



## **Material Safety Data Sheet**

### **Giardia Cel Reagent**

The Cellabs Bulk FITC Conjugates are for the detection of *Cryptosporidium* and / or *Giardia* in environmental specimens.

*Cryptosporidium* and *Giardia* cause similar illness and are transmitted by the same routes. Both *Cryptosporidium* and *Giardia* may be identified using histological stains and microscopy. Considerable experience and expertise is required for accurate diagnosis, particularly of *Cryptosporidium* due to the small size of oocysts.

Monoclonal antibody labelling proves a more rapid and accurate method of detecting the organisms. Cellabs Bulk FITC Conjugates for the detection of *Cryptosporidium* and *Giardia* utilises this direct staining method. The reagents contain a mixture of fluorescein-labelled monoclonal antibodies, which bind specifically to the *Cryptosporidium* oocysts and / or *Giardia* cysts in the specimen.

The oocysts and cysts will be displayed with bright green fluorescence, with typical morphology. *Cryptosporidium* oocysts are commonly 4-6 µm in diameter and are resistant to common disinfectants and routine chlorination of drinking water. *Giardia* cysts take an elliptical shape and are the larger of the two parasites, ranging in size between 8-12 µm in length.

The Cellabs reagents are also suitable for use in flow cytometry and Chemsan® detection techniques.

#### **Instructions for use:**

***(Please refer to the DWI regulations if you are an accredited laboratory)***

1. Add 50µl of the monoclonal antibody-FITC reagent to your specimen, covering the whole well area.
2. Incubate the slide at 37°C in a dark humidified chamber for 75 +/- 15 minutes.
3. Carefully tilt the slide, and using a hand held pipette or a disposable micro-pipette tip attached to a gentle vacuum, aspirate any excess antibody from the slide. Ensure that the well surface is not touched by the tip of the pipette.
4. Apply 50µl of DAPI working solution dilution (1/5000 dilution in phosphate buffer saline (PBS)). Allow to stand at room temperature for 2 minutes.
5. Carefully remove any excess fluid by repeating step 3.
6. Apply a drop of oocyst / cyst free water to each well slide. Leave to dry for 2 to 3 minutes. Repeat aspiration step three if required.
7. Add a drop of Cellabs Mounting Fluid, (ZIMM10) to the well.
8. Place a cover slip on the slide, and without applying any pressure seal the cover slip to the slide with a suitable sealant. Record date and time of staining.
9. Read immediately or store at 2 to 8°C in a secure, dark place for up to 24 hours.

#### **N.B**

If the slides have been stored between 2 and 8°C it is important that they are brought to ambient temperature before they are read.



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<b>1. Product Information.</b>	
<b>Product name:</b>	Giardia Cel Reagent (5ml)
<b>Catalogue Number:</b>	ZIRGI

<b>2. Company Information.</b>	
<p><b><u>Manufactured By:</u></b></p> <p>Cellabs pty Ltd. 7/27 Dale Street Brookvale NSW 2100 Australia</p> <p>Ph: +61 2 9905 0133 Fax: +61 2 9905 6426</p>	<p><b><u>Distributed By:</u></b></p> <p>TCS Water Sciences Botloph Claydon Buckingham MK18 2LR England</p> <p>Ph: +44 (0) 1296 714222 Fax: +44 (0) 1296 714806</p> <p>Email: <a href="mailto:watersciences@tcsgroup.co.uk">watersciences@tcsgroup.co.uk</a> Web: <a href="http://www.tcswatersciences.co.uk">www.tcswatersciences.co.uk</a></p> <p>TCS Water Sciences is a division of TCS Biosciences Ltd, Registered in England 2172900</p>

<b>3. Composition / Data on Components</b>				
<b>Chemical Characteristics of Preparation.</b>				
<b>Description:</b> FITC Staining Reagent.				
<b>Dangerous Components:</b>				
<b><u>CAS No.</u></b>	<b><u>Designation</u></b>	<b><u>%</u></b>	<b><u>Index</u></b>	<b><u>R-Phrases</u></b>
26628-22-8	Sodium Azide	0.1	T-	28-32

<b>4. Hazards Identification</b>
<b>Hazard Designation:</b> Xn harmful.
<b>Information pertaining to particular dangers for man and environment:</b> R22 Harmful if swallowed.
<b>Classification System:</b> The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.



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### 5. First Aid Measures

Symptoms of poisoning may even occur after several hours, therefore medical observation for at least 48 hours after the accident.

<b>Eye Exposure:</b>	Rinse open eye for several minutes under running water.
<b>Dermal Exposure:</b>	Rinse well with water.
<b>Inhalation Exposure:</b>	Supply fresh air, consult a doctor in case of symptoms.
<b>Oral Exposure:</b>	Instantly call for a doctor.

### 6. Fire Fighting Measures.

<b>Suitable extinguishing agents:</b>	CO <sub>2</sub> , sand, extinguishing powder. Do not use water.
<b>Unsuitable extinguishing agents:</b>	Water, foam.
<b>Protective Equipment:</b>	No special measures required.

### 7. Accidental Release Measures.

<b>Personal related safety precautions:</b>	Not required.
<b>Measure for environmental protection:</b>	Prevent material from reaching sewage system, holes and cellars. Dilute with plenty of water.
<b>Measures for cleaning/collecting:</b>	Absorb with liquid binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose of contaminated material as waste according to item 14.

### 8. Handling and Storage.

<b>Handling:</b>	No special measures required.
<b>Storage:</b>	No special measures required.
<b>Class according to regulation on inflammable liquids:</b>	Void.



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### **9. Exposure Controls and Personal Protection**

**Additional Information about design of technical systems:** No further data. See item 8.

**Components with critical values that require monitoring at the workplace:**

<u>CAS No.</u>	<u>Designation of Material</u>	<u>Type</u>	<u>Value</u>	<u>Unit</u>
Not required.				

**Additional Information:**

- The official lists that were valid during the compilation were used as basis.
- Personal protective period.

**General protective and hygienic measures:**

- The usual measures should be adhered to in handling the chemicals.
- Wash hands during breaks and at the end of work.
- Keep away from foodstuffs, beverages and food.

**Breathing equipment:** Not required

**Protection of hands:** Not required.

**Eye protection:** Safety glasses recommended during refilling.

### **10. Physical and Chemical Properties.**

<b>Form:</b>	Fluid.
<b>Colour:</b>	Clear.
<b>Smell:</b>	Odourless.
<b>Melting Point:</b>	0°C.
<b>Flash Point:</b>	Not applicable.
<b>Danger of Explosion:</b>	Not explosive.
<b>Steam Pressure (at 20°C):</b>	23 mbar.
<b>Density (at 20°C):</b>	1g/cm <sup>3</sup> .
<b>Solubility in water:</b>	Fully Soluble.
<b>pH Values:</b>	Neutral.

### **11. Stability and Reactivity.**

<b>Dangerous Reactions:</b>	With heavy metals and metal salts (danger of explosion) Reacts with acids.
<b>Dangerous products of Composition:</b>	None.
<b>Additional Information:</b>	Contains Sodium Azide as preservative.



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### **12. Toxicological Information.**

<b>Form of Exposure:</b>			
<b>Skin contact:</b>	No irritant effect.		
<b>Eye contact:</b>	No irritant effect.		
<b>Sensitisation:</b>	No sensitising effect known.		
<b>Acute toxicity:</b> LD/LC50 values that are relevant for classification			
<b><u>Components</u></b>	<b><u>Type</u></b>	<b><u>Value</u></b>	<b><u>Species</u></b>
Sodium Azide	Oral	27 mg /kg	rat
	Dermal	20mg /kg	rab
Additional toxicological Information: The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version: harmful.			

### **13. Ecological Information.**

<b>General notes:</b> Water Hazard class I (self assessment): Slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

### **14. Disposal Considerations.**

<b>Product recommendations.</b>	
<ul style="list-style-type: none"> <li>• Must not be disposed of together with household garbage.</li> <li>• Do not allow product to reach sewage system.</li> <li>• Chemicals or preparations are generally considered to be dangerous wastes.</li> <li>• Please ask your waste management authorities about the disposal of this product.</li> </ul>	
<b>Hazardous substances:</b>	Sodium Azide (0.1%).
<b>Uncleaned packaging recommendations:</b>	Disposal must be done according to official regulations.
<b>Recommended cleaning agent:</b>	Water, if necessary with cleaning agent.



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### 15. Transport Information.

- Not dangerous according to the above specifications.

### 16. Regulatory Information.

<b>Designation according to EC guidelines:</b>	The product has been classified and labelled in accordance with EC Directives/Ordinance on Hazardous materials (GefStoffV).
<b>Code letter and hazard designation of product:</b>	Xn Harmful.
<b>Hazard-determining components of labelling:</b>	Sodium Azide.
<b>Risk phrases: 22</b>	Harmful if swallowed.
<b>Safety phrases: 46</b>	If swallowed, seek medical advice immediately and show this container or label.
<b>National Regulations:</b>	
<b>Classification according to VbF:</b>	Void.
<b>Water hazard class:</b>	Water hazard class I (self-assessment): slightly hazardous for water.

### 17. Other Information.

- The above information and recommendations are believed to be correct as of the date of this Material Safety Data Sheet but shall not be taken to be all inclusive and shall be used only as a guide.
- All chemicals and preparations may present unknown hazards and should be used with caution.
- Cellabs shall not held liable for any damage resulting from handling or from contact with the above product.



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