

Biochemical studies on thermophilic enzymes.

University of Salford - Isolation and Characterization of Thermophilic Bacteria Indigenous to AI

Table 3. Enzymes from thermophilic and extremely thermophilic bacteria involved in carbohydrate hydrolysis.

Species	T-opt. (°C)	Habitat	Enzyme	References
Sulfolobales				
<i>Sulfolobus solfataricus</i>	80	t	α -Amylase β -Glucosidase	(21), (24) (33)
Thermoproteales				
<i>Thermoproteus aznav</i>	88	t	α -Amylase Cellulase Xylanase	(4), (24) (4), (24) (4), (24)
Pyrodictales				
<i>Pyrodicticum alysi</i>	97	m	α -Amylase Pullulanase Xylanase	(2) (2) (2)
Desulfurococcales				
<i>Desulfurococcus mobilis</i>	88	t	α -Amylase	(8)
<i>Desulfurococcus maculatus</i>	88	t	α -Amylase Pullulanase	(8) (8)
<i>Staphylothermus marinus</i>	92	m	Transglucosylase α -Amylase	(3) (8)
Thermococcales				
<i>Thermococcus fermentans</i>	100	m	α -Amylase α -Glucosidase β -Glucosidase β -Mannosidase Pullulanase type II	(5) (12) (28) (24) (6)
<i>Thermococcus allosylus</i>	96	m	β -Glucosidase	(24)
<i>Thermococcus woesei</i>	100	m	α -Amylase α -Glucosidase Pullulanase type II	(27) (30) (41)
<i>Thermococcus codex</i>	87	m	α -Amylase Pullulanase	(8) (4)
<i>Thermococcus hydrothermalis</i>	80	t	α -Glucosidase β -Glucosidase α -Amylase Pullulanase	(24) (29) (29) (29)
<i>Thermococcus litoralis</i>	88	m	α -Glucosidase α -Amylase Pullulanase type II	(6) (6) (6)
<i>Thermococcus profundus</i>	80	m	α -Glucosidase α -Amylase	(24) (11)

m, marine; t, terrestrial

Description: -

-Biochemical studies on thermophilic enzymes.

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D26103/79Biochemical studies on thermophilic enzymes.

Notes: PhD thesis, Chemistry.

This edition was published in 1978



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Tags: #Biochemical #characterisation #of #the #trehalase #of #thermophilic #fungi: #An #enzyme #with #mixed #properties #of #neutral #and #acid #trehalase

Thermophile

C-terminally His 6-tagged proteins were purified by immobilised metal ion affinity chromatography IMAC using His-Trap FF columns GE, Healthcare, Little Chalfont, GB. None of the other ions tested increased or reduced the activity for any of the enzymes in comparison to reactions without additional ions Fig. Journal of Microbiology, Biochemistry and Technology, 11, 57—58.

Cohnella amylopullulanases: Biochemical characterization of two recombinant thermophilic enzymes

Effect of Cleome arabica leaf extract treated by naringinase on human neutrophil chemotaxis. The abnormal thermoability of enzymes from psychrophiles is not the primary target of death from heat. Further incubation after this optimum period did not increase the enzymes activity, and a steep decrease down to 38.

Hydrolytic Enzyme Production by Thermophilic Bacteria Isolated from Saudi Hot Springs

Isolation and characterization of proteolytic microorganisms from fresh and fermented cabbage.

Isolation and Characterization of Thermophilic Enzymes Producing Microorganisms for Potential Therapeutic and Industrial Use

Citation: Fei L, Tian S, Moysey R, Misca M, Barker JJ, Smith MA, et al. This could be explained by the marked product inhibition, with single-digit mM-range k_i and IC 50 values.

Production, purification, and biochemical characterization of a fibrinolytic enzyme from thermophilic Streptomyces sp. MCMB

Both TLC and HPAEC-PAD analysis demonstrated the liberation of rhamnose from naringin by all tested rhamnosidases Fig. However, these enzymes are activated by calcium or manganese, and as a result inhibited by chelators and by ATP, properties typical of neutral trehalases.

Biochemical characterisation of four rhamnosidases from thermophilic bacteria of the genera *Thermotoga*, *Caldicellulosiruptor* and *Thermoclostridium*

This difference may be due to the nature of the sample from which they isolated. Steitz TA, Steitz JA 1993 A general two-metal-ion mechanism for catalytic RNA. Bodrossy L, Holmes EM, Holmes AJ, Kovacs KL, Murrell JC 1997 Analysis of 16S rRNA and methane monooxygenase gene sequences reveals a novel group of thermotolerant and thermophilic methanotrophs, *Methylocaldum* gen.

Thermophilic and mesophilic enzymes from *B. caldotenax* and *B. stearothermophilus*: properties, relationships and formation

In addition, illustrates and confirms the phylogenetic relationship among the bacterial isolates and similar strains deposited in GenBank.

***Cohnella amylopullulanases*: Biochemical characterization of two recombinant thermophilic enzymes**

The final PCR product was digested with NdeI and SacI New England Biolabs , ligated into placzz1 a pUC19 derivative plasmid with a multiple-cloning site vector, and transformed into E.

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