

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 (µg/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

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