



AMYLASE HR ASSAY REAGENT

R-AMHR4

10/10

DESCRIPTION:

A new α -amylase assay reagent containing *p*-nitrophenyl α -D-maltoheptaoside (blocked) plus a thermostable α -glucosidase (replacing the thermolabile α -glucosidase used in the former mixture). The incorporation of this enzyme allows the assay to be performed up to 60°C and over the pH range 5.0 - 7.5.

ASSAY OF α -AMYLASE USING AMYLASE HR ASSAY REAGENT:

In this reagent, BPNPG7 is used in combination with a thermostable α -glucosidase (replacing the amyloglucosidase and yeast α -glucosidase mixture in "Cereal α -amylase assay reagent"). The substrate is used in exactly the same way as the Ceralpha Reagent, the major difference being the ability to use this reagent at temperatures up to 60°C, and at pH values up to 7.0. This is of particular advantage when assaying for bacterial α -amylases. When using the assay at pH 7.0, we recommend the use of MOPS buffer (0.1 M). Phosphate buffer must be avoided as the phosphate may bind calcium ions and render the enzyme less stable.

A particular advantage of this substrate mixture is its extreme stability. The level of α -amylase contamination in the thermostable α -glucosidase is undetectable. The reagent is stable at room temperature for several days (barring microbial contamination). Since the pH optima of the α -glucosidase is pH 6.0-7.0, it is less effective at lower pH values. However, with the amount of enzyme added to the Amylase HR Reagent, the reagent can be used down to a pH of 5.4 with no limiting effects introduced by this enzyme i.e. the absorbance values obtained with this reagent and Ceralpha Reagent are the same.