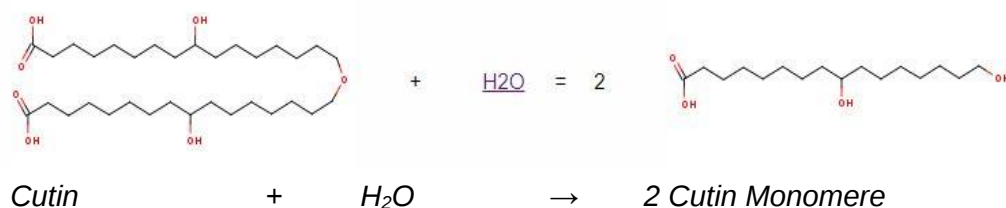


Cutinase 2p

E.C. 3.1.1.74

Description: Enzyme preparation for the hydrolysis of cutin and other esters. Cutin (polyester of hydroxy and hydroxy-epoxy fatty acid) is cleaved into the corresponding monomers.

Catalysed reaction:



Origin: *Arxula adeninivorans*

Application: Splitting of cutin, organics synthesis (see table 1)

Activity: > 70 000 U/ g
(Method: pH 7.0; 37°C, substrate: Glycerinetributyrate))

Specific activity: > 3 500 U/ mg Protein

Parameter: pH Optimum: 4 - 6
effective in the range of pH 3.5 - 8

Temperature Optimum: 20 - 40°C
effective in the range of 5 – 60°C

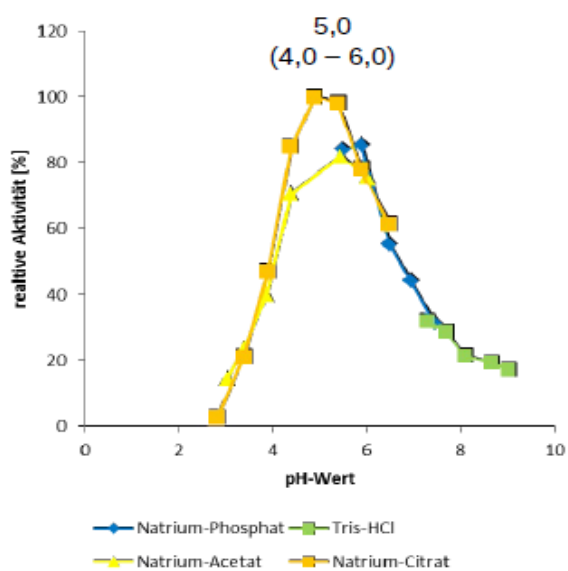


Image 1: pH-spectrum

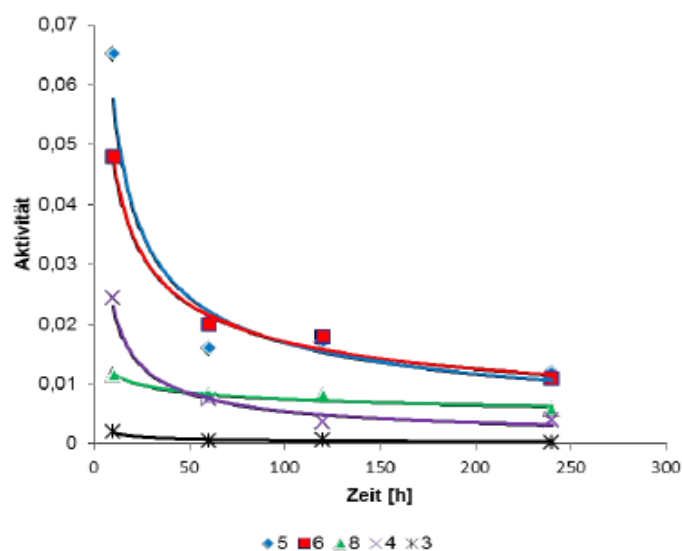


Image 2: pH-stability

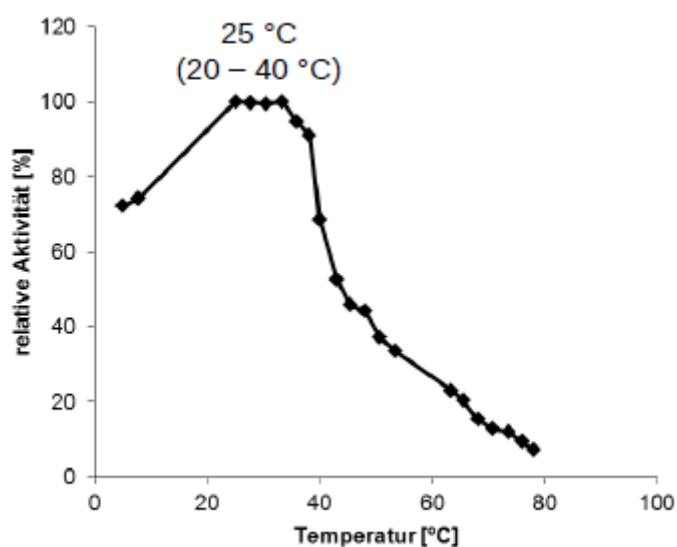


Image 3: Temperature-spectrum

Article-no.: 2465

Form of delivery: Partially purified lyophilizate

Stability: Stable at -20°C

Storage: – 20°C

Table 1: Use of cutinases in bio catalysis

(according to Carvalho et al., 1998b)

Reaction	Substrate	Enzyme preparations/ reaction	Reference.
Hydrolysis	triolein	Reverse Micelles AOT/ isooctane	Melo et al., 1995b
		triolein/ water	Flipsen et al., 1996
	tricaprylin	Immobilization on zeolites	Gonçalves et al., 1996a
		Calcium alginate	Gonçalves et al., 1995
		Covalent bonding on porous silicate	Gonçalves et al., 1996b
	p-nitrophenyl valerate	Micelles with SDS/ Triton X100	Pocalyko and Tallman, 1998
	p-nitrophenyl palmitate	Immobilization on dextran and silica-derivatives	Gonçalves et al., 1998a
Ester synthesis	Methyl-,ethyl-, Propyl propionate	Gas/ solid phase system	Lamare et al., 1997
	oleic acid +hexanol	Reverse micelles AOT/ isooctane	Sebastião et al., 1993, Sebastião et al., 1992
	caprylic acid + butanol	Organic solvents	Sarazin et al., 1992, Sarazin et al., 1995
	caprylic acid + butanol	Organic solvents	Sarazin et al., 1992, Sarazin et al., 1995
	butanoic acid + 2-butanol	Phosphatidylcholine/ isooctane, reverse micelles	Pinto-Sousa et al., 1994
	oleic acid + glycerin	Organic solvents	Melo et al., 1995a
	hexanoic acid + hexanol	CTAB, Reverse micelles	Cunnah et al., 1996
		Immobilization on Accurel EP 100	Sereti et al., 1997
	butanoic acid + hexanol	Immobilization on Accurel EP 100	Sjursnes et al., 1998
	lauric acid + pentanol	Reverse micelles AOT/ isooctane	Papadimitriou et al., 1996

Transesterification	methyI propionate + propanol	Gas/ solid phase system	Lamare and Legoy, 1995, Lamare et al., 1997
	butyl acetate + hexanol	Reverse micelles AOT/ isooctane	Carvalho et.al 1997a, Carvalho et al., 1998a
		Reverse micelles CTAB/ isooctane	Cunnah et al., 1996
		Immobilization on zeolites	Serralha et al., 1998

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