

TOTAL MONOMERIC ANTHOCYANIN COMPOSITION OF SOME UNDEREXPLOITED FRUITS USED BY KANI TRIBAL COMMUNITY OF AGASTHYAMALAI BIOSPHERE RESERVE.

R.D. Arun Raj* and M. Reginald Appavoo

Dept. of Botany & Research Centre, Scott Christian College (Autonomous), Nagercoil, Tamilnadu.

Corresponding Author R. D. Arun Raj

Dept. of Botany & Research centre, Scott Christian College (Autonomous)

Nagercoil - 629003, Kanyakumari district, Tamil Nadu, India.

email: arunrajrd@gmail.com

Mobile: +919744356244

Phone: 0471-2255780

Abstract : Total monomeric anthocyanin (CGE) composition of 10 underutilized fruits used by *Kanis*, an ethnic community of Agasthyamalai Biosphere Reserve was quantified using pH-differential method. The values obtained were ranged from 23.32 mg/L for *A. lindleyana* to 304.26 mg/L for *R. glomeratus*. 5 of the 10 fruits studied showed level of above 150 mg/L. The result proves that, these fruits are rich in anthocyanin, which is even comparable to the commercially cultivated counterparts known to be good sources of this pigment.

Keywords : Agasthyamalai Biosphere Reserve, Anthocyanin, *Kanis*, Wild fruits.

REFERENCE

- Asolkar, L.V.; Kakkar, K. K. and Chakre, O. J.** (1992). Second supplement to Glossary of Indian Medicinal plants with active principles- Part 1. Publications and Information Directorate, CSIR, New Delhi.
- Gillman, M.W.; Cupples, L.A.; Gagnon, D.; Posner, B.M.; Castelli, W.P. and Wolf, P.A.** (1995). Protective effect of fruit and vegetables on development of stroke in men. *Journal of the American Medical Association*, 273: 1113–1117.
- Gopalan, C; Ramasastri, BV; Balasubramanian, Pant, S.C (Eds.).** (1995). Nutritive value of Indian foods. National Institute of Nutrition, Indian Council of Medical Research, Hyderabad, 8–10.
- Gould, K.S. and Lee, D.W. (Eds.),** (2002). Anthocyanins and leaves. The function of anthocyanins in vegetative organs. *Advances in botanical research* 37: 134-137
- Gross J.** (1987). Pigments in Fruits. Academic Press. London
- Jyoti Kumari.** (2003). Indigenous knowledge erosion. *Indian Folk life*, 2 (13): 10 -12.
- Karuppasamy, S.; Muthuraja, G. and Rajasekaran, K.M.** (2011). Antioxidant activity of some lesser known wild edible fruits from Western Ghats of India. *Indian J Nat. Prod. Resour.*, 2(2): 174 -178.
- Lee, J.; Durst, R.W. and Wrolstad, R.E.** (2005). Determination of total monomeric anthocyanin pigment content of fruit juices, beverages, natural colorants, and wines by the pH differential method: Collaborative study. *Journal of the AOAC International*, 88: 1269–1278.
- Lohachoopol, V.; Srzednicki, G. and Craske, J.** (2004). The Change of Total Anthocyanins in Blueberries and Their Antioxidant Effect After Drying and Freezing. *Journal of Biomedicine and Biotechnology*, 5: 248–252
- Mashelkar, R.A.** (2001). Intellectual Property Rights and the Third World. *Curr. Sci.*, 81 (8): 955-965.
- Mazza, G. and Miniati, E.** (1993). Anthocyanins in Fruits, Vegetables and Grains. CRC Press, Boca Raton, FL.
- Nazarudeen, A.** (2010). Nutritional composition of some lesser known fruits used by the ethnic communities and the local folks of Kerala. *IJTK*, 9(2): 398-402,
- Reddy, S.** (2006). Making Heritage Legible: Who Owns Traditional Medical Knowledge?. *Int. J. Cultural Property*, 13: 161–188.
- Sahu, G. R.; Sarawgi, A. K.; Sharma, B. and Parikh, M.** (2010). Inheritance of Anthocyanin Pigmentation in Rice. *Journal of Rice Research*, 3(1): 19 - 23.
- Seeram, N.P.; Bourquin, L.D. and Nair, M.G.** (2001b). Degradation products of cyanidin glycosides from tart cherries and their bioactivities. *J Agric Food Chem* 49: 4924–4929.
- Seeram, N.P.; Momin, R.A.; Bourquin, L.D. and Nair, M.G.** (2001a). Cyclooxygenase inhibitory and antioxidant cyanidin glycosides from cherries and berries. *Phytomedicine* 8: 362–369.
- Suresh, R.; Saravanakumar, M. and Suganyadevi, P.** (2011). Anthocyanins from Indian cassava (*Manihot esculenta* Crantz) and its antioxidant properties. *IJPSR*, 2(7): 1819-1828.
- Wu, X.; Beecher, G. R.; Holden, J. M.; Haytowitz, D. B.; Gebhardt, S. E. and Prior, R. L.** (2006). Concentrations of Anthocyanins in Common Foods in the United States and Estimation of Normal Consumption. *J.Agric.Food Chem.*, 54: 4069 - 4075.