**Product specification of Glucose oxidase (E.C.# 1.1.3.4) FROM strain RF11400**

**Host*: Trichoderma reesei***

**Donor: *Penicillium amagasakiense***

**Samples: 1. Liquid enzyme sample batch 161017710, 2016-2338-4**

**2. Liquid enzyme sample batch 161114013, 2016-2583-3**

**3. Liquid enzyme sample batch 2481, 2017-332-1**

Table 1. Enzyme activity and microbiological quality of the product.

|  |  |  |  |
| --- | --- | --- | --- |
| **Batch** | **161017710** | **161114013** | **2481** |
| Glucose oxidase activity (GOX/g) | 11700 | 12600 | 13100 |
| Total viable count (cfu\*/g) | <1 | <1 | <1 |
| Total coliforms (cfu\*/g) | <1 | <1 | <1 |
| Presence of the production strain (in 20 ml) | not detected | not detected | not detected |
| Antibiotic activity | negative | negative | negative |
| Escherichia coli (in 25 g) | not detected | not detected | not detected |
| Salmonella (in 25 g) | not detected | not detected | not detected |

GOX: Assay of glucose oxidase activity, Roal internal method B080

Total viable count: NMKL 86:2013, 30ºC

Total coliforms: RapidEcoli Agar, 37°C,24h, Metropolilab In House method

Production strain: Analyzed at ISO 17025 accredited laboratory with Detection of production strain (*Trichoderma, Aspergillus*), Roal internal method M001

Antibiotic activity: Specifications for Identity and Purity of Certain food Additives, FAO Food and Nutrition Paper 65 (2006), Rome, Vol. 4, p. 122

E. coli: ISO 16649-3:2015 mod.

Salmonella: NMKL 71:1999 mod.

*\*cfu: colony forming units*

Table 2. Heavy metals (mg/kg)

|  |  |  |  |
| --- | --- | --- | --- |
| **Batch** | **161017710** | **161114013** | **2481** |
| Arsenic, As | <0,5 | <0,5 | <0,5 |
| Lead, Pb | <0,05 | <0,05 | <0,05 |

Heavy metals: ISO 17294-2

Table 3. Nutritional analysis

|  |  |  |  |
| --- | --- | --- | --- |
| **Batch** | **161017710** | **161114013** | **2481** |
| Protein % | 22,7 | 22,7 | 24,2 |
| Moisture % | 4,39 | 4,25 | 4,44 |
| Ash % | 0,82 | 0,84 | 1,3 |
| % TOS | 94,79 | 94,91 | 94,26 |

Protein: NMKL 6

Moisture: NMKL 23

Ash: NMKL 173

TOS: Total organic solids [100-(%Ash+%Moisture)]

Rajamäki, 16.6.2017

Anni Honkanummi

Quality Management Coordinator