50 oral - rat - 430 mg/kg.
Skin corrosion/irritation:	No data available.
Serous eye damage/irritation:	No data available.
Respiratory/skin sensitization:	No data available.
Germ cell mutagenicity:	No data available.
Carcinogenicity:	No component of this ingredient is present at levels higher than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity:	May cause adverse reproductive effects - such as birth defect, miscarriages, or infertility.

Specific target organ toxicity (single and repeated): No data available.

Aspiration hazard:	No data available.

(Hazardous) ingredients of Cytokine stabilization buffer (section 16):

Serum albumin:

Acute toxicity:	No data available.
Skin corrosion/irritation:	No data available.
Serous eye damage/irritation:	No data available.
Respiratory/skin sensitization:	No data available.
Germ cell mutagenicity:	No data available.

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Carcinogenicity: No component of this ingredient is present at levels higher than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity: No data available.
Specific target organ toxicity (single and repeated): No data available.
Aspiration hazard: No data available.

Hazardous ingredients of Stop solution (section 16):

Sulfuric acid (H_2SO_4):
Acute toxicity: LD50 oral - rat - male and female - 2,140 mg/kg.
LD50 inhalation - mouse - male and female - 4h - 0.85 mg/l.
Skin corrosion/irritation: Skin - rabbit: result: extremely corrosive and destructive to tissue.
Serous eye damage/irritation: Causes serious eye damage.
Respiratory/skin sensitization: Human - result: negative.
Germ cell mutagenicity: Ames test - Salmonella typhimurium - result: negative.
Carcinogenicity: No data available.
Reproductive toxicity: No data available.
Specific target organ toxicity (single and repeated): No data available.
Aspiration hazard: No data available.
Ingredient is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. May cause spasm, inflammation and edema of the larynx and bronchi, pneumonitis, pulmonary edema, burning sensation, Symptoms: cough, wheezing, laryngitis, shortness of breath, headache, nausea, vomiting, pulmonary edema. Effects may be delayed.
After inhalation of aerosols: damage to the affected mucous membranes. After skin contact: severe burns with formation of scabs. After eye contact: burns, corneal lesions. After swallowing: severe pain (risk of perforation!), nausea, vomiting and diarrhea. After a latency period of several weeks possibly pyloric stenosis.

12. Ecological information

Mixtures

12.1 Toxicity:

Tween-20: LL50 - Danio rerio (zebra fish) - >100 mg/ml - 96h.
EC50 - Daphnia (water flea) - >10 mg/l - 48h.
EC50 - Bacteria - 146-774 mg/l - 5 min.

Other components: No data available.

12.2 Persistence and degradability:

Tween-20: Aerobic - exposure time 28d - result: >60% - readily biodegradable.

Other components: No data available.

12.3 Bio-accumulative potential: No data available.

12.4 Mobility in soil: No data available.

12.5 Results of PBT and vPvB assessment:

TMB substrate and stop solution:

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This substance/mixture contains no components considered to be either PBT or vPvB at levels of 0.1% or higher.
Other components: No data available.

12.6 Other adverse effects: No data available.

Ingredient coating antibody, detection antibody and streptavidin-HRP conjugate:
Toxicity Trehalose, dihydrate:
Static test EC50 - Daphnia magna (water flea) - >100 mg/l - 48h
Static test ErC50 - Desmodesmus sunspicatus (green algae) - 30.41 mg/l - 72h
Biodegradability ingredient Trehalose, dihydrate:
Aerobic - exposure time 28d
Remarks: The 10 day time window criterion is not fulfilled. (anhydrous substance)

Ingredient stop solution:
Toxicity sulfuric acid (H_2SO_4):
Static test EC50 - Daphnia magna (water flea) - >100 mg/l - 48h
Static test ErC50 - Desmodesmus sunspicatus (green algae) - >100 mg/l - 72h
Biodegradability ingredient sulfuric acid (H_2SO_4):
Methods for determining the biodegradability are not applicable to inorganic substances.
Other adverse effects ingredient sulfuric acid (H_2SO_4):
Biological effects: Harmful effect due to pH shift. Caustic even in diluted form. Does not cause biological oxygen deficit. Endangers drinking water supplies if allowed to enter soil and/or waters in large quantities. Neutralization possible in waste water treatment plants. Discharge into the environment must be avoided.

13. Disposal considerations

13.1 Waste treatment methods

Products: The generation of waste should be avoided or minimized wherever possible.
Waste material must be disposed in accordance with local, regional and national/federal regulations. Do not let products enter drains.
Stop solution: offer surplus and non-recyclable solution to licensed disposal company.
Packaging: Dispose of as unused product.

14. Transport information

Stop solution:

14.1 UN number (ADR, RID, ADN, IMDG, IATA):	UN3264.
14.2 UN proper shipping name (ADR, RID, ADN, IMDG, IATA):	Corrosive liquid, acidic, inorganic, N.O.S. (sulfuric acid)
14.3 Transport hazard class(es) (ADR, RID, ADN, IMDG, IATA):	8.
14.4 Packing group (ADR, RID, ADN, IMDG, IATA):	III.
14.5 Environmental hazards:	No hazards identified.
14.6 Special precautions for user:	Not applicable.

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Additional information Transportation of Dangerous Goods (ADR, RID, ADN, IMDG, IATA):

Limited quantities (LQ): 5L.

Excepted quantities (EQ): Code: E1.
Maximum net quantity per inner packaging: 30 ml.
Maximum net quantity per outer packaging: 1000 ml.

Other components:

14.1 UN number (ADR, RID, ADN, IMDG, IATA): Not applicable.
14.2 UN proper shipping name (ADR, RID, ADN, IMDG, IATA): Not dangerous.
14.3 Transport hazard class(es) (ADR, RID, ADN, IMDG, IATA): Not applicable.
14.4 Packing group (ADR, RID, ADN, IMDG, IATA): Not applicable.
14.5 Environmental hazards: None.
14.6 Special precautions for user: Not applicable.
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code: Not applicable.

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Authorizations and/or restrictions on use: None.
German Water hazard class: No data available.

15.2 Chemical Safety Assessment

For these mixtures a chemical safety assessment has not been carried out.

16. Other information

This SDS applies to the following U-CyTech ELISA kits:

Analyte	Human	Monkey	Marmoset	Mouse	Rat
IFN-γ	CT201A	CT141A	CT340A	CT301A	CT071A
IL-1ß	CT526A	CT139A			
IL-2	CT202A	CT142A	CT344A	CT309A	
IL-4	CT203A	CT143A		CT338A	CT073A
IL-5	CT204A	CT144A		CT296A	
IL-6	CT205A	CT145A	CT339A	CT299A	
IL-8 (CXCL8)	CT212A	CT151A			
IL-10	CT206A	CT146A		CT307A	
IL-12/IL-23 p40	CT207A	CT149A	CT345A		
IL-12p70	CT210A				
IL-13	CT208A	CT147A	CT341A		
IL-17A	CT514A	CT504A	CT343A		
IL-17F	CT518A	CT503A			
IL-21	CT530A				
IL-23	CT517A	CT502A			
IL-27p28	CT524A				
IL-29	CT525A				
IL-31	CT520A				

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Analyte	Human	Monkey	Marmoset	Mouse	Rat
IL-33	CT519A				
IP-10 (CXCL10)	CT522A	CT157A			
Angiopoietin-2	CT527A	CT158A			
G-CSF	CT389A	CT159A			
GM-CSF	CT200A	CT140A			
Granzyme B	CT211A				
Perforin	CT391A	CT154A			
TNF-α	CT209A	CT148A	CT342A	CT303A	CT075A

Specific (hazardous) ingredients of the components in this product

- Coating antibody, standard, detection antibody and Streptavidin-HRP conjugate - items are lyophilized, when reconstituted:

Cas no.	EC no.	Index no.	Classification	Concentration
Proteins (antibodies, cytokines or streptavidin - horseradish peroxidase polymer respectively)				
-	-	-	-	< 1% (v/v)
Serum albumin (*this ingredient is no part of coating antibody*)				
9048-46-8	232-936-2	-	-	1% (w/v)
Trehalose, dihydrate ($C_{12}H_{22}O_{11} \bullet 2H_2O$)				
6138-23-4	202-739-6	-	-	< 5% (w/v)
Phosphate-buffered saline (PBS)				
-	-	-	-	> 90% (v/v)

- BSA stock solution:

Cas no.	EC no.	Index no.	Classification	Concentration
Serum albumin				
9048-46-8	232-936-2	-	-	10% (w/v)
Streptomycin sulfate				
3810-74-0	223-286-0	-	Acute Tox. 4 (H302); Repr. 2 (H361)	0.007-0.021% (v/v)

No further components need to be disclosed according to the applicable regulations.

- Cytokine stabilization buffer

Cas no.	EC no.	Index no.	Classification	Concentration
Serum albumin				
9048-46-8	232-936-2	-	-	1% (w/v)

No further components need to be disclosed according to the applicable regulations.

- TMB substrate:

No components need to be disclosed according to the applicable regulations.

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- Stop solution:

Cas no.	EC no.	Index no.	Classification	Concentration
Sulfuric acid (H_2SO_4)				
7664-93-9	231-639-5	016-020-00-8	Met. Corr. 1 (H290); Skin Corr. 1A (H314); Eye Dam. (H318) Concentration limits: ≥ 15%: Skin Corr. 1C, H314 5% - < 15%: Skin Irrit. 2, H315 5% - < 15%: Eye Irrit. 2, H319 ≥ 1% Met. Corr. 1, H290	0.99% (v/v)

Reason for revision: Adjustment in section 16. Layout change.

Text of Hazard statements and Risk phrases mentioned in section 16:

Acute Tox.	Acute toxicity
Eye Dam.	Eye damage
Eye Irrit.	Eye irritation
Met. Corr.	Corrosive to metals
Repr.	Reproductive toxicity
Skin Corr.	Skin corrosion
Skin Irrit.	Skin irritation
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H361	Suspected of damaging fertility or the unborn child
H290	May be corrosive to metals

Abbreviations and acronyms:

ADN:	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road
BSA:	Bovine serum albumin
CAS:	Chemical Abstract Service
CE:	Conformité Européenne
CEN:	European Committee for Standardization
CET:	Central European Time
CSB:	Cytokine stabilization buffer
EC:	European Commission
EC50:	Effective concentration, 50%
EC no:	European Chemical number
EQ:	Excepted quantities
ErC50:	Concentration with 50% reduction in growth rate

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EU:	European Union
IARC:	International Agency for Research on Cancer
IATA:	International Air Transport Association
IBC code:	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in bulk
IMDG:	International Maritime Dangerous Goods
LD50:	Lethal dose, 50%
LL50:	Lethal load, 50%
LQ:	Limited quantities
Marpol:	Marine Pollution
M-factor:	multiplication factor
NIOSH:	National Institute for Occupational Safety & Health
No:	Number
NOS:	Not otherwise specified
PBS:	Phosphate-buffered saline
PBT:	Persistent, bio-accumulative and toxic
R&D:	Research & Development
REACH:	Registration, Evaluation, Authorization and restriction of Chemicals
RID:	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS:	Safety data sheet
TMB:	3,3',5,5'-Tetramethylbenzidine
TWA:	Time-weighted average
UN:	United Nations
US:	United States
WGK:	German Water Endangerment Class
vPvB:	Very persistent and very bio-accumulative

Further information

The information provided in this SDS is to the best of our knowledge and present information. The information is described as a guidance for safe handling and is not considered a warranty or quality specification. The information is only applicable to the described products and may not be valid for such products used in combination with any other products, materials or in any process, unless specified in the text. U-CyTech B.V. shall not be held liable for any damage resulting from handling or from contact with the above products.