



QUALITY CHANGES OF 'CEMPEDAK' (*Artocarpus integer*) FRUIT POWDER PACKAGED IN ALUMINUM-LAMINATED POLYETHYLENE POUCHES

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ABSTRACT

'Cempedak' powder was produced by spray-drying of juice produced from Celluclast[®] 1.5 L-treated 'cempedak' fruit puree, to which 15% (w/w) maltodextrin DE 10 and 0.66% (w/w) calcium phosphate have been added. Spray-drying took place at an inlet air temperature of 160 °C. The powder was packed in aluminum-laminated polyethylene pouches and subjected to accelerated storage at a temperature of 38±1 °C and 90% relative humidity (RH) for 49 days. Spray-dried 'cempedak' fruit powder was found to have a more pronounced hygroscopicity and caking tendency with the increase of storage time-apart from becoming darker, more reddish but less yellowish. The kinetics of most quality parameters monitored was of zero-order, indicating that the 'cempedak' fruit powder degradation was constant: while hygroscopicity and water solubility index was of the first order. Under accelerated storage conditions, the shelf-life was extrapolated to be 60.43 days, based on the Guggenheim-Anderson-de Boer (GAB) model for water activity-moisture content.