

DETERMINATION OF TOTAL CAROTENOIDS AND ANTIOXIDANT ACTIVITY IN PEPPER *Capsicum chinense*

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Peppers of the genus *Capsicum* belong to the family Solanaceae, and have fruits with wide genetic diversity in terms of colour, form and chemical composition. Carotenoids are substances present in abundance in peppers and are considered antioxidant. Epidemiological data indicate a possible role of antioxidant compounds in the prevention of numerous chronic diseases, including certain types of cancer, cardiovascular and neurodegenerative diseases. The objective of this study was to quantify the level of total carotenoids and evaluate antioxidant activity in pepper fruits of the genotypes "PRR", "Cumari do Pará", "PMO" and "Murupi". The extraction and quantification of carotenoids were conducted according to Rodriguez-Amaya (1999). Determination of antioxidant activity was by the ABTS method following RE et al. (1999) adapted by RUFINO et al. (2007). Peppers of the genotypes "PRR" and "PMO" had elevated carotenoid values, 215.86 µg/100g and 232.14 µg/100g, while the genotypes "Cumari do Pará" and "Murupi" had low values of, 9.76 µg/100g and 12.10 µg/100g, respectively. Regarding antioxidant activity, the peppers had high values, in particular the peppers "PMO", "Murupi" and "PRR", with values of 18.29 µMolar trolox/g, 17.19 µMolar trolox/g and 12.45 µMolar trolox/g. Meanwhile, the pepper "Cumari do Pará", presented lower levels than the others, of 7.74 µMolar trolox/g. Thus, it is apparent that peppers, *Capsicum chinense*, are important sources of antioxidant compounds that, when present in the diet, may contribute to the deactivation of molecules that generate oxidative stress, leading to biochemical and physiological damage to the organism.