

## QUANTIFICATION OF LUPEOL IN SELECTED JUICY CULTIVARS OF MANGO (*MANGIFERA INDICA* L.) POPULARLY GROWN IN TELANGANA REGION

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Received-04.09.2017, Revised-23.09.2017

**Abstract :** The mango (*Mangifera indica* L.) is a juicy stone fruit (drupe) and also one of the most important climacteric tropical fruits in the world. Numerous phytochemicals are present in mango peel and pulp, such as triterpene, lupeol which is under basic research for its potential biological effects. Present investigation about "Quantification of lupeol in selected juicy cultivars of mango (*Mangifera indica* L.) Popularly grown in Telangana region" quantified by High performance Liquid Chromatography (HPLC) method. Experiment was designated with two factorial completely randomized design and executed with the objectives of estimation of lupeol in selected juicy varieties and estimation of lupeol in selected juicy varieties during storage at ambient conditions. Among the varieties significantly chinnarasam recorded highest amount of lupeol (67.24±8.77 µg/100g). While lowest amount of lupeol was recorded in Pandurivari Mamidi (8.45±0.10 µg/100g). Among the storage days significantly highest amount of lupeol was recorded in 4<sup>th</sup> day of storage (38.63±15.93 µg/100g). While 8<sup>th</sup> and 12<sup>th</sup> day of storage were similar amount of lupeol content 29.73±5.93 µg/100g 29.53±5.94 µg/100g respectively. Lupeol content varies among the cultivars and storage days. Showed maximum amount of lupeol content at its 4<sup>th</sup> day of storage.

**Keywords:** HPLC (High performance Liquid Chromatography), Juicy cultivars, Lupeol, Mango, Triterpene

### REFERENCES

**Nutrient profile for mango from USDA SR-21.** *Nutritiondata.com*. Retrieved 31 January 2016.

**Anyakora, C., Ibukam, A., Teddy, E. and Francis, O.** (2008). African Journal of Pharmacy and Pharmacology. 2 (2).

**Berardini, N., Fezer, R., Conrad, J., Beifuss, U., Carle, R. and Chieber, A.** (2005). "Screening of mango (*Mangifera indica* L.) cultivars for their contents of flavonol O – and xanthone C-glycosides, anthocyanins, and pectin". *J Agric Food Chem.* 53(5): 1563–70.

**Chaturvedi, P.K., Bhui, K. and Shukla, Y.** (2008). "Lupeol: connotations for chemoprevention". *CancerLett.* 263(1):113.

**Gouado, I., Schweigert, F.J., Ejoh, R.A., Tchouanguap, M.F. and Camp, J.V.** (2007). "Systemic levels of carotenoids from mangoes and papaya consumed in three forms (juice, fresh and dry slice)". *Eur J Clin Nutr.* 61(10): 1180

**Jyotshna., Srivastava, P., Bharti, K. and Karuna, S.** (2015). Uni dimensional double development HPTLC – densitometry method for simultaneous analysis of (*Mangifera indica* L.) pulp and peel during storage. *Food Chemistry.* 176: 91-98.

**Kostermans, A.J.H.G. and Bompard, J.M.** (1993). The Mangoes: Their Botany, Nomenclature, Horticulture and Utilization. *Academic Press.*

**Mahammad, S.** (2009). Lupeol a novel anti-inflammatory and anti-cancer dietary triterpene. *Cancer Letters.* 285: 109-115.

**Mahattanatawee, K., Manthey, J.A., Luzio, G., Talcott, S.T., Goodner, K. Baldwin, E.A.** (2006). "Total antioxidant activity and fiber content of select Florida-grown tropical fruits". *J Agric Food Chem.* 54 (19): 7355–63.

**Morton. and Julia Frances.** (1987). "Mango". *Fruits of Warm Climates.* NewCROP, New Crop Resource Online Program, Center for New Crops & Plant Products, Purdue University. pp. 221–239.

**Rahman, S. and Saleem, M.** (2011). Beneficial health effects of lupeol triterpene; A review of preclinical studies. *Life Sciences.* 88(7-8): 285-93.

**Rincon and Keer** (2010). Influence of osmotic dehydration, ripeness and frozen storage on physicochemical properties of mango. *Journal of food processing and preservation.* 34 (5): 887-903.

**Saratha, V., Iyyam, S. P. and Subramanian, S.** (2011). Isolation and characterization of lupeol, a triterpenoid from *Calotropis gigantean* latex. *Interantional Journal of Pharmaceutical Sciences Review and Research.* 10 (2): 54-57.

**Shukla, H. K.** (1988). Pre and post harvest physiology of mango fruits (*Mangifera indica* L.) cv. Dashehari. Ph. D Thesis, Kanpur University. Kanpur.

**Singh, U.P., Singh, D.P. Singh, M.** (2004). "Characterization of phenolic compounds in some Indian mango cultivars". *Int J Food Sci Nutr.* 55 (2): 163–9.

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