

RINGKASAN

PENGARUH PENAMBAHAN ASAM ASKORBAT, ASAM FITAT DAN ASAM OKSALAT TERHADAP AKTIVITAS ENZIM α -AMILASE DARI UBI JALAR (*Ipomoea batatas L.*)

Reaksi enzimatik dapat dihambat oleh berbagai inhibitor. Berdasarkan data penelitian, diketahui bahwa asam askorbat, asam fitat dan asam oksalat dapat menekan kerja enzim α -amilase dalam memecah amilum menjadi glukosa. Enzim α -amilase yang digunakan dalam penelitian ini diisolasi dari ubi jalar. Isolasi dilakukan dengan metode ekstraksi. Hasil isolasi difraksinasi bertingkat menggunakan amonium sulfat pada tingkat kejenuhan 30-50 %.

Berdasarkan data penelitian sebelumnya, diperoleh kondisi optimum enzim α -amilase dari ubi jalar pada pH 6,1, temperatur 65°C dan waktu inkubasi 30 menit. Kemudian dilakukan penambahan asam askorbat, asam fitat dan asam oksalat, masing-masing terkandung dalam substrat amilum 1% melalui variasi konsentrasi pada kondisi optimum enzim α -amilase tersebut.

Hasil penelitian menunjukkan bahwa adanya asam askorbat, asam fitat dan asam oksalat yang terkandung dalam substrat amilum itu dapat menurunkan aktivitas enzim α -amilase dari ubi jalar.



SUMMARY

EFFECTS OF ASCORBIC ACID, PHYTIC ACID AND OXALATE ACID ON SWEETPOTATO α -AMYLASE ACTIVITY (*Ipomoea batatas L.*)

The enzymatic reactions can be inhibited by some inhibitors. Based on the research experiment, we know that ascorbic acid, phytic acid and oxalate acid pushing down activities of sweetpotatoes α -amylase by dividing starch into glucose. The purpose of this experiment is to know influence of ascorbic acid, phytic acid and oxalate acid on activities sweetpotatoes α -amylase which divide starch into glucose. This enzyme was isolated from sweetpotato. Isolation has been carried out by extraction method. It has been done phased fractination using ammonium sulphate at 30-50%. Based on the previous research, obtained that optimum condition sweetpotato α -amylase at pH 6.1, temperature 65°C and incubation times 30 minutes.

It has been done addition ascorbic acid, phytic acid and oxalate acid, each one in substrate starch 1% by variation concentration at optimum condition sweetpotato α -amylase. The results showed that the influences of ascorbic acid, phytic acid and oxalate acid were high significant reduced activities of sweetpotato α -amylase.

