



# SAFETY DATA SHEET

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Revised edition no : 0

Date : 12 / 6 / 2012

Supersedes : 0 / 0 / 0

## Murashige & Skoog Medium (Micro and Macro elements)

**M0221**

### Synonyms

M&amp;S Medium, Micro and Macro elements

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

### 1.1. Product identifier

Identification of the product : Mixture.  
Raw material

Product code : M0221

Trade name : Murashige & Skoog Medium (Micro and Macro elements)

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

Use : For professional use only.  
Duchefa Biochemie B.V. products are only intended for in vitro laboratory research purposes.

### 1.3. Details of the supplier of the safety data sheet

Company identification : Duchefa Biochemie B.V.  
A. Hofmanweg 71  
2031 BH Haarlem The Netherlands  
Tel: +31(0)23-5319093  
Fax: +31(0)23-5318027  
E-mail:info@duchefa.nl

### 1.4. Emergency telephone number

Emergency phone nr : Tel: (+31)-(0)23-5319093 (local time : 9.00 to 17.00)  
National Poison Information Centre :Europe NL : +31 30 274 88 88  
(this service is only available to health professionals)  
See [www.who.int/ipcs/en/](http://www.who.int/ipcs/en/) for a local poison centre

## SECTION 2 Hazards identification

### 2.1. Classification of the substance or mixture

Classification EC 67/548 or EC 1999/45

Hazard Class and Category Code Regulation EC 1272/2008 (CLP)

: Not regulated.

### 2.2. Label elements

Labelling EC 67/548 or EC 1999/45

• Symbol(s) : None.

Labelling Regulation EC 1272/2008 (CLP)

• Hazard pictograms code : ---

• Precautionary statements

### 2.3. Other hazards

None under normal conditions.

## SECTION 3 Composition/information on ingredients

Substance / Preparation : Preparation.

Components : This product is not hazardous but contains hazardous components.

Substance name	Contents	CAS No	EC No	Annex No	Ref REACH	Classification
Potassium nitrate	44.165 %	7757-79-1	231-818-8	----	----	O; R8 ----- Ox. Sol. 2

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### SECTION 3 Composition/information on ingredients (continued)

Substance name	Contents	CAS No	EC No	Annex No	Ref REACH	Classification
Ammonium nitrate	: 38.353 %	6484-52-2	229-347-8	----	----	O; R8 Ox. Sol. 3
Calcium chloride	: 7.718 %	10043-52-4	233-140-8	017-013-00-2	----	Xi; R36 Eye irrit 2
Magnesium sulphate	: 4.197 %	7487-88-9	231-298-2	----	----	-----
Potassium dihydrogenorthophosphate	: 3.952 %	7778-77-0	231-913-4	----	----	-----
Ethylenediaminetetraacetate ferric sodium	: 0.853 %	15708-41-5	239-802-2	----	----	-----
Manganese sulfate monohydrate	: 0.393 %	10034-96-5	232-089-9	025-003-00-4	----	Xn; R20/22 N; R51-53 STOT RE 2 Aquatic Chronic 2
Zinc sulphate	: 0.2 %	7446-20-0	231-793-3	030-006-00-9	----	Xn; R22 Xi; R41 N; R50-53 Eye Dam 1 Acute Tox. 4 (oral) Aquatic Acute 1 Aquatic Chronic 1
Boric acid	: 0.144 %	10043-35-3	233-139-2	005-007-00-2	----	Repr. Cat. 2; R60 Repr. Cat. 2; R61 Repr. 1B Repr. 1B
Potassium iodide	: 0.0193 %	7681-11-0	231-659-4	----	----	-----
Sodium molybdate dihydrate	: 0.0058 %	10102-40-6	231-551-7	----	----	-----
Cobalt dichloride	: 0.00058 %	7646-79-9	231-589-4	027-004-00-5	----	Carc. Cat. 2; R49 Muta. Cat. 3; R68 Repr. Cat. 2; R60 Xn; R22 R42/43 N; R50-53 (M fact. = 10) Carc. 1B (inhal) Repr. 1B Resp. Sens. 1 Acute Tox. 4 (oral) Muta. 2 Skin Sens. 1 Aquatic Acute 1 Aquatic Chronic 1
Copper (II) sulfate	: 0.00058 %	7758-99-8	231-847-6	029-004-00-0	----	Xn; R22 Xi; R36/38 N; R50-53 Acute Tox. 4 (oral) Eye irrit 2 Skin Irrit. 2 Aquatic Acute 1 Aquatic Chronic 1

### SECTION 4 First aid measures

#### 4.1. Description of first aid measures

- General information : Seek medical attention if ill effect develops.
- Inhalation : Remove victim to fresh air.
- Skin contact : Wash skin with mild soap and water.
- Eye contact : Rinse with water.
- Ingestion : Rinse mouth.

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

Symptoms and effects, both acute and delayed : May cause skin irritation.

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

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### SECTION 4 First aid measures (continued)

Medical attention and special treatment needed : No data available.

### SECTION 5 Fire-fighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Water spray.  
Carbon dioxide (CO<sub>2</sub>).  
Foam.  
Dry powder.

#### 5.2. Special hazards arising from the substance or mixture

Specific hazards : Under fire conditions, hazardous fumes will be present.  
NO<sub>x</sub>  
CO<sub>x</sub>  
SO<sub>x</sub>

#### 5.3. Advice for fire-fighters

Protection against fire : Wear proper protective equipment.

### SECTION 6 Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General precautions : Avoid raising powdered materials into airborne dust.  
Personal precautions : Wear suitable protective clothing.

#### 6.2. Environmental precautions

Environmental precautions : Prevent entry to sewers and public waters.

#### 6.3. Methods and material for containment and cleaning up

Clean up methods : Sweep up dry powder and dispose properly.

#### 6.4. Reference to other sections

Reference to other sections : No Reference

### SECTION 7 Handling and storage

#### 7.1. Precautions for safe handling

General : Store in dry, well-ventilated area.

#### 7.2. Conditions for safe storage, including any incompatibilities

Storage : Store at room temperature.  
Store in dry, well-ventilated area.

#### 7.3. Specific end use(s)

Specific end use(s) : For professional use only.  
Duchefa Biochemie B.V. products are only intended for in vitro laboratory research purposes.

### SECTION 8 Exposure controls/personal protection

#### 8.1. Control parameters

No data available.

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### SECTION 8 Exposure controls/personal protection (continued)

#### 8.2. Exposure controls

- Eye protection : Safety glasses.
- Skin protection : In case of possible repeated skin contact wear protective clothing.
- Hand protection : Wear gloves.
- Respiratory protection : P1 Where excessive dust may result, wear approved mask.

### SECTION 9 Physical and chemical properties

#### • Appearance

Appearance : Powder.

Colour : White.

#### • Odour

Odour : Weak.

#### • Odour threshold

Odour threshold : Not established.

#### • pH

pH value : No data available.

#### • Melting point / Freezing point

Melting point [°C] : No data available.

#### • Initial boiling point - boiling range

Boiling point [°C] : No data available.

#### • Flash point

Flash point [°C] : No data available.

#### • Evaporation rate

Evaporation rate (ether=1) : No data available.

#### • Flammability

Flammability range [vol% in air] : No data available.

#### • Explosion limits (lower - upper)

Explosion limits : No data available.

#### • Vapour pressure

Vapour pressure : Not established.

#### • Vapour density

Relative vapour density (air=1) : No data available.

#### • Relative density

Relative density : Not established.

#### • Solubility

Solubility in water : Good.

#### • Partition coefficient : n-octanol / water

Log P octanol / water at 20°C : Not established.

#### • Auto-ignition temperature

Auto-ignition temperature [°C] : No data available.



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### SECTION 9 Physical and chemical properties (continued)

#### • Thermal decomposition

Thermal decomposition [°C] : No data available.

#### • Viscosity

Viscosity : No data available.

#### • Explosive Properties

Explosive Properties : Not established.

#### • Oxidising properties

Oxidising properties : Not established.

#### 9.2. Other information

Other data : No data available.

### SECTION 10 Stability and reactivity

#### 10.1. Reactivity

Reactivity : No data available.

#### 10.2. Chemical stability

Stability : No data available.

#### 10.3. Possibility of hazardous reactions

Hazardous reactions : No data available.

#### 10.4. Conditions to avoid

Conditions to avoid : Moisture.

#### 10.5. Incompatible materials

Materials to avoid : Strong oxidizers.

#### 10.6. Hazardous decomposition products

Hazardous decomposition products : When heated to decomposition, emits dangerous fumes.  
NO<sub>x</sub>  
CO<sub>x</sub>  
SO<sub>x</sub>

### SECTION 11 Toxicological information

#### 11.1. Information on toxicological effects

No data available.

### SECTION 12 Ecological information

#### 12.1. Toxicity

No data available.

#### 12.2. Persistence - degradability

No data available.

#### 12.3. Bioaccumulative potential

No data available.

#### 12.4. Mobility in soil

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### SECTION 12 Ecological information (continued)

No data available.

#### **12.5. Results of PBT and vPvB assessment**

No data available.

#### **12.6. Other adverse effects**

No data available.

**Environmental precautions** : Prevent entry to sewers and public waters.  
Avoid release to the environment.

### SECTION 13 Disposal considerations

#### **13.1. Waste treatment methods**

**General** : Dispose in a safe manner in accordance with local/national regulations.  
Avoid release to the environment.

### SECTION 14 Transport information

#### **14.1. UN Number**

Not applicable.

#### **14.2. Proper shipping name**

Not applicable.

#### **14.3. Transport Hazard Classification**

Not applicable.

#### **14.4. Packing group**

Not applicable.

#### **14.5. Environmental hazards**

Not applicable.

#### **14.6. Special precautions for user**

Not applicable.

#### **14.7. Bulk transport - annex II Marpol 73/78 - IBC**

Not applicable.

### SECTION 15 Regulatory information

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

Ensure all national/local regulations are observed.

#### **15.2. Chemical Safety Assessment**

Not established.

### SECTION 16 Other information

**Further information** : 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.

**Revision** : Complete SDS revision

The contents and format of this SDS are in accordance with REGULATION (EC) No 1907/2006 OF THE EUROPEAN

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PARLIAMENT AND OF THE COUNCIL

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