

Chemical composition analysis of lysophospholipase from *Trichoderma reesei* strain RF7206

- Sample:**
- 1. Liquid semi-final concentrate: batch no 372062173**
 - 2. Liquid semi-final concentrate: batch no 130429093**
 - 3. Liquid semi-final concentrate: batch no CE130072E**

Table 1. Enzyme activity, presence of production strain, antimicrobial activity, heavy metals and microbiological quality of the product.

Batch	372062173	130429093	C130072E
Lysophospholipase activity (LPL/g)	35500	64800	60400
Presence of antimicrobial activity	Not detected	Not detected	Not detected
Presence of production strain (in 20 ml)	Not detected*	Not detected*	Not detected
Escherichia coli (in 25g)	Not detected	Not detected	Not detected
Salmonella (in 25g)	Not detected	Not detected	Not detected
Total coliforms (cfu**/g)	<1	<1	<1
Lead	<0,05	<0,05	<0,05
Arsenic	<0,5	<0,5	-
Total heavy metals (As, Pb, Cd, Hg)	<0,7	<0,7	-

LPL: Assay of lysophospholipase activity B056, Roal internal method

Antimicrobial activity: Specifications for Identity and Purity of Certain food Additives, FAO Food and Nutrition Paper 49 (1990), Rome, Appendix A, p. 83.

Production strain: Detection of production strain (*Trichoderma reesei*, *Aspergillus*) in enzyme preparations M001, Roal internal method

E. coli: SFS 4089:1998 (mod.)

Salmonella: NMKL 71:1999 (mod.)

Total coliforms: ISO 4832:2006 (mod.)

Lead and arsenic: ISO 17294-2:2005

Total heavy metals: calculated from individual results of indicated elements (ISO 17294-2:2005)

*tested from end fermentation

**cfu: colony forming units

- Not measured

Table 2. Nutritional analysis

Batch	372062173	130429093	CE130072E
Fat %	0,5	0,26	0,24
Protein %	3,0	9,0	7,0
Moisture %	73,7	50,8	54,1
Ash %	3,3	5,2	5,3
Carbohydrates %	19,5	34,8	33,4
Energy value (kJ/100 g)	401	760	696
TOS % Total organic solids [100- (%Ash+%Moisture)]	3,7	9,6	10,2

Fat: NMKL 131:1989 modified

Protein: AOAC 2000 2001.11 (4.2.11) modified

Moisture: AOAC 2000 950.46 (39.1.02) modified

Ash: NMKL 173:2005 modified

Carbohydrates: By difference 100% - (moisture+protein+fat+ash)%

Energy value: Calculated on the basis of contents of protein, fat and carbohydrate. Factors protein and carbohydrate 17 kJ/g, fat 38 kJ/g

Table 4. Mycotoxins ($\mu\text{g}/\text{kg}$)

Batch	372062173	130429093	CE130072E
Aflatoxin B1	<0,05	<0,05	<0,05
Aflatoxin B2	<0,05	<0,05	<0,05
Aflatoxin G1	<0,05	<0,05	<0,05
Aflatoxin G2	<0,05	<0,05	<0,05
Sum of aflatoxins B1+B2+G1+G2	<0,05	<0,05	<0,05
Ochratoxin A	<2	<0,5	<0,5
T2-Toxin	<20	<20	<10
HT-2-Toxin	<20	<20	<10
Fumonisin B1	-	<10	<10
Fumonisin B2	<10	<10	<10

Aflatoxins: ASU 15.00-2; (= DIN 12955)

Ochratoxin A: A. Thellmann, W. Weber: DLR 93 (1), 1997, S 1-3

T2- and HT-2Toxin: J.Agric.Food Chem. 2008 (56), 4968-4975 pp.

Fumonisin B1 and B2: EN 14352

Rajamäki 8.2.2018