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Abstract: Amylases are a group of enzymes that break down starch, the reserve carbohydrate in germinating seeds. Amylases convert starch into limit dextrins and reducing sugars like maltose. Amylases are useful in preparing weaning and elderly foods. They are also used in making detergents, bread, alcohol, etc. Finger millet amylases are bracketed with the strongest amylases amongst the grains. The present study was undertaken with the purpose of identifying the finger millet genotype with the best amylase activity. Finger millet seeds of 25 genotypes were tested at previously standardized conditions for genotype A404 (pH=4.6, temperature=50°C, germination time=72 hours and incubation time of thirty minutes). Amongst the 25 genotypes, RAU8 showed the highest amylase activity. Thereafter, the RAU8 genotype enzyme extract was analyzed for pH optima, temperature optima, optimum germination time and incubation time. The optimum pH for amylase activity in genotype RAU-8 was found to be 5.0. The optimum temperature was found to be 50°C. Highest amylase activity was observed in extracts of seeds germinated for 96 hrs. Maximal activity was obtained after incubation for 15 min. The study showed that the RAU8 amylase is suitable for use in brewing and detergents industries where temperature, short incubation and fast processes are desired.

Description: Assessment of amylase activity in finger millet (*Eleusine coracana* L. Gaertn.) genotypes

Subject: Biotechnology

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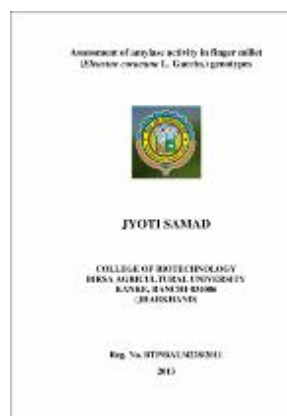
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