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AlternaFuel 100P

Product #325

(For considerations in **biomass saccharification** applications)

I. INTRODUCTION:

AlternaFuel 100P is a powdered fungal hemicellulase enzyme complex from *Trichoderma longibrachiatum* that can effectively be used for the degradation of various lignocellulosic biomass substrates for conversion of biomass to glucose.

II. PHYSICAL PROPERTIES:

Appearance: Tan to cream Powder
(Note that color does not affect or reflect activity.)
Odor: Slight fermentation odor
pH (1% soln): 4.5 ± 1.0
Activity: >90,000 Xyl/g

Activity is based on an internal standard and should not be used to compare to other products with different activity units or products with different enzyme components with the same activity units. The activity reported with each lot should only be used to confirm consistency from lot to lot.

III. RECOMMENDATIONS FOR USAGE:

As each lignocellulosic biomass substrate has its own characteristics and there are numerous processes for the pretreatment of the biomass prior to enzyme addition, it is recommended that **AlternaFuel 100P** be tested under laboratory conditions to determine the most effective conditions for its use.

pH Range: **AlternaFuel 100P** can utilized over a pH range of 3.5 to 5.5. The optimal pH is 4.5.

Temperature Range: **AlternaFuel 100P** is effective in the temperature range of 35°C to 80°C. The optimal temperature for SHF (Separate Saccharification and Fermentation) is 50°C.

IV. DOSAGE:

As a starting point for the optimization of the dosage of **AlternaFuel 100P** a dose of 0.01 g of **AlternaFuel 100P** per kg of original biomass. The actual dosage will depend upon the composition of the biomass and pretreatment process.

To achieve the maximum conversion of C6 components to fermentable sugars it is recommended that **AlternaFuel 100P** be supplemented with additional cellobiase to ensure complete hydrolysis of C6 components to glucose.

V. STORAGE CONDITIONS/ACTIVITY:

AlternaFuel 100P retains more than 90% activity after four months when stored at 25°C out of direct sunlight and in the original closed container. **AlternaFuel 100P** also retains more than 90% activity after 1 month when stored at 38°C. Do not let freeze.

VI. PACKAGING:

AlternaFuel 100P is packaged in 75 kg fibre drums.

Nothing disclosed is to be construed as a recommendation to use our products in violation of any patents. The information presented is believed to be accurate. However, said information and products are offered without warranty or guarantee, except as to the composition and purity stated herein since the ultimate conditions of use and variability of the materials treated is beyond our control. We recommend that the prospective user determine the suitability of our materials and suggestions before adopting them on a commercial scale. The goods described herein are sold as is and with all faults. The seller specifically disclaims all warranties in connection with the sale of the goods, both express and implied, including, without limitation, the warranties of merchantability and fitness for any particular purpose, as those terms are defined in the Uniform Commercial Code of Florida. The seller shall not be liable for any incidental or consequential damages whatsoever.