

CHANGES OF α -AMYLASE ACTIVITY AND GLUCID CONTENT DURING THE STEEPING AND GERMINATION OF VARIOUS RICE

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Summary

Effect of steeping and germination conditions on the α -amylase activity and glucid content in five rice varieties: IR5451, IR50404, OM4900, Jasmine85, OM6976 were studied. Seeds are soaked in 30-50°C for 72 hours with distilled water (after 12 hours soaking, draining 30 minutes and change fresh water) and germination at 30°C in 1-8 days. The results show that the longer steeping and germination the greater the reduction in sugar content corresponding to the increase in α -amylase activity. The α -amylase activity enzyme increase to 5.66-7.38 times after steeping (corresponding to the reducing sugar content increased from 1.91 to 2.42 times) depending on the variety. During germination, α -amylase activity increased significantly (34.28-41.46) at the first 4-7 days and then began to decrease depending on the rice variety. Dry matter losses (%) and shoot lengths in five rice varieties during germination were also evaluated and showed increases and differences by time and rice variety. Thus, the time of immersion and germination have different effects on the activity of α -amylase enzyme, starch content and reducing sugars, changes in particle characteristics are different depending on the variety.

Keywords: *OM6976, IR5451, IR50404, OM4900, Jasmine 85, α -amylase, reducing sugar.*