

LIQUEFYING ALKALINE α -AMYLASE PROCESS FOR PRODUCING THE SAME
AND DETERGENT COMPOSITION CONTAINING THE SAME

ABSTRACT

The present invention relates to a liquefying alkaline α -amylase having the enzymatic properties described below, a production process thereof and a detergent composition containing the same.

5 1) Action:

It hydrolyzes α -1,4-glucosidic linkages in starches, amylose, amylopectin and partial degradation products thereof and from amylose, forms glucose (G1), maltose (G2), maltotriose (G3), maltotetraose (G4),
10 maltopentaose (G5) and maltohexaose (G6). It however does not act on pullulan.

2) Isoelectric point:

It has an isoelectric point higher than 8.5 when measured by an isoelectric focusing electrophoresis.

15 The amylase according to the present invention has a liquefying activity capable of permitting degrading starches and starchy polysaccharides at high random, and has an optimum pH on the alkaline side. Owing to the high isoelectric point, it can be purified
20 readily. Detergents with the amylase incorporated therein have excellent detergency especially against the soil of smeared food.

(Figure 1 diagrammatically illustrates the activity of the liquefying alkaline α -amylase according to the present invention as a function of pH)