

# **Changes in carbohydrates and amylolytic activity during malting of a local variety of rice**

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## **Abstract**

A local variety of paddy, “Mottaikarupan” was selected for this study. Both paddy and its dehusked unpolished rice grains were steeped and allowed to germinate. Steep liquor analysis revealed that there was an increase in the release of the soluble materials with steeping time. Germination of dehusked unpolished rice (77.7%) was better than paddy (59.6%) on the fifth day. A change in moisture content during germination was almost the same for both paddy and dehusked unpolished rice after 2<sup>1/2</sup> days. Appreciable drop in starch content (from 89.1 to 84.5g/100g dry matter) was observed from the third day. Increase in reducing sugar and total sugar contents were observed during germination. Increase in malt amylase (40.0 to 367.8Ug<sup>-1</sup> dry matter) activity was observed from the second to fifth day of germination. Addition of 0.1gl<sup>-1</sup> gibberellic acid improved the germination of dehusked unpolished rice by 11.7% at 4<sup>th</sup> day, while addition of Tween-80 (1.0ml/l) with gibberellic acid decreased the germination.

Key words: Rice malt, Malting, Germination, Steeping, Rice steep liquor, Malt enzymes