

CereCalase®



TECHNICAL INFORMATION

DESCRIPTION:

This food grade fungal enzyme system used in National Enzyme Company products is obtained by the controlled fermentation of *Aspergillus niger* and *Trichoderma longbrachiatum*. This enzyme system is a unique mixture of enzymes that hydrolyze non-starch polysaccharides (NSPs). Hemicellulase, beta-glucanase, and phytase are included in this novel enzyme system. Hemicellulase hydrolyzes the interior glucosidic bonds of galactomannoglucans, yielding polysaccharides of lower molecular weight. Beta-glucanase acts on the interior 1,4-beta-glucosidic bonds of beta-glucans containing mixed 1,3- and 1,4-bonds. Phytase cleaves phosphate groups from phytic acid, also known as inositol hexaphosphate, releasing phosphate and free myoinositol. Hemicelluloses, beta-glucans, and phytic acid can act as anti-nutritive factors due to their tendency to bind minerals and other nutrients, and thus prevent intestinal absorption of these nutrients. These NSPs are common in many vegetable foods including grains, beans and herbs. **CereCalase®** combines the enzymes necessary to hydrolyze the NSPs, increasing the availability of nutrients for absorption.

ACTIVITY:

The activity of **CereCalase®** is measured in Macerating Units (MU). Compendial methods of analysis do not currently exist for this combination of enzymes. No single FCC assay suitably represents the action of the enzyme system. Therefore, National Enzyme Company combines the FCC assays for hemicellulase, beta-glucanase and phytase to derive the representative MU. For more details about this unit of activity and assay procedures, please contact our technical staff.

PROPERTIES:

Form:	Dry powder
Color:	Light tan
Odor:	Free of offensive odor
Taste:	Free of offensive taste
Effective pH Range:	3.0 to 6.5
Optimum pH Range:	5.0 to 6.0
Effective Temperature Range:	Up to 60° C
Optimum Temperature Range:	50 to 55° C

TYPICAL SIDE ACTIVITIES:

Cellulase and α -amylase

APPLICATIONS:

Each of the individual enzymes have an extensive history of use in the agricultural industry for supplementing animal feeds to increase nutrient availability. **CereCalase®** is uniquely suited for use in human digestion, digestion supplements for pets, and agricultural feeds.

SHELF LIFE:

To maintain optimum enzyme activity, this product should be stored in a cool, dry place in a tightly sealed container. When properly stored, this product can be expected to lose less than 10% of its activity in twelve months.