

	<b>SAFETY DATA SHEET</b>	Page : 1
		Revised edition no : 0
		Date : 7 / 10 / 2011
		Supersedes : 0 / 0 / 0
<b>Macerozyme R-10</b>		<b>M8002</b>

### Synonyms

Macerating enzyme from Rhizopus sp.  
Pectinase  
Poly-(1,4a-D-galacturonide) glycanohydrolase  
Polygalacturonase

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

### 1.1. Product identifier

**Identification of the product** : Raw material  
**Product code** : M8002  
**Trade name** : Macerozyme R-10  
**CAS number** : CAS No : 009032-75-1

### 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.



# SAFETY DATA SHEET

Page : 2

Revised edition no : 0

Date : 7 / 10 / 2011

Supersedes : 0 / 0 / 0

**Macerozyme R-10****M8002**

## SECTION 3 Composition/information on ingredients

**Components** : This product is not hazardous.

Substance name	Contents	CAS No	EC No	Annex No	Ref REACH	Classification
Macerozyme R-10	> 3 U/g	9032-75-1	232-885-6	----	----	-----

A multicomponent enzyme mixture containing approximately:

- Pectinase 0.5 U/mg
- Cellulase 0.1 U/mg
- Hemicellulase 0.25 U/mg

## SECTION 4 First aid measures

### 4.1. Description of first aid measures

- **General information** : Seek medical attention if ill effect or irritation 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** : Exposure may produce an allergic reaction.

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

**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>

### 5.3. Advice for fire-fighters

- Protection against fire** : Wear proper protective equipment.
- Special procedures** : Avoid (reject) fire-fighting water to enter environment.

## SECTION 6 Accidental release measures

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

**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.**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

In case of emergency : +31(0)23-5319093



# SAFETY DATA SHEET

Page : 3

Revised edition no : 0

Date : 7 / 10 / 2011

Supersedes : 0 / 0 / 0

**Macerozyme R-10****M8002**

## SECTION 6 Accidental release measures (continued)

### 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 2 - 8 °C

### 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.

### 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 : Brown.  
Beige.

### • Odour

Odour : Odourless.

### • Odour threshold

Odour threshold : Not established.

### • pH

pH value : 3.5 - 7 Optimum  
6.5 - 7.5 1 %

### • Melting point / Freezing point

Melting point [°C] : Not established.

### • Initial boiling point - boiling range

Boiling point [°C] : No data available.

### • Flash point

Flash point [°C] : No data available.

### • Evaporation rate

## 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

In case of emergency : +31(0)23-5319093

**SAFETY DATA SHEET**

Revised edition no : 0

Date : 7 / 10 / 2011

Supersedes : 0 / 0 / 0

**Macerozyme R-10****M8002****SECTION 9 Physical and chemical properties (continued)**

Evaporation rate (ether=1)	: No data available.
<b>• Flammability</b>	
Flammability range [vol% in air]	: No data available.
<b>• Explosion limits (lower - upper)</b>	
Explosion limits	: No data available.
<b>• Vapour pressure</b>	
Vapour pressure	: No data available.
<b>• Vapour density</b>	
Relative vapour density (air=1)	: No data available.
<b>• Relative density</b>	
Relative density, liquid (water=1)	: 1.22 g/cm <sup>3</sup>
<b>• Solubility</b>	
Solubility	: 1 mg/ml 0.1 M Sodium acetate buffer pH 4.5
Solubility in water	: Partial.
<b>• Partition coefficient : n-octanol / water</b>	
Log P octanol / water at 20°C	: Not established.
<b>• Auto-ignition temperature</b>	
Auto-ignition temperature [°C]	: No data available.
<b>• Thermal decomposition</b>	
Thermal decomposition [°C]	: No data available.
<b>• Viscosity</b>	
Viscosity	: No data available.
<b>• Explosive Properties</b>	
Explosive Properties	: Not established.
<b>• Oxidising properties</b>	
Oxidising properties	: Not established.
<b>9.2. Other information</b>	
Dry extract [%]	: < 10

**SECTION 10 Stability and reactivity**

<b>10.1. Reactivity</b>	
Reactivity	: Stable under normal conditions.
<b>10.2. Chemical stability</b>	
Stability	: Stable under normal conditions.
<b>10.3. Possibility of hazardous reactions</b>	
Hazardous reactions	: This product is not hazardous.
<b>10.4. Conditions to avoid</b>	
Conditions to avoid	: No data available.
<b>10.5. Incompatible materials</b>	
Materials to avoid	: Alkali. Strong acids.



# SAFETY DATA SHEET

Page : 5

Revised edition no : 0

Date : 7 / 10 / 2011

Supersedes : 0 / 0 / 0

**Macerozyme R-10****M8002**

## SECTION 10 Stability and reactivity (continued)

### 10.6. Hazardous decomposition products

Hazardous decomposition products : When heated to decomposition, emits dangerous fumes.

## SECTION 11 Toxicological information

### 11.1. Information on toxicological effects

Toxicity information : Not established.

## 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

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.

## 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

In case of emergency : +31(0)23-5319093



# SAFETY DATA SHEET

Page : 6

Revised edition no : 0

Date : 7 / 10 / 2011

Supersedes : 0 / 0 / 0

**Macerozyme R-10**

**M8002**

## SECTION 14 Transport information (continued)

### 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 PARLIAMENT AND OF THE COUNCIL

End of document