

QUALITY OF *DHATURA* LEAVES : A COMPARATIVE STUDY ON PLANTS GROWING IN POLLUTED AND NON-POLLUTED AREA

Bishnupriya Dhar¹, R.M. Johri², R.K. Sharma³ and S.C. Pant⁴

Quality of raw drugs used in Ayurvedic formulation is of Prime impirtance. In India collection of commercial raw material is mostly being made from wild sources. However, the plant growing in polluted area will not be suitable for thereapeutic uses because of the presence of pollutants which are generally toxic in nature. Therefore an atempt has been made in present paper to identify structural chemical change in the leaf of Datura metel Linn. (Family-Solanaceae) growing in pollued area so that the drugs collected from polluted area may be identified and discarded. Effect of air pollution on leaf epidermis along with anatomy, and preliminary phyto-chemistry has been studied in Datura metel Linn. Besides changes in percentage of the chemical constituents, frequency of stomata, stomatal abnormalities such as

degeneration of guard cells, arrested development are more frequent in the leaves collected from polluted environment. Major venation pattern and marinal ultimate venation remain unchanged. However there is a significant difference in thickness of veins, vein ending termination, density and length of trichome as compared to the corresponding values in the leaves and length of trichome as compared to the corresponding values in the leaves from apprently non-polluted areas of the National capital territory of Delhi city.

-
- 1.& 4. Research Officer (Pharmacognosy), Central Council for Research in Ayurveda. and Siddha, 61-65, Institutional Area, Opp. 'D' Block, Janakpuri, New Delhi - 110058.
 2. Reader, M.M.H. Post Graduate College, Ghaziabad. (U.P.).
 3. Senior Scientific Officer, Pharmacopoeial Laboratory for Indian Medicine, Ghaziabad (U.P.).

This paper was presented in the Seminar on the Role of Good Manufacturing Practices in the Development of ISM Drugs held on 23rd and 24th April 2001 at CRI (Ay.) Kolkata.