

## عنوان مقاله:

Fructose Enrichment Of Date Syrup Using Immobilized Glucose Isomerase Enzyme

## محل انتشار:

هجدهمین کنگره ملی صنایع غذایی (سال: 1387)

تعداد صفحات اصل مقاله: 9

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## خلاصه مقاله:

Considering the differences of glucose compounds in various dates, this research has been aimed to convert the glucose existing in date syrups to enriched fructose syrup using immobilized glucose Isomerase enzyme. This procedure is very much similar to the process used for producing high fructose corn syrup(HFCS), however it should be noted that the sucrose hydrolysis stage has been discarded in this study due to negligible amounts of sucrose in the used date syrups. This enzyme (EC: 5.3-1.5) reversibly converts aldopentoses and aldohexoses to its Isomerase in temperature range of about 60 ° c. Quality and quantity of products are highly dependent on temperature range and p H of the reaction , as the amount of produced fructose will increase by increasing temperature and p H . Besides, enzyme stability also heavily depends on aforementioned elements. Isomerization process was performed in a batch in which reaction conditions were 30-90 ° c range and p H = 6-8.5 . It became evident that immobilized glucosel isomerase enzyme would be benefit from the highest activity and stability in 50-60°C and p H = 7-7.7

## کلمات کلیدی:

Substrate, Enzyme activity, Heat resistance, Relative activity

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