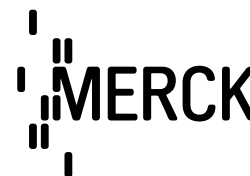


# Safety Data Sheet



According to EC Directive 91/155/EEC

Date of issue: 17.12.2002 Supersedes edition of 28.03.1994

## 1. Identification of the substance/preparation and of the company/undertaking

### Identification of the product

Catalogue No.: 114394

Product name: Sulfite Cell Test Method: photometric 1.0 - 20.0 mg/l  $\text{SO}_3^{2-}$   
25 Tests Spectroquant®  
SO<sub>3</sub>-1K

### Use of the substance/preparation

Reagent for analysis

### Company/undertaking identification

Company: Merck KGaA \* 64271 Darmstadt \* Germany \* Tel: +49 (0)6151/72-0

Emergency telephone No.: +49 (0)6151/72112 \* Fax: +49 (0)6151/72-7780

## 2. Composition/information on ingredients

CAS-No.: 6381-92-6

M: 372.24 g/mol

EC-No.: 205-358-3

Formula Hill:  $\text{C}_{10}\text{H}_{14}\text{N}_2\text{Na}_2\text{O}_8 * 2 \text{H}_2\text{O}$

## 3. Hazards identification

No hazardous product as specified in Directive 67/548/EEC.

## 4. First aid measures

After inhalation: fresh air.

After skin contact: wash off with plenty of water. Remove contaminated clothing.

After eye contact: rinse out with water.

After swallowing: make victim drink plenty of water. Call in physician.

## 5. Fire-fighting measures

Suitable extinguishing media:

Water, CO<sub>2</sub>, foam, powder.

Special risks:

Combustible. Formation of hazardous combustion gases or vapours possible in event of fire.

Special protective equipment for fire fighting:

Do not stay in dangerous zone without self-contained breathing apparatus.

Other information:

Prevent fire-fighting water from entering surface water or groundwater.

## Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114394  
Product name: Sulfite Cell Test Method: photometric 1.0 - 20.0 mg/l SO<sub>3</sub><sup>2-</sup>  
25 Tests Spectroquant®  
SO<sub>3</sub>-1K

### 6. Accidental release measures

Person-related precautionary measures:  
Avoid inhalation of dusts.

Environmental-protection measures:  
Do not allow to enter sewerage system.

Procedures for cleaning / absorption:  
Take up dry. Forward for disposal. Clean up affected area. Avoid generation of dusts.

### 7. Handling and storage

*Handling:*

No further requirements.

*Storage:*

Tightly closed. Dry. At +15°C to +25°C.

The data apply to the entire pack.

### 8. Exposure controls/personal protection

*Personal protective equipment:*

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory protection: required when dusts are generated.

Eye protection: required

Hand protection:

In full contact:

Glove material: nitrile rubber  
Layer thickness: 0.11 mm  
Breakthrough time: > 480 Min.

In splash contact:

Glove material: nitrile rubber  
Layer thickness: 0.11 mm  
Breakthrough time: > 480 Min.

The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and the resultant standard EN374, for example KCL 740 Dermatril® (full contact), 740 Dermatril® (splash contact). The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. 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 (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Industrial hygiene:

Change contaminated clothing. Wash hands after working with substance.

## Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114394  
Product name: Sulfite Cell Test Method: photometric 1.0 - 20.0 mg/l SO<sub>3</sub><sup>2-</sup>  
25 Tests Spectroquant®  
SO<sub>3</sub>-1K

### 9. Physical and chemical properties

Form:	crystals
Colour:	white
Odour:	odourless
pH value at 50 g/l H <sub>2</sub> O	(20 °C) 4-5
Melting point	255 °C decomposes
Boiling point	not applicable (decomposition)
Ignition temperature	not available
Flash point	not available
Explosion limits	lower not available upper not available
Vapour pressure	low
Density	not available
Bulk density	~ 400-500 kg/m <sup>3</sup>
Solubility in water	(20 °C) 100 g/l
water	(80 °C) 230 g/l
Thermal decomposition	255 °C

### 10. Stability and reactivity

#### *Conditions to be avoided*

Strong heating.

#### *Substances to be avoided*

strong oxidizing agents, aluminium, nickel, zinc, copper, copper alloys.

#### *Hazardous decomposition products*

no information available

#### *Further information*

releases water of crystallization when heated.

### 11. Toxicological information

#### *Acute toxicity*

LD<sub>50</sub> (oral, rat): >2000 mg/kg (anhydrous substance).

Specific symptoms in animal studies:

Eye irritation test (rabbit): No irritation.

Skin irritation test (rabbit): No irritation.

## Merck Safety Data Sheet

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25 Tests Spectroquant®  
SO<sub>3</sub>-1K

### *Subacute to chronic toxicity*

Sensitization:  
Sensitization test (guinea pig): No sensitizing effect.  
Experience in man: May cause sensitization.

Bacterial mutagenicity: Salmonella typhimurium: negative.

### *Further toxicological information*

After eye contact: slight irritation symptoms.  
After swallowing: slow absorption. disturbed electrolyte balance.  
After swallowing of large amounts: Damage of: kidneys.

### *Further data*

The product should be handled with the care usual when dealing with chemicals.

## 12. Ecological information

Biologic degradation:  
Slightly biodegradable.  
Slightly eliminable (DOC reduction <20 %).

Ecotoxic effects:  
Biological effects:  
Fish toxicity: *P.reticulata* LC<sub>50</sub>: ~320 mg/l /96 h.  
Bacterial toxicity: *Ps.putida* EC<sub>50</sub>: 56 mg/l /8 h (anhydrous substance).

Further ecologic data:  
Do not allow to enter waters, waste water, or soil!

## 13. Disposal considerations

### *Product:*

Chemicals must be disposed of in compliance with the respective national regulations. Under [www.retrologistik.de](http://www.retrologistik.de) you will find country- and substance-specific information as well as contact partners.

### *Packaging:*

Merck product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system. Under [www.retrologistik.de](http://www.retrologistik.de) you will find special information on the respective national conditions as well as contact partners.

## 14. Transport information

Entire package: not subject to transport regulations.

## Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114394  
Product name: Sulfite Cell Test Method: photometric 1.0 - 20.0 mg/l SO<sub>3</sub><sup>2-</sup>  
25 Tests Spectroquant®  
SO<sub>3</sub>-1K

### 15. Regulatory information

#### *Labelling according to EC Directives*

Symbol: ---

R-phrases: ---

S-phrases: ---

#### *German regulations*

Water pollution class 2 (polluting substance) VwVwS Anh. 2 KennNr. 104

Storage class VCI 10-13

#### *Other national regulations*

Swiss toxic class: 4

### 16. Other information

#### *Reason for alteration*

Chapter 15: labelling.

Chapter 11: toxicological information.

Chapter 12: ecological information.

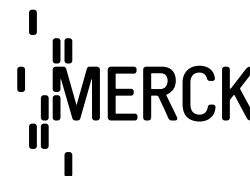
General update.

#### *Contact for information:*

USF/GEN P \* Tel: +49 6151/722775 \* Fax: +49 6151/726433 \* e-mail:prodsafe@merck.de

*The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.*

# Safety Data Sheet



According to EC Directive 91/155/EEC

Date of issue: 17.12.2002 Supersedes edition of 28.03.1994

## 1. Identification of the substance/preparation and of the company/undertaking

### Identification of the product

Catalogue No.: 114394  
Product name: Sulfite Cell Test Method: photometric 1.0 - 20.0 mg/l SO<sub>3</sub><sup>2-</sup>  
25 Tests Spectroquant®  
Küvetten-Reagenz

### Use of the substance/preparation

Reagent for analysis

### Company/undertaking identification

Company: Merck KGaA \* 64271 Darmstadt \* Germany \* Tel: +49 (0)6151/72-0  
Emergency telephone No.: +49 (0)6151/72112 \* Fax: +49 (0)6151/72-7780

## 2. Composition/information on ingredients

Aqueous solution of inorganic and organic compounds.

### Hazardous ingredients:

#### Name according to EC Directives:

CAS-No.	EC No.	EC-Index-No.	Classification	Content:
Ethanol 64-17-5	200-578-6	603-002-00-5	F; R11	≥ 5 - < 20 %

(Full text of R-Phrases in heading 16)

## 3. Hazards identification

No hazardous product as specified in Directive 67/548/EEC.

## 4. First aid measures

After inhalation: fresh air.  
After skin contact: wash off with plenty of water. Remove contaminated clothing.  
After eye contact: rinse out with water.  
After swallowing: make victim drink plenty of water. Consult doctor if feeling unwell.

## 5. Fire-fighting measures

Suitable extinguishing media:  
In adaption to materials stored in the immediate neighbourhood.

Special risks:  
Non-combustible.

Other information:  
Prevent fire-fighting water from entering surface water or groundwater.

## Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114394  
Product name: Sulfite Cell Test Method: photometric 1.0 - 20.0 mg/l SO<sub>3</sub><sup>2-</sup>  
25 Tests Spectroquant®  
Küvetten-Reagenz

### 6. Accidental release measures

Person-related precautionary measures:  
Do not inhale vapours/aerosols.

Environmental-protection measures:  
Do not allow to enter sewerage system.

Procedures for cleaning / absorption:  
Take up with liquid-absorbent material (e.g. Chemizorb®). Forward for disposal. Clean up affected area.

### 7. Handling and storage

*Handling:*

No further requirements.

*Storage:*

Tightly closed. Dry. At +15°C to +25°C.

The data apply to the entire pack.

### 8. Exposure controls/personal protection

*Specific control parameter*

TRGS 900

Name	Ethanol
Value	1000 ml/m <sup>3</sup> 1900 mg/m <sup>3</sup>
Peak limit	4 exceeding factor: 4-fold in 15 minutes
Embryotoxic	Y Substances with which no foetotoxic risk is to be expected when observing the maximum allowable concentration (MAC Germany) and the biological tolerance value at the workplace (BAT Germany).

*Personal protective equipment:*

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory protection: required when vapours/aerosols are generated.

Eye protection: required

Hand protection: not required

Industrial hygiene:

Change contaminated clothing. Wash hands after working with substance.

### 9. Physical and chemical properties

Form:	liquid
Colour:	weakly yellowish
Odour:	ethanolic
pH value	(25 °C) 7.0

## Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114394  
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25 Tests Spectroquant®  
Küvetten-Reagenz

Melting point		not available
Boiling point		not available
Ignition temperature		not available
Flash point		not available
Explosion limits	lower	not available
	upper	not available
Density		not available
Solubility in Water		not available

### 10. Stability and reactivity

#### *Conditions to be avoided*

no information available

#### *Substances to be avoided*

The generally known reaction partners of water.

#### *Hazardous decomposition products*

no information available

### 11. Toxicological information

#### *Acute toxicity*

Quantitative data on the toxicity of this product are not available.

#### *Further toxicological information*

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

#### *Further data*

The product should be handled with the care usual when dealing with chemicals.

### 12. Ecological information

#### Ecotoxic effects:

Quantitative data on the ecological effect of this product are not available.

#### Further ecologic data:

No ecological problems are to be expected when the product is handled and used with due care and attention.



## Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114394  
Product name: Sulfite Cell Test Method: photometric 1.0 - 20.0 mg/l SO<sub>3</sub><sup>2-</sup>  
25 Tests Spectroquant®  
Küvetten-Reagenz

### 13. Disposal considerations

*Product:*

Chemicals must be disposed of in compliance with the respective national regulations. Under [www.retrologistik.de](http://www.retrologistik.de) you will find country- and substance-specific information as well as contact partners.

*Packaging:*

Merck product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system. Under [www.retrologistik.de](http://www.retrologistik.de) you will find special information on the respective national conditions as well as contact partners.

### 14. Transport information

Entire package: not subject to transport regulations.

### 15. Regulatory information

*Labelling according to EC Directives*

Symbol: ---  
R-phrases: ---  
S-phrases: ---

*German regulations*

Water pollution class 1 (slightly polluting substance) VwVwS Anh. 4  
Storage class VCI 10-13  
Data sheet of the Chemical Professional Association M051 Dangerous chemical substances

### 16. Other information

Text of any R phrases referred to under heading 2:

11 Highly flammable.

*Reason for alteration*

Chapter 8: specific control parameter.  
Chapter 11: toxicological information.

General update.

*Contact for information:*

USF/GEN P \* Tel: +49 6151/722775 \* Fax: +49 6151/726433 \* e-mail: [prodsafe@merck.de](mailto:prodsafe@merck.de)

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# Safety Data Sheet

According to EC Directive 91/155/EEC

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## 1. Identification of the substance/preparation and of the company/undertaking

### *Identification of the product*

Catalogue No.: 114394

Product name: Sulfite Cell Test Method: photometric 1.0 - 20.0 mg/l  $\text{SO}_3^{2-}$   
25 Tests Spectroquant®

Blindwert-Reagenz

### *Use of the substance/preparation*

Reagent for analysis

### *Company/undertaking identification*

Company: Merck KGaA \* 64271 Darmstadt \* Germany \* Tel: +49 (0)6151/72-0

Emergency telephone No.: +49 (0)6151/72112 \* Fax: +49 (0)6151/72-7780

## 2. Composition/information on ingredients

Aqueous solution.

## 3. Hazards identification

No hazardous product as specified in Directive 67/548/EEC.

## 4. First aid measures

After inhalation: fresh air.

After skin contact: wash off with plenty of water. Remove contaminated clothing.

After eye contact: rinse out with water.

After swallowing: make victim drink plenty of water. Consult doctor if feeling unwell.

## 5. Fire-fighting measures

Suitable extinguishing media:

In adaption to materials stored in the immediate neighbourhood.

Special risks:

Non-combustible.

## 6. Accidental release measures

Person-related precautionary measures:

Do not inhale vapours/aerosols.

Procedures for cleaning / absorption:

Take up with liquid-absorbent material (e.g. Chemizorb®). Forward for disposal. Clean up affected area.

## Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114394  
Product name: Sulfite Cell Test Method: photometric 1.0 - 20.0 mg/l SO<sub>3</sub><sup>2-</sup>  
25 Tests Spectroquant®  
Blindwert-Reagenz

### 7. Handling and storage

#### *Handling:*

No further requirements.

#### *Storage:*

Tightly closed. Dry. At +15°C to +25°C.

The data apply to the entire pack.

### 8. Exposure controls/personal protection

#### *Personal protective equipment:*

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory protection: required when vapours/aerosols are generated.

Eye protection: required

Hand protection: not required

#### Industrial hygiene:

Change contaminated clothing. Wash hands after working with substance.

### 9. Physical and chemical properties

Form:	liquid	
Colour:	yellow	
Odour:	odourless	
pH value	(25 °C)	6.5-7.0
Melting point		not available
Boiling point		not available
Ignition temperature		not available
Flash point		not available
Explosion limits	lower	not available
	upper	not available
Density		not available
Solubility in water	(25 °C)	soluble

## Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114394  
Product name: Sulfite Cell Test Method: photometric 1.0 - 20.0 mg/l SO<sub>3</sub><sup>2-</sup>  
25 Tests Spectroquant®  
Blindwert-Reagenz

### 10. Stability and reactivity

#### *Conditions to be avoided*

no information available

#### *Substances to be avoided*

The generally known reaction partners of water.

#### *Hazardous decomposition products*

no information available

### 11. Toxicological information

#### *Acute toxicity*

Quantitative data on the toxicity of this product are not available.

#### *Further toxicological information*

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

#### *Further data*

The product should be handled with the care usual when dealing with chemicals.

### 12. Ecological information

#### Ecotoxic effects:

Quantitative data on the ecological effect of this product are not available.

#### Further ecologic data:

No ecological problems are to be expected when the product is handled and used with due care and attention.

### 13. Disposal considerations

#### *Product:*

Chemicals must be disposed of in compliance with the respective national regulations. Under [www.retrologistik.de](http://www.retrologistik.de) you will find country- and substance-specific information as well as contact partners.

#### *Packaging:*

Merck product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system. Under [www.retrologistik.de](http://www.retrologistik.de) you will find special information on the respective national conditions as well as contact partners.

### 14. Transport information

Entire package: not subject to transport regulations.

## Merck Safety Data Sheet

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Catalogue No.: 114394  
Product name: Sulfite Cell Test Method: photometric 1.0 - 20.0 mg/l SO<sub>3</sub><sup>2-</sup>  
25 Tests Spectroquant®  
Blindwert-Reagenz

### 15. Regulatory information

#### *Labelling according to EC Directives*

Symbol: ---

R-phrases: ---

S-phrases: ---

#### *German regulations*

Water pollution class nwg (nonpolluting substance) VwVwS Anh. 3

Storage class VCI 10-13

### 16. Other information

#### *Reason for alteration*

General update.

#### *Contact for information:*

USF/GEN P \* Tel: +49 6151/722775 \* Fax: +49 6151/726433 \* e-mail:prodsafe@merck.de

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