SUCRASE PLUS β-GALACTOSIDASE

08/23

E-SUCRBG

Sucrase from Yeast ***(Non-recombinant)***
EC: 3.2.1.20
Synonyms: alpha-glucosidase; alpha-D-glucoside glucohydrolase
CAZy Family: GH13
CAS: 9001-42-7

β-Galactosidase from *Aspergillus niger* ***(Non-recombinant)***
EC: 3.2.1.23
Synonyms: beta-galactosidase; beta-D-galactoside galactohydrolase
CAZy Family: GH35
CAS: 9031-11-2

Refer to the product lot number Certificate of Analysis for lot specific properties.

This product is for use in the **Integrated Total Dietary Fiber procedure (K-INTDF)** when performing HPLC analysis of non-digestible oligosaccharides (using the Waters Sugar-Pak column) as the fructosyl-trisaccharide β-D Fruf (2→1)-β-D-Fruf-(2→1)-β-D-Fruf, chromatographs at a similar point to the disaccharides, sucrose, maltose and lactose. Accurate determination of this trisaccharide requires the hydrolysis of these disaccharides. This can be achieved using this enzyme mixture.

PROPERTIES

1. ELECTROPHORETIC PURITY:

This is a mixture of sucrase (maltase; from yeast) and β-galactosidase (from *A. niger*)
- Two major bands on SDS-gel electrophoresis: Sucrase (from yeast) (57,750) and β-galactosidase (from *A. niger*) (125,000)

2. STORAGE CONDITIONS:

The enzyme is supplied as a lyophilised powder and should be stored below -10°C. It is recommended that all buffers used for dilution contain BSA (0.5 mg/mL).

3. PREPARATION OF ENZYME FOR USE:

Dissolve the contents of one vial in 6 mL of 0.1 M sodium maleate (pH 6.0). Transfer aliquots of approx. 2 mL to polypropylene tubes and store below -10°C between use. Can be thawed and re-frozen several times.

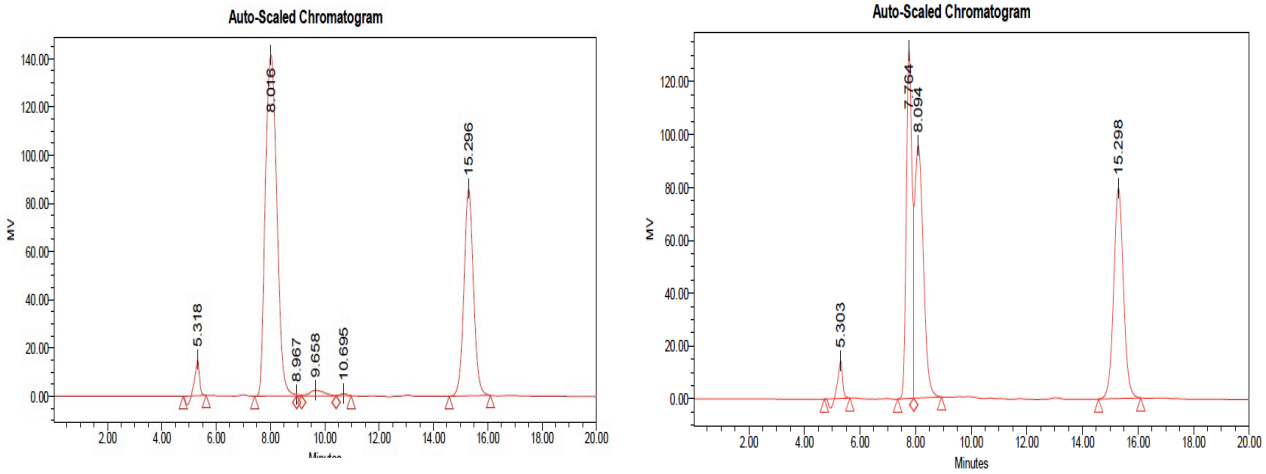
INCUBATION CONDITIONS:

To **1 mL** of sugar mixture obtained in the **Integrated Total Dietary Fiber procedure [Step I(b)]** containing up to 5 mg/mL of sucrose, maltose and/or lactose and fructo-triose, **add:** 0.2 mL of sucrase/β-galactosidase enzyme mixture, and incubate at 40°C, for 60 min. Terminate the reaction by incubating the tube at 100°C for 2 min and centrifuge the suspension at 12,000 rpm for 5 min.

SAMPLE PREPARATION AND HPLC:

Analyse the supernatant solution by HPLC using a Waters Sugar-Pak® column as described in the Integrated Total Dietary Fiber method (**K-INTDF**). Calculate the amount of fructo-triose by reference to the D-sorbitol internal standard. This amount should then be added to the determined amount of non-digestible oligosaccharides [NDO; low molecular weight soluble dietary fiber; Soluble Dietary Fiber soluble in 78% aqueous ethanol (SDFS)].

Hydrolysis of Sucrose, Maltose and Lactose with Sucrase + β-Galactosidase



Sucrase/maltase + β-Galactosidase