The moisture of the newly harvested paddy cv. Khao Dawk Mali 105 was reduced to 15.12% content and packed in polypropylene bags (70 micrometer thickness). The bags were stored at 25 °C and 37 °C for 7 months. Analysis of the reducing sugars of the starch of the milled rice during storage at 37 °C was found to increase from 0.42 % to 0.62 % while the reducing sugars of the starch of the milled rice stored at 25 °C, decreased from 0.41% to 0.19%. The total sugars and amylose contents were analyzed and found not to change during storage at 25 °C and 37 °C. The amylase activity in the brown rice was found to be 0.9-9.6 U/100g during storage. The viscosity property by RVA of the milled rice starch was found to increase during storage under the study conditions. From the results, it might be shown the relationship between the increase of the reducing sugars when the rice stored at high temperature and this condition tended to cause the higher viscosity property of the rice starch during storage.