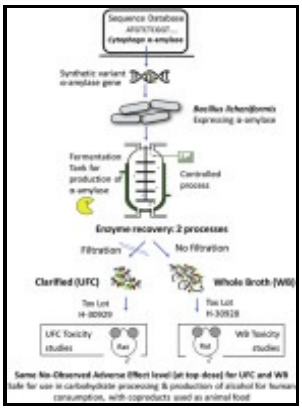
Study of the production of a bacterial alpha-amylase.

University of Birmingham - Production and optimization of α



Description: -
-study of the production of a bacterial alpha-amylase.
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Amylase production

The fructose syrup obtained is used as a sweetener, especially in the beverage industry.

α

If the process is carried out for a time period shorter than the optimum duration the maximum yield cannot be obtained.

Microbial Alpha

They can be subjected to strain improvement, mutations and other such changes by which the production of α-Amylase can be optimized. Saccharification is the production of glucose and fructose syrup by further hydrolysis.

The production of α

The halophilic nature the enzyme prevents inhibition of its activity under these conditions which would otherwise occur if a normal enzyme is used. This is followed by the saccharification process where the starch is hydrolyzed by α-Amylase to yield fermentable sugars. During ripening of fruits, β-Amylase breaks down starch into maltose resulting in the sweetness of ripened fruit.

Production and optimization of α

The purity can also be analysed by size exclusion chromatography wherein the molecular weight of the purified protein can be determined.

Amylase production

International journal of analytical chemistry, 2011, 2011.

α

The optimum pH for activity is found to be 7. The following sections elaborate on the types of amylases and their roles in enzymatic reactions.

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