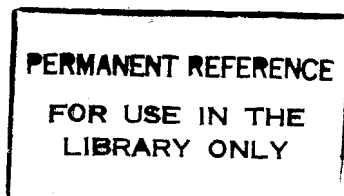


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**EFFECTS OF 1-METHYLCYCLOPROPENE (1-MCP) ON POSTHARVEST  
QUALITY OF CHILLI**

*(Capsicum annuum L.var.MI-2)*



A PROJECT REPORT PRESENTED BY

**SALMATHUL JASEELA ABUSALIHU**

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## THE EFFECTS OF 1- METHYLCYCLOPROPENE (1-MCP) ON POSTHARVEST QUALITY OF *Capsicum annuum* L.var.MI-2

A. SALMATHUL JASEELA

Postgraduate Institute of Science

University of Peradeniya

Peradeniya

Sri Lanka

*Capsicum annuum* L.var.MI-2 pods were harvested at mature green stage and analysed its postharvest behaviour with respect to respiration rate, ethylene production rate along with colour. This cultivar of *Capsicum* produced low amounts of ethylene. However, external ethylene may be involved in the regulation of fruit maturation and senescence. Effects of postharvest treatments as ethylene releasing compound ethephon, ethylene action inhibitor 1- methylcyclopropene (1-MCP), and combination of 1-MCP and ethephon on postharvest quality of *Capsicum annuum* L.var.MI-2 stored at  $27\pm 2^{\circ}\text{C}$  were analysed. Patterns of rate of respiration and rate of ethylene production of harvested *Capsicum annuum* L. var. MI-2 did not clearly indicate whether the fruit is climacteric or non-climacteric. Ethephon treatment decreased the rate of respiration during the early part of storage. Latter it was increased. This was coincided with loss of fresh weight. And this treatment induced the rate of ethylene production and thereby induced senescence via induction of colour, shrivelling and disease incidence on *Capsicum* pods. Since 1-MCP is an ethylene action inhibitor it decreased the inductive effects of ethylene during the postharvest life of *Capsicum* such as rate of respiration, rate of ethylene production, change in colour, % loss of fresh weight, degree of shrivelling and % disease incidence. The response of ethephon + 1-MCP treatment was similar as 1-MCP treatment in most of the postharvest quality parameters. So, the inhibitory effects of 1-MCP were effective to certain extent even the *Capsicum* pods treated with ethephon prior to 1-MCP treatment. But the 1-MCP + ethephon treatment effects were more or less similar as ethephon treatment alone.