

EFFECTS OF POSTHARVEST APPLICATION OF HEXANAL ON PHYSICO-CHEMICAL CHARACTERISTICS OF TOMATOES (CV. VAISHALI) DURING STORAGE

Chavan R. F & Sakhale B. K

Research Scholar, Department of Chemical Technology, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad-431004, M.S., India

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ABSTRACT

The tomato fruits (Cv. Vaishali) harvested at breaker stage of their maturity were washed with clean water and subsequently treated with 500 ppm solution of fungicide benomyl. After treatment with fungicide, the hexanal treatment at variable concentrations such as 300, 600, 900 and 1200 μL^{-1} given to tomato fruits in four different lots at 20 oC for 24 hrs and these treated fruits were stored for investigation of different characteristics at 20 oC. Various physico-chemical parameters were recorded during storage period at subsequent time intervals of 4 days, and the findings obtained showed decreased physiological loss in weight (10%), the hue angle and hence the surface color increased from -3.24 to 3.59, TSS found increased from 1.5 to 3.1 obrix, firmness showed drastic decline from 361 to 112 gf, percent titrable acidity also changed 0.40 to 0.15 %, however AA content showed very gradual and steady decrease from 72.58 to 21.64 mg/100 g, total phenolic content showed very significant retention and only reduced from 3.80 to 3.21 mg GAE/g and lycopene content which is one of the key parameter of tomato also showed significant retention and showed up trend from 6.98 to 12.08 mg/100g respectively.

KEYWORDS: Tomato, Hexanal, Post-harvest, Parameters, Shelf Life, Quality