

# NATURAL DYES:

## Scope and Challenges



M. Daniel • S.D. Bhattacharya  
Arun Arya • Vinay M. Raole

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*Chief Editor*

**M. Daniel**

Department of Botany

*Associate Editors*

**S.D. Bhattacharya**

Department of Textile  
Chemistry

**Arun Arya**

Department of Botany

**Vinay M. Raole**

Department of Botany

The Maharaja Sayajirao University of Baroda  
Vadodara – 390 002, India



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## PREFACE

Natural dyes is a highly exciting and rewarding field. But the progress that is expected in this area does not appear to happen. This is because of the lack of awareness of the potentialities of these compounds. The National Seminar held in Baroda on 28 and 29<sup>th</sup> of February 2004 was a beginning to highlight the multifaceted arena of natural dyes. For the first time, the application of natural dyes in foods, pharmaceutical preparations, cosmetics, wall paints and for art paintings has been highlighted. It is heartening to say that the response was very heartwarming.

A vast majority of participants in the seminar was from Textile chemistry and dyeing sections. It is observed that a majority of them used the conventional dyes like madder, saffron, annatto etc. One set back for selection of these dyes is that they are very costly to procure because of their uses in medicine. But some workers attempted to dye clothes with uncommon dyes like apricot or teak leaves or barks of neem and *Cassia*, which are cheap and readily available. The antimicrobial properties of dyes and the rapid multiplication of dye and yielding plants are the other aspects attempted. Quite a few researchers conducted the search for new dyes, the most prominent among them is Bharathan from Gandhigram Institute, Dindigal whose compilations of the raw materials and dyeing recipes are some of the highlights of this book. The natural dyes used in paintings also received great attention. Accounts of the food colors were given but no attempt was done to put them into practice. There were absolute lacunae in the areas of pharmaceutical colors, wall paints and cosmetics. Another disturbing fact was that nobody was aware or keen to know of the chemical nature and properties of the dyes they have used or the identity and correct name of the source plants.

The workshop and exhibition conducted on the third day was huge success. More than 100 sources of dyes, the different natural dyes like anthocyanins, carotenoids, quinones, flavonoids, proanthocyanidins, iridoids, indigo etc. and the various extraction procedures and their analytical methods were exhibited. Also exhibited were the paintings by Shatrughan Thakur of Department of Paintings, Fine Arts Faculty, The Maharaja Sayajirao University of Baroda and a large number of paintings and dyed materials from Gandhigram Rural Institute, Dindigal. Mr. Bharathan, assisted by his

students gave a live-demonstration of various dyeing processes practiced by them. Also presented in the exhibition were wall paints and cosmetics like face powder, nail polishes and lipsticks prepared using natural dyes.

The editors express their thanks to all the contributors for the timely submission of their manuscripts in the proper form, to the clerical staff of Department of Botany for typing certain parts of the manuscript and Scientific Publishers (India), Jodhpur for doing an excellent job of printing and publishing this volume.

**Editors**

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**A.**  
**General**