

Title Addition of a surfactant does not contribute to the extraction of carotenoid pigments in tomatoes and watermelons

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Abstract

The determination of lycopene content is currently the focus of different works carried out on tomatoes and watermelons in many laboratories, once this compound is scientifically proven to be related to the prevention of different types of cancer. The incomplete extraction of lycopene, which primarily occurs due to its retention in filter paper porous, causes the underestimation of pigments concentration in the analysed material. The addition of surfactants is potentially a way to circumvent this problem. The present work was carried out to evaluate the effectiveness of the addition of a surfactant in the extraction of lycopene in tomatoes (*Lycopersicon esculentum* cv. Solarset) and watermelons (*Citrullus lanatus* cv. Crimson Sweet). Tomatoes and watermelons were harvested at their optimum maturity stages in commercial fields and taken to the postharvest laboratory. Ten grams of each tissue were homogenized with 30 ml acetone and 20 micro l Triton X (alpha-[4-(1,1,3,3-tetramethylbutyl) phenyl]-omega -hydroxypoly(oxy-1,2-ethanedyl)). The homogenate was then vacuum-filtered and 45 ml hexane was added. The final solution was transferred to a separation funnel. The hexane-pigment extract was then transferred to a 25-ml volumetric flask and the volume was brought up with hexane. Absorbance was read in two different wavelengths (503 and 451). The addition of the surfactant did not significantly contribute, in both species, to lycopene extraction.