



Product Information Sheet

C214 Cellulase, Onozuka RS

Synonym: N/A
CAS: 9012-54-8
Formula: N/A
Molecular Wt: N/A

Properties

Form: Powder
Appearance: Beige to Tan
Application: Enzyme
Solubility: Water
Storage Temp: 2 to 6°C
Storage Temp of Stock Solution: Stable for 24h at 4°C with pH 5-7; completely degraded at 80°C after 10-15 min.
Other Notes: Derived from *Trichoderma viride*

Application Notes

Cellulase Onozuka RS is derived from *Trichoderma viride*. It is a multi-enzymatic system consisting of cellulase, α -amylase, hemicellulase, pectinase, and protease activity. Cellulase acts together with other enzymes to degrade cell walls by modifying celluloses, lichenin and cereal β -D-glucans. It modifies cellulose by hydrolyzing 1,4- β -D-glucosidic linkages. Other enzymes like α -amylase break down 1,4- α -D-glucosidic linkages in polysaccharides while 1,4- α -D galactosiduronic linkages in galacturans are randomly cleaved by pectinase.

Cellulase Onozuka RS contains xylanase activity that is three times higher than Cellulase Onozuka R-10. It is often used in the isolation of plant protoplasts when combined with Macerozyme R-10 (Product No. M481) or other enzymes. It contains 2 U/mg of cellulase activity, meaning one unit of cellulase activity at pH 4.5 will liberate 1 μ mol of glucose from carboxymethyl cellulose at 40°C per minute. Cellulase activity is inhibited by glucose and cellobiose. Moreover, it is completely inhibited by Hg^{2+} and slightly inhibited by Mn^{+} , Ag^{2+} , Zn^{2+} and Cu^{2+} .

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