



NATUZYM® FC

Product Data Sheet

Date of issue: 19 September 2022

Enzymatic complex for ultra-filtration membrane cleaning

Description: NATUZYM® FC is an enzymatic complex used for filter membrane cleaning especially ultrafiltration (UF) membranes, replacing part of Cleaning In Place chemicals. The product contains different activities such as amylases, hemicellulases and cellulases from various microorganisms. Hemicelluloses and cellulose bind with proteins and phenolic compounds in fruit juices, progressively fouling filter membranes and decreasing the fruit juice flux rate quickly. The active enzymes in NATUZYM® FC hydrolyse part of membrane fouling material.

Properties: Enzyme: Cellulase IUBMB: 3.2.1.4
Activity: >250 000 GMA units/g Form: liquid
Density: 1.10–1.25 g/ml Colour: brown

Colour and appearance may vary from batch to batch. Colour intensity or turbidity is not an indication of enzyme activity.

Application: NATUZYM® FC has been developed to hydrolyse hemicellulose, cellulose and other clotting fruit components before chemical membrane cleaning.

Conditions of use: For optimal efficiency, NATUZYM® FC is used after first washing of UF membranes with water and before the chemical cleaning. A water solution is prepared in the tank used for membrane cleaning. Water pH is adjusted to 4.0-4.5 with citric acid. NATUZYM® FC is added at 3 kg per m³ of solution. The enzyme solution is circulated in the whole UF membrane unit via a pump for 15 min, then held for 1 to 2 hours at ambient temperature. The solution is re-circulate for 15 minutes each 45 minutes during one cleaning cycle. UF membranes are finally washed with water before final chemical cleaning in place.

GM Status: The product and its constituent enzymes are not genetically modified. Enzyme proteins are produced by fermentation of classical microorganisms, which are removed and not present in the final product. Only agricultural raw materials of non-genetically modified (non-GM) origin are used for the fermentation process and in the final formulation.

Composition: NATUZYM® FC is stabilised with glycerol. It contains minor amounts of the preservatives sodium benzoate and potassium sorbate.

Packaging and storage: NATUZYM® FC is available in 25 kg polyethylene drums or IBCs. The product is best stored in the original and unopened packaging under refrigerated conditions (4–8 °C) in order to retain maximum activity during storage. Under optimum conditions shelf life is 24 months.

Safety and caution: Enzyme products need to be handled with care. Please consult the separately available Safety Data Sheet for further information.



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Compliance and legal: Our enzyme products are used as processing aids in the food manufacturing process and are thus free from any labelling provisions in the European Union. The product does not fall within the scope of EU regulations (EC) 1829/2003 and (EC) 1830/2003 on genetically modified food and feed.

The product is manufactured to comply with recommended purity specifications given by the Joint FAO/WHO Expert Committee on Food Additives (JECFA), and conforms with the recommended specifications of the Food Chemical Codex for food enzymes.

Purity criteria:

Total plate count	< 50 000 CFU per g
Yeasts & Moulds	< 30 CFU per g
Total Coliforms	< 30 CFU per g
Salmonella	absent in 25 g
Escherichia coli	absent in 25 g

Heavy Metals (as Pb)	< 30 ppm
Lead	< 5 ppm
Arsenic	< 3 ppm
Cadmium	< 0.5 ppm
Mercury	< 0.5 ppm

Special diet information:

Kosher:	Certified
Halal:	Certified
Vegan/Vegetarian:	enzyme product or any constituents are not of animal origin

Certification: WeissBioTech GmbH has a certified quality management system according to ISO 9001:2015 and a certified Food Safety Management System according to FSSC 22000 incl. HACCP, which are reviewed in regular audits.

Made by WeissBioTech GmbH, Germany

To the best of our knowledge, the information contained herein is accurate and complete. However, nothing herein contained shall be construed to imply any warranty or guarantee.

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