ABSTRACT

Larasati Setya Putri. Physicochemical Properties (Cooking Quality) and Sensory Characteristics (Eating Quality) of Several Cultivated Rice Varieties. Under Direction of Leily Amalia and Bram Kusbiantoro.

The physicochemical properties and sensory characteristics were studied for six varieties namely IR42, Inpara 3, Ciherang, Inpari 1, Inpari 2, and Inpari 6 Jete. Physicochemical parameters measured were amylose content (AC), in vitro digestibility of starch, gel consistency, amilography, water uptake ratio (WUR), and volume expansion. The sensory data on cooked rice obtained by scoring, hedonic, ranking test, and Quantitative Descriptive Analysis (QDA). The result showed that AC of varieties ranged from 18.87 to 28.60%. The highest digestibility of starch was found in Inpari 6 Jete. On the other hand, Inpari 6 Jete had the lowest gelatinization temperature. The gel consistency of six varieties were range from 32.25 to 86.25 mm. The WUR and volume expansion of all varieties were not significant. Scoring test showed that the colour of cooked rice from all varieties studied was white. The most favorite cooked rice was recorded in Inpari 6 Jete. Ranking test for aroma of cooked rice showed that inpara 3 was the most fragrant. There ware significant correlations between AC and some physicochemical properties and also sensory characteristics. AC was positively correlated with volume expansion ($r=0.430, p<0.05$) and the colour of cooked rice ($r=0.752, p<0.01$). On the other hand, AC was negatively correlated with gel consistency ($r=-0.766, p<0.01$), in vitro digestibility of starch ($r=-0.633, p<0.01$), gloss of cooked rice ($r=-0.805, p<0.01$), aroma ($r=-0.502, p<0.05$), and texture of cooked rice ($r=-0.929, p<0.01$).

Keyword: rice quality, physicochemical, sensory characteristics.