

Cellulase

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Cellulase refers to a class of enzymes produced chiefly by fungi, bacteria, and protozoans that catalyze the cellulolysis. However, there are also cellulases produced by other types of organisms such as plants and animals. Several different kinds of cellulases are known, which differ structurally and mechanistically. The EC number for this group of enzymes is [<http://expasy.org/enzyme/3.2.1.4> EC 3.2.1.4]. Reaction: Endohydrolysis of 1,4-beta-D-glycosidic linkages in cellulose, lichenin and cereal beta-D-glucans. Other names: Endoglucanase. Endo-1,4-beta-glucanase. Carboxymethyl cellulase. Endo-1,4-beta-D-glucanase. Beta-1,4-glucanase. Beta-1,4-endoglucan hydrolase. Celludextrinase. Avicelase. ([From the Wikipedia article Cellulase](#).)

Recent Publications on Cellulase:



- [Analysis of expressed sequence tags and identification of genes encoding cell-wall-degrading enzymes from the fungivorous nematode *Aphelenchus avenae*.](#)
*ABSTRACT: BACKGROUND: The fungivorous nematode, Aphelenchus avenae is...*18th November, 2009
- BMC Genomics. 2009 Nov 16;10(1):525. ([DOI Direct Link](#))
- [Combination effect of pH and acetate on enzymatic cellulose hydrolysis.](#)
*The productivity and efficiency of cellulase are significant in cellulose...*18th November, 2009
Division of Biotechnology, School of Bioresources and Technology, King- J Environ Sci (China). 2009;21(7):965-70.
- [Growth of in vitro *Fusarium oxysporum* f. sp. *niveum* in chemically defined media amended with gallic acid.](#)
*Gallic acid was artificially added to the media to grow Fusarium oxysporum...*17th November, 2009
College of Resources and Environmental Sciences, Nanjing Agricultural- Biol Res. 2009;42(3):297-304. Epub 2009 Nov 2. ([DOI Direct Link](#))
- [Production of fuel ethanol and methane from garbage by high-efficiency two-stage fermentation process.](#)
*A two-stage fermentation process, consisting of a simultaneous...*17th November, 2009
Tokyo Gas Co., Ltd., 1-7-7 Suehiro-cho, Tsurumi-ku, Yokohama City,- J Biosci Bioeng. 2009 Dec;108(6):508-12. Epub 2009 Jul 14. ([DOI Direct Link](#))
- [Template-blocking PCR: An advanced PCR technique for genome walking.](#)
*This report describes the development of an improved method for the...*12th November, 2009
Industrial Biotechnology and Bioenergy Research Center, Korea Research- Anal Biochem. 2009 Nov 7. ([DOI Direct Link](#))
- [Cellulases from *Penicillium funiculosum*: production, properties and application to cellulose hydrolysis.](#)

- The objective of this work is to investigate the utilization of two...* 11th November, 2009
 PETROBRAS-CENPES-Centro de Pesquisas e Desenvolvimento, Gerencia de- J Ind Microbiol Biotechnol. 2009 Nov 10. ([DOI Direct Link](#))
- [Prospecting for cellulolytic activity in insect digestive fluids.](#)
Efficient cellulolytic enzymes are needed to degrade recalcitrant plant... 10th November, 2009
 Department of Entomology and Plant Pathology, University of Tennessee,- Comp Biochem Physiol B Biochem Mol Biol. 2009 Nov 3. ([DOI Direct Link](#))
 - [Ectopic expression of PtaRHE1, encoding a poplar RING-H2 protein with E3 ligase activity, alters plant development and induces defence-related responses.](#)
RING (really interesting new gene)-H2 domain-containing proteins are... 7th November, 2009
 Laboratoire de Biotechnologie Vegetale, Universite Libre de Bruxelles, rue- J Exp Bot. 2009 Nov 5. ([DOI Direct Link](#))
 - [Response of Cellulase Activity in pH-Controlled Cultures of the Filamentous Fungus Acremonium cellulolyticus.](#)
Cellulase production was investigated in pH-controlled cultures of... 3rd November, 2009
 Laboratory of Biotechnology, Integrated Bioscience Section, Graduate- Appl Biochem Biotechnol. 2009 Nov 1. ([DOI Direct Link](#))
 - [Optimizing the saccharification of sugar cane bagasse using dilute phosphoric acid followed by fungal cellulases.](#)
A low level of phosphoric acid (1% w/w on dry bagasse basis, 160 degrees C... 3rd November, 2009
 Department of Microbiology and Cell Science, University of Florida, Box- Bioresour Technol. 2009 Oct 30. ([DOI Direct Link](#))
 - [Comparison of pretreatment strategies for enzymatic saccharification and fermentation of barley straw to ethanol.](#)
Barley straw used in this study contained 34.3% cellulose, 23.0%... 31st October, 2009
 Fermentation Biotechnology Research Unit, National Center for Agricultural- N Biotechnol. 2009 Oct 27. ([DOI Direct Link](#))
 - [13C-metabolic flux ratio and novel carbon path analyses confirmed that Trichoderma reesei uses primarily the respirative pathway also on the preferred carbon source glucose.](#)
BACKGROUND: The filamentous fungus Trichoderma reesei is an important host... 31st October, 2009
 VTT Technical Research Centre of Finland, Espoo, Finland.- BMC Syst Biol. 2009 Oct 29;3:104. ([DOI Direct Link](#))
 - [Effects of plant diversity on nutrient retention and enzyme activities in a full-scale constructed wetland.](#)
This study focused on the relationship between plant diversity (six... 30th October, 2009
 School of Life Sciences, Taizhou University, Linhai 317000, PR China.- Bioresour Technol. 2009 Oct 26. ([DOI Direct Link](#))
 - [Production and optimization of cellulase-free, alkali-stable xylanase by Bacillus pumilus SV-85S in submerged fermentation.](#)
This paper reports the production of a cellulase-free and alkali-stable... 28th October, 2009
 Department of Biochemistry, Kurukshetra University, Kurukshetra, 136119,- J Ind Microbiol Biotechnol. 2009 Oct 27. ([DOI Direct Link](#))
 - [Three-stage hydrolysis to enhance enzymatic saccharification of steam-exploded corn stover.](#)
The objective of the present research was to explore new approach to... 28th October, 2009
 Key Laboratory of Forest Genetics and Biotechnology, Ministry of- Bioresour Technol. 2009 Oct 24. ([DOI Direct Link](#))

BioNews Results for Cellulase

- [Response of Cellulase Activity in pH-Controlled Cultures of the Filamentous Fungus Acremonium cellulolyticus](#)

- [Dyadic International, Inc. - Dyadic International Completes FDA GRAS Notification Process for C1-Derived Cellu](#)

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Cellulase Patents:

- 7585674- [Host microorganisms](#)
- 7598069- [Enzymatic hydrolysis of biomasses having a high dry matter \(DM\) content](#)
- 7598217- [Multilayered detergent shaped bodies with viscoelastic phase](#)
- 7598361- [Nucleic acid molecules and other molecules associated with the sucrose pathway](#)
- 7601364- [Carbohydrate mixtures](#)
- 7601527- [.alpha.-amylase variants](#)
- 7601529- [Pectate lyase variants](#)
- 7601678- [Washing and cleaning agents comprising fine microparticles with cleaning agent components](#)
- 7601679- [Process for producing a hollow body with a compartment, containing a portion of a washing, cleaning or rinsing agent](#)
- 7601681- [Laundry and cleaning and/or fabric care composition](#)
- 7601861- [Method for producing alkylaryl compounds and alkylaryl sulphonates](#)
- 7595291- [Esterified alkyl alkoxyates used as low-foam surfactants](#)
- 7595290- [Water-soluble stretchable pouches containing compositions](#)
- 7595281- [Methods to increase recovery of treatment fluid following stimulation of a subterranean formation comprising in situ fluorocarbon coated particles](#)
- 7585818- [Nonnatural galactomannans and methods of use](#)
- 7585825- [Scented solid substances comprising a non-ionic surfactant-impregnated carrier](#)
- 7588925- [Phospholipases and uses thereof](#)
- 7588926- [Proteases](#)
- 7591376- [Methods for fractionating a machining suspension using destabilization and separation steps](#)
- 7592163- [Highly active xylose reductase from Neurospora crassa](#)
- 7592434- [Pectate lyases, nucleic encoding them and methods for making and using them](#)
- 7595151- [Methods and compositions for diagnosis and treatment of influenza](#)
- 7595152- [Detection of influenza virus](#)
- 7595182- [Endoglucanase STCE and cellulase preparation containing the same](#)
- 7601885- [Transgenic plant comprising a cassava vein mosaic virus promoter and a heterologous nucleic acid sequence](#)
- 7604795- [Nanoparticles for protein drug delivery](#)
- 7608689- [Methods for enhancing the degradation or conversion of cellulosic material](#)
- 7611588- [Methods and compositions for removing metal oxides](#)
- 7611690- [Nanoparticles for protein drug delivery](#)
- 7611701- [Preparation of phytase-containing granulates for use in animal feed](#)
- 7611738- [Processes for extracting phytochemicals from pomegranate solids and compositions and methods of use thereof](#)
- 7611882- [Detergent compositions comprising Bacillus subtilis pectate lyases](#)
- 7615524- [Laundry additive sachet](#)

- 7618795- [Starch process](#)
- 7618801- [Streptomyces protease](#)
- 7618931- [Natural heavy duty cleaners](#)
- 7608575- [Fabric care compositions and systems comprising organosilicon microemulsions and methods employing same](#)
- 7608573- [Natural heavy duty cleaners](#)
- 7608567- [Degradable surfactants and methods for use](#)
- 7604817- [Method for promoting growth of tissue](#)
- 7604967- [Lignin-blocking treatment of biomass and uses thereof](#)
- 7604974- [Bacillus 029cel cellulase](#)
- 7605115- [Subtilisin variants](#)
- 7605116- [Highly water-soluble solid laundry detergent composition that forms a clear wash liquor upon dissolution in water](#)
- 7608191- [Production of a fermentation product](#)
- 7608436- [Process for producing saccharide oligomers](#)
- 7608445- [Nitrilases, nucleic acids encoding them and methods for making and using them](#)
- 7608449- [Methods and compositions related to high-titer pseudotyped retroviruses](#)
- 7608451- [Gene regulation in transgenic animals using a transposon-based vector](#)
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