PHYSICOCHEMICAL, TEXTURAL, AND NUTRITIONAL CHARACTERIZATION OF MEXICAN RICE CULTIVARS.

ABSTRACT

The physicochemical properties, textural properties, and starch digestibility of rice cultivars grown in Mexico were evaluated. Variations existed in grain dimensions, and the rice grains were classified as medium, long, and extra long. Huimanguillo had the highest amylose content (30.4%), and A06, A92, A98, and Champoton presented the lowest amylose content (24.3–25.2%). The protein content was 7.1–11.0% and the lipid level was 0.47–1.22% among these Mexican cultivars. Champoton showed the highest temperature and enthalpy of gelatinization, and this with A98, Culiacan, and Huimanguillo had the highest enthalpy of retrogradation. Cotaxtla had the highest pasting peak, setback, and final viscosity. The texture assessment in cooked rice showed that A06 had the highest hardness, and A96 and A98 had the highest stickiness. There was little difference in the rapidly digestible starch, slowly digestible starch, and resistant starch content of tested Mexican rice cultivars. The differences in the physicochemical properties could be used to determine the end use of these Mexican rice cultivars.

http://www.aaccnet.org/publications/cc/2011/May/Pages/88_3_245.aspx

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