



Product Information Sheet

Laminarinase AP-L[®]

An Enzyme Supplies Betaglucanase preparation, for the cellulosic bio-ethanol industry.

INTRODUCTION

Laminarinase AP-L is an enzyme preparation with a high content of β -1,3 and β -1,6 glucanase activities, along with acid protease & endo-cellulase side-activities. Laminarin, is a beta-glucan found in the cell walls of many plants and algae/phytoplankton. Its breakdown can improve the digestibility of plants & algae, particularly associated with the production of digestive supplements and assist in the production of algal/diatom based Biofuels by aiding cellular breakdown and release.

- IUB-No. 3.2.1.6
- CAS-No. 62213-14-3

This product complies with the recommended specifications of the FAO/WHO joint expert committee on food additives (JECFA), and the food chemicals codex (FCC) for food-grade enzymes. The enzyme is non-GMO.

ENZYME PROPERTIES

Laminarinase AP-L has the following characteristics:

- Liquid product (brown colour)
- Obtained from *Trichoderma* spp.
- Specific gravity of ~1.15g/ml
- Temperature optimum 40-50°C (range 15-55°C)
- pH optimum 5.0 (range 4.5-6.0)
- Activity minimum 2,500 LAMu/g
- Fully water soluble

APPLICATION SCOPE

Laminarinase AP-L is used primarily in the production of bio-ethanol when the raw material is either plant, algal or phytoplankton, and can also be used in the digestive supplements industry.

- 15-20°C for between 1-5 days @ 4-12g/hl
- 40-55°C for between 1-2 hours @ 20g/hl

(Because of the variation in reaction parameters e.g. substrate type and degree of activity required, it is advisable for customers to perform their own trials with regard to dose rates).

PACKAGING

Laminarinase AP-L is available in bulk containers or 25Kg 'non-toxic' plastic jerry cans

STORAGE STABILITY

To maintain optimum activity, Laminarinase AP-L should be stored at moderate temperatures (below 25° C), in the original containers and with the lid closed. When stored at temperatures below 25°C, the activity loss will be less than 10% in 6 months. At temperatures below 5°C, the activity loss will be less than 10% in 1 year.

SAFETY AND ENZYME HANDLING

Inhalation of aerosols from liquid enzymes should be avoided. Open in a well-ventilated environment. In case of contact with skin/eyes, promptly rinse with water for at least 15 minutes. Clean any spillages with low-pressure water hoses, avoiding the formation of aerosols. For more detailed information please refer to the Material Safety Data Sheet for this product.

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