AJHS.
Asian Journal of Home Science
Volume **9** | Issue 1 | June, 2014 | 17-20

Research Paper

e ISSN-0976-8351 | Open Access - *www.researchjournal.co.in*

Exploration of plant derived natural dyes in Assam

■ BINAPANI DEKA, PANKAJ DEKA, R. BORGOHAIN **AND** M. NEOG

Received: 01.02.2014; **Revised:** 10.02.2014; **Accepted:** 18.02.2014

■ **ABSTRACT :** Considering the importance of natural dyes, a survey to explore plant derived natural dyes was conducted during 2012-13 in different locations of Jorhat district of Assam. Altogether six sources of natural dyes *viz.*, *Tectona grandis* (teak), *Nyctanthes arbor-tristis* (night-flowering jasmine), *Lawsonia inermis* (henna), *Tagetes patula* (marigold), *Clitoria ternatea* (aparajita), *Curcuma longa* (turmeric) and *Phutuki* (*Melastoma malabathricum* L) were explored. Alum (Potassium aluminium sulphate), Copper sulphate, vinegar and ammonia were used as mordants. Experimental results indicated that varieties of colours can be produced from a single plant depending on the types of mordant used. The treated fabrics showed excellent colour fastness properties. The treated samples did not exhibit any colour fading and maintained the original texture. Antibacterial activities of raw and the mordanted dye samples against both *E. coli* and *S. aureus* bacteria were examined. The antibacterial activity of dyed fabrics was ranked as copper sulphate > potassium aluminum sulphate > vinegar > without mordant against both *S. aureus* and *E. coli*. The technique of producing natural dyes from the aforementioned sources was percolated and popularized among the local self-help groups of Jorhat, Assam.

■ **KEY WORDS:** Exploration of plant, Natural dyes, Mordant

■ **HOW TO CITE THIS PAPER :** Deka, Binapani, Deka, Pankaj, Borgohain, R. and Neog, M. (2014). Exploration of plant derived natural dyes in Assam. *Asian J. Home Sci.*, **9** (1) : 17-20.

See end of the paper for authors' affiliations

BINAPANI DEKA
Krishi Vigyan Kendra, Kaliapani, TEOK (ASSAM) INDIA
Email: dbinapani@ymail.com, badalassam@gmail.com