Viscozyme® L

Description
Viscozyme L is a multi-enzyme complex containing a wide range of carbohydases, including arabanase, cellulase, beta-glucanase, hemicellulase and xylanase. The enzyme also has activity against the branched pectin-like substances found in soybean cell walls. The enzyme preparation is produced from a selected strain of Aspergillus aculeatus.

Product Properties

Appearance
Viscozyme L is a clear brown liquid with a density of approx. 1.2 g/ml.

Activity
Viscozyme .................................................100 FBG/g.

FBG = Fungal Beta-Glucanase Units.
See the Analytical Method for further information.

Other characteristics
The ability of Viscozyme L to function at low temperatures will result in reduced energy consumption in the extraction of materials from plant cells. In addition, the absence of significant levels of amylase and lipase activities means that these major components will not be affected during the extraction process. The optimal conditions for Viscozyme L with its several and complex activities are a pH range of 3.3-5.5 and a temperature of 25-55°C.

Food-grade status
Viscozyme complies with the recommended purity specifications for food-grade enzymes given by the Joint FAO/WHO Expert Committee on Food Additives (JECFA) and the Food Chemicals Codex (FCC), supplemented with a maximum limit of 10²/g for moulds.

Packaging
See the standard Packaging List for more packaging information.

Application
Viscozyme L is a special enzyme preparation used in the breakdown of cell walls for the extraction of useful components from plant tissue and in the processing of cereal and vegetable materials.
The multi-component nature of Viscozyme is of particular use in the processing of plant materials in the alcohol, brewing, starch and related industries. The ability of the enzyme to liberate bound materials and to degrade non-starch polysaccharides can be used to improve starch availability in fermentation and to generally reduce viscosity and hence improve extraction yields. For the reduction of beta-glucans and viscosity a dosage of 0.02-0.1% of grist weight is recommended. For other applications a general recommendation is 0.05-0.1%.

**Safety**

Enzymes are proteins. Inhalation of dust or aerosols may induce sensitization and may cause allergic reactions in sensitized individuals. Some enzymes may irritate the skin, eyes and mucous membranes upon prolonged contact. This product may create easily inhaled aerosols if splashed or vigorously stirred. Spilled product may dry out and create dust. Spilled material should be flushed away with water. Avoid splashing. Left-over material may dry out and create dust. Wear suitable protective clothing, gloves and eye/face protection as prescribed on the warning label. Wash contaminated clothes.

**Handling Precautions**

Viscozyme L is non-flammable, completely miscible with water and safe when used according to directions. Observe standard handling precautions to avoid direct contact with the product or inhalation of dust from the dried product. In case of accidental spillage and contact with the skin or eyes, rinse promptly with water.

A Material Safety Data Sheet is supplied with all products. See the Safety Manual for further information regarding how to handle the product safely.

**Storage**

Enzymes gradually lose activity over time depending on storage temperature and humidity. It is recommended to store the product under cool and dry conditions in closed containers at 0-10°C (32-50°F) (e.g. in the hop storage room). Extended storage and/or adverse conditions including higher temperature or high humidity, may lead to a higher dosage requirement. Further information on product stability is available on request.