

# Material safety data sheet

## *FluoroSpot kit*

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

#### Product identifiers

Product: FluoroSpot kit  
Catalogue no.: Please see section 16 for the exact products for which this MSDS applies.  
Brand: U-CyTech biosciences

#### Relevant identified uses of the product and uses advised against

Identified uses: Laboratory reagent. To be used in ELISPOT system.  
For R&D use only, not for food, drug, household or other uses.

#### Details of the supplier of the material safety data sheet

Supplier: U-CyTech biosciences  
Yalelaan 48  
3584 CM Utrecht  
The Netherlands  
Phone: +31 85 073 1460  
E-mail: info@ucytech.com

### 2. Hazard identification

#### Classification of the products in this kit

Except for Dilution buffer R, the items in this kit are not classified as hazardous according to Regulation (EC) no. 1272/2008.

#### Dilution buffer R is classified as

According to Regulation (EC) no. 1272/2008:  
Skin irritation (Category 2)  
Eye irritation (Category 2)  
Skin sensitization (Category 1)  
Chronic aquatic toxicity (Category 3)

Pictogram:



Signal word:

Warning

Hazard statement:

H315: Causes skin irritation  
H317: May cause an allergic skin reaction

H319: Causes serious eye irritation  
 H412: Harmful to aquatic life with long lasting effects

Precaution statements: P273: Avoid release to the environment

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P333 + P313: If skin irritation or a rash occurs: Get medical advice/attention.

**Other hazards** - none

### 3. Composition/information on ingredients

Product name: FluoroSpot kit

Ingredients:

Cas no.	EC no.	Index no.	Classification	Concentration
<b>Coating antibodies (lyophilized)</b>				
-	-	-	-	-
<b>Biotinylated detector antibodies (lyophilized)</b>				
-	-	-	-	-
<b>Fluorescent-labeled conjugate (lyophilized)</b>				
-	-	-	-	-
<b>Spot enhancer</b>				
-	-	-	-	-
<b>Blocking stock solution</b>				
-	-	-	-	-
<b>Dilution buffer R</b>				
-	-	-	Skin Irrit. 2; Eye Irrit. 2; Skin Sens 1; Aquatic Chronic 3; H315, H317, H319, H412	-
<b>Tween-20 (C<sub>58</sub>H<sub>114</sub>O<sub>26</sub>)</b>				
-	-	-	-	-

For specific ingredients of all items in this kit, see section 16 of this material safety data sheet (MSDS).

#### 4. First aid measures

##### Description of first aid measures

- General advice: Consult physician. Show this MSDS to the doctor in attendance.
- After contact with skin: Wash contaminated area with soap and water. Remove contaminated clothing and shoes. Consult a physician.
- After swallowing: If the person is conscious, wash out mouth with water. Consult a physician.
- After contact with eyes: Rinse thoroughly with plenty of water for at least 15 minutes. Assure adequate flushing by separating the eyelids. Consult a physician.
- After inhalation: Provide fresh air. If breathing becomes difficult, consult a physician.

##### Most important symptoms and effects, both acute and delayed

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

##### Indication of any immediate medical attention and special treatment needed

No data available.

#### 5. Fire-fighting measures

- Extinguishing media: Water spray, carbon dioxide, dry chemical powder or alcohol-resistant foam.
- Special hazards /risks: Except for Tween-20 there is no data available.
- Tween-20:  
Vapors heavier than air.  
Forms explosive mixtures with air on intense heating.  
Development of hazardous combustion gases or vapors possible in the event of fire. In case of fire carbon oxides may develop.
- Advice for fire fighters: Wear self-contained breathing apparatus and protective clothing for fire fighting if necessary.

#### 6. Accidental release measures

- Personal precautions: Use personal protective equipment to avoid exposure. Avoid formation of dust and aerosols. Avoid breathing dust, vapors, mist or gas. Ensure adequate ventilation. Follow general safety rules for laboratories. Evacuate personnel to safe areas in case of an emergency.

**Environmental precautions:** Prevent further leakage or spillage if safe to do so. Do not let products enter drains. Discharge into the environment must be avoided.

**Clean-up methods:** Soak up with inert absorbent material or pick up and arrange disposal without creating dust. Sweep up and keep in suitable, closed containers for disposal (section 13).

## 7. Handling and storage

**Safe handling:** Only for laboratory use. Use personal protective equipment to avoid (prolonged or repeated) exposure. Avoid formation of dust and aerosols. Ensure adequate ventilation. Follow general safety rules for laboratories.

**Safe storage:** Store all items except Tween-20 at 2-8° C in a dry and well-ventilated place. Keep containers tightly closed.

Store Tween-20 in a cool, dry and well-ventilated place. Keep containers tightly closed.

## 8. Exposure controls/personal protection

Contains no substances with occupational exposure limit values.

### Appropriate engineering controls 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.

### Personal protective equipment

The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Hand protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

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Handle with gloves. 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.

Eye protection

The selected safety glasses have to have side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin and body protection

The selected clothing has to be impervious.

**9. Physical and chemical properties**

Coating antibodies, biotinylated detector antibodies and fluorescent-labeled conjugate:

Physical state and appearance: solid (lyophilized)	Color:	white
Odor: no data available	pH (at 20°C):	no data available
Melting/freezing point: no data available	Boiling/condensation point:	no data available
Flash point: no data available	Auto ignition temperature:	no data available
Flammability limits: no data available	Specific gravity:	no data available
Solubility: soluble in water		

Spot enhancer:

Physical state and appearance: liquid	Color and form:	transparent, colorless
Odor: no data available	pH (at 20°C):	no data available
Melting point: no data available	Boiling/condensation point:	no data available
Flash point: no data available	Auto ignition temperature:	no data available
Flammability limits: no data available	Specific gravity:	no data available
Solubility: product is aqueous solutions		

Blocking stock solution and Dilution buffer R:

Physical state and appearance: liquid	Color and form:	transparent, (light) yellow
Odor: no data available	pH (at 20°C):	no data available
Melting/freezing point: no data available	Boiling/condensation point:	no data available
Flash point: no data available	Auto ignition temperature:	no data available
Flammability limits: no data available	Specific gravity:	no data available
Solubility: products are aqueous solutions		

Tween-20:

Physical state and appearance: liquid to viscous	Color:	yellowish
Odor: no data available	pH (at 20°C):	7
Melting/freezing point: no data available	Boiling/condensation point:	100°C
Flash point: > 110°C - closed up	Auto ignition temperature:	no data available
Flammability limits: no data available	Density (at 25°C):	1.95 g/ml
Solubility: soluble in water	Vapor pressure	< 1.33 hPa



## 10. Stability and reactivity

Chemical stability: Stable under recommended storage conditions.  
Conditions to avoid: No data available.  
Materials to avoid: Bases, oxidizing agents, strong oxidizing agents, strong acids, reducing agents, heavy metal salts, strong reducing agents.

Hazardous reactions/decomposition products:

No data available for all items except for the following items where hazardous decomposition products are formed under fire conditions:

Tween-20: Carbon oxides.

## 11. Toxicological information

Acute toxicity: Tween-20: LD<sub>50</sub> (oral, rat): 40.554 mg/kg.  
Other items: no data available.

Irritation and corrosion (skin and eyes): Tween-20: mild skin irritation (human, 3 d)  
Other items: no data available.

Sensitization (skin and respiratory): No data available.

Germ cell mutagenicity: No data available.

Carcinogenicity: Tween-20: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.  
Other items: no data available.

Reproductive toxicity: No data available.

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

Aspiration hazard: No data available.

Signs and symptoms of exposure:

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

Potential health effects:

Dilution buffer R:

Inhalation: May be harmful if inhaled and may cause respiratory tract irritation.

Skin: May be harmful if absorbed through skin and causes skin irritation.

Eyes: Causes eye irritation.

Ingestion: May be harmful if swallowed.

Other items:

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.

Further hazardous properties cannot be excluded. The products should be handled with the care usual when dealing with chemicals.

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**Additional information:**

RTECS: Tween-20: TR7400000 - Others items: not available.

**12. Ecological information**

Toxicity: Tween-20: LC<sub>50</sub> (fish, 24h): 350 mg/l.  
Other items: no data available.

Persistence and degradability: No data available.

Bio accumulative potential: No data available.

Mobility in soil: No data available.

Results of PBT and vPvB assessment: No data available.

Other adverse effects: No data available.

**13. Disposal considerations**

Product: The generation of waste should be avoided or minimized wherever possible.  
Dissolve or mix with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.  
Observe all federal, state and local environmental regulations.

Packaging: Dispose of as unused product.

**14. Transport information**

This product is not dangerous for road (ARD), rail (RID), inland waterways (ADNR), sea (IMDG) and air (ICAO/IATA) transport. UN number is not available.

**15. Regulatory information**

Coating antibodies, biotinylated detector antibodies, fluorescent-labeled conjugate, Spot enhancer, Blocking stock solution and Tween-20 are not classified as dangerous according to EU legislation.

Dilution buffer R is classified as irritant to skin and eyes according to EU legislation.

**16. Other information****Specific ingredients of the items in this kit**

- Blocking stock solution:

Information regarding the specific chemical identity of Blocking stock solution is being withheld as a trade secret of the manufacturer. However, the product contains no substances which at their given concentration, are considered to be hazardous to health according to Regulation (EC) no. 1272/2008.

- Lyophilized coating antibodies, biotinylated detector antibodies and fluorescent-labeled conjugate (when reconstituted):

Cas no.	EC no.	Index no.	Classification	Concentration
<b>Proteins (antibodies or fluorescent-labeled conjugate respectively)</b>				
-	-	-	-	< 1%
<b>Serum albumin (<i>this ingredient is not present in coating antibodies</i>)</b>				
9048-46-8	232-936-2	-	-	1%
<b>Trehalose, dihydrate (C<sub>12</sub>H<sub>22</sub>O<sub>11</sub> • 2H<sub>2</sub>O)</b>				
6138-23-4	202-739-6	-	-	< 5%

- Spot enhancer:

Cas no.	EC no.	Index no.	Classification	Concentration
Information regarding the specific chemical identity of Spot enhancer is being withheld as a trade secret of the manufacturer. The product contains a substance, which is considered to be hazardous to health (specified below) according to Regulation (EC) no. 1272/2008.				
-	-	-	Acute Tox. 4; Eye Dam. 1; Aquatic. Chronic 2; H302, H318, H411	< 1%

- Tween-20 (Tween is a registered trade mark of Uniqema, a business unit of ICI Americas Inc.; synonyms: Polyoxyethylenesorbitan monolaurate, polyethylene glycol sorbitan monolaurate):

Cas no.	EC no.	Index no.	Classification	Concentration
<b>Tween-20</b>				
9005-64-5	500-018-3	-	-	-

- Dilution buffer R:

Cas no.	EC no.	Index no.	Classification	Concentration
<b>Proclin 300</b>				
-	-	-	Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 2 H302, H314, H317, H410	1%
<b>Tromethamine (synonym: Tris)</b>				
77-86-1	201-064-4	-	Skin Irrit. 2, Eye Irrit. 2; STOT SE 3; H315, H319, H335	≤ 20%

Proclin is a registered trade mark of Rohn and Haas Company.



**Text of Hazard statements and Risk phrases mentioned in section 3 and 16**

Acute Tox.	Acute toxicity
Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
Eye Dam.	Serious eye damage
Eye Irrit.	Eye irritation
Skin Corr.	Skin Corrosion
Skin Irrit.	Skin irritation
Skin Sens.	Skin sensitization
STOT SE	Specific target organ toxicity - single exposure
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects

**This MSDS applies for the following U-CyTech FluoroSpot kits (2-plate format)**  
*(please find below the catalogue number of the FluoroSpot kit)*

Analyte	Species	
	Human	Old World Monkey
IFN- $\gamma$ / Granzyme B	CT849-F2	
IFN- $\gamma$ / IL-1 $\beta$	CT856-F2	
IFN- $\gamma$ / IL-2	CT852-F2	CT902-F2
IFN- $\gamma$ / IL-4	CT857-F2	
IFN- $\gamma$ / IL-5	CT853-F2	CT903-F2
IFN- $\gamma$ / IL-6	CT858-F2	
IFN- $\gamma$ / IL-10	CT850-F2	CT900-F2
IFN- $\gamma$ / IL-13	CT854-F2	CT904-F2
IFN- $\gamma$ / IL-17A	CT855-F2	CT905-F2
IFN- $\gamma$ / TNF- $\alpha$	CT851-F2	CT901-F2

**Further information**

The information provided with this document is furnished in good faith and without warranty of any kind. Personnel handling this product must consider these data only as supplemental to other information gathered by them and must make independent determinations of its suitability and completeness of information from all sources to assure proper use and disposal of the materials and the safety and health of employees and customers. U-CyTech B.V. shall not be held liable for any damage resulting from handling or from contact with the above product.

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