

# CERTIFICATE OF ANALYSIS

Cellulase "Onozuka" R-10 from Trichoderma viride	Cat.No.:	16419
E.C. 3.2.1.4	Contr.No.:	141123

Parameter	Method	Specification	Result
Molecular weight		ca. 52 000	
Appearance		beige lyophilisate	corresponds
Activities (U/mg)	Cellulase Hemicellulase Protease (DMC) α-Amylase Pectinase	ca. 1 ca. 1 ca. 0.01 ca. 0.8 ca. 0.4	1.0 0.94 0.013 0.83 0.26
Minimum shelf life		5	10/2017
Storage (°C)		-0/6	+2 to +8

### **Unit definitions**

### Cellulase

1 unit is the amount of enzymatic activity which catalyzes the liberation of 1  $\mu$ mol glucose from sodium carboxymethyl cellulose per minute at 40°C, pH 4.5.

### Hemicellulase

1 unit is the amount of enzymatic activity which liberates 1  $\mu$ mol of reducing groups from beechwood xylan per hour at 37°C, pH 5.5, calculated as xylose.

### **Protease**

1 DMC-unit is that amount of enzymatic activity which catalyzes the cleavage of 1 µequivalent peptide bond from dimethylcasein per minute at 25°C, pH 7.0, expressed in terms of the appearance of new terminal amino groups.

## α-Amylase

1 unit is that amount of enzymatic activity which catalyzes the liberation of 1 µequivalent of reducing groups from soluble starch (Zulkowsky) per minute at 25°C, pH 6.0, calculated as maltose.

### **Pectinase**

1 unit is that amount of enzymatic activity which catalyzes the liberation of 1  $\mu$ mol of reducing groups from pectic acid per minute at 25°C, pH 4.5, calculated as D-galacturonic acid.

We do not guarantee that the product can be used for a special application.

This document does not release you from performing the standard control upon receipt of incoming goods.

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Quality Control

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