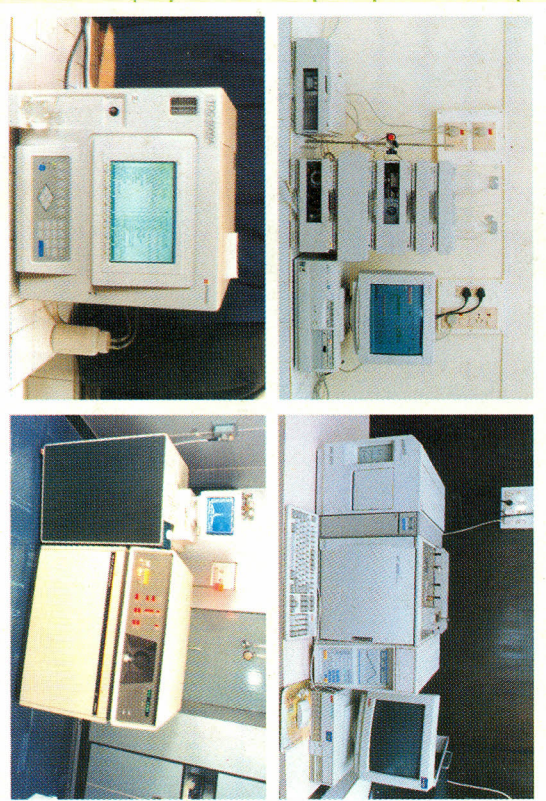


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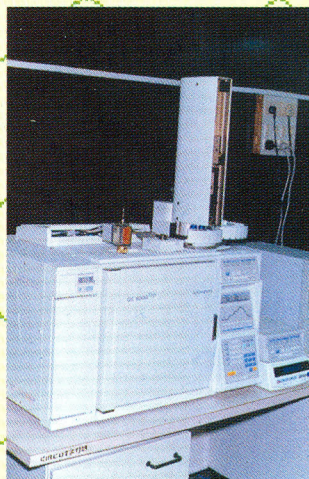
CIRCOT ECO-TESTING FACILITIES FOR TEXTILE MATERIALS



Central Institute for Research on Cotton Technology
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Introduction

The Central Institute for Research on Cotton Technology is an acknowledged leader for over 78 years in the field of testing, standardisation and development of test methods for different types of textile materials. The environmental issues have never been in a sharper focus than as it is today. The rapid strides of the industrial progress witnessed world over has produced in its wake a number of environmental



Gas Chromatograph

problems in almost all spheres of human activities. Textile field is no exception to this and is one such area of activity which is at the centre of attention of the world as several large number of chemicals are employed during both production and processing.

Eco-standards are now gaining ground as an instrument of environment policy in most of the industrial countries of the developed and developing world. Responding to this new challenge and to lend a helping hand to the Indian trade and industry, CIRCOT has created a full fledged Eco-testing Laboratory for issuing Certificate of Eco-compliance for Textile Materials.

This modern and state-of-the-art Eco-testing Laboratory at CIRCOT was established with partial funding from Ministry of



UV-VIS Recording Spectrometer



Atomic Absorption Spectrometer

Textiles, Govt. Of India. The equipment and test methods employed for evaluating the banned and red-listed chemicals in textiles very well conform to various international standards and requirements.

Salient Features of Eco-testing Facility at CIRCOT

- ☑ Modern and state-of-the art equipment for evaluation of eco-parameters in textiles
- ☑ Well furnished chemical laboratory
- ☑ Qualified scientific and technical personnel
- ☑ Staff trained in India and abroad in analytical procedures
- ☑ International standard methods adopted for evaluation of eco-parameters

Major Analytical Instruments in the Eco-testing Laboratory

- ☑ Gas Chromatograph with ECD, FID and NPD Detector Systems
- ☑ High Performance Liquid Chromatograph (HPLC)
- ☑ Gas Chromatograph with Mass Spectrometer (GC-MS)
- ☑ Total Organic Carbon Analyser
- ☑ UV-VIS Recording Spectrometer
- ☑ Atomic Absorption Spectrometer
- ☑ X-Ray Fluorescence Spectrometer
- ☑ High Performance Thin Layer Chromatograph (HPTLC)
- ☑ pH Meter
- ☑ Centrifugal Evaporator
- ☑ Weatherometer
- ☑ Computerised Colour matching System
- ☑ Colourfastness Evaluation System



High Performance Thin layer Chromatograph

Eco-parameters Evaluated

- Free Formaldehyde** : Spectroscopic evaluation of free and total formaldehyde
- PCP** : Detection and quantification of PCP through Gas Chromatograph with ECD & MSD
- Banned Pesticides** : Detection and quantification of banned pesticides employing Gas Chromatograph coupled to ECD & MSD
- Toxic Heavy Metals** : Analysis of toxic heavy metals through Atomic Absorption Spectrometer using Flame, Graphite Hydride Generator & Mercury Concentrator Systems as per international norms
Qualitative and quantitative estimation of heavy metals by X-Ray Fluorescence Spectrometer
- Banned Aromatic Amines** : Qualitative and quantitative analysis of banned aromatic amines employing HPTLC, HPLC and GC-MS
- Halogenic Carrier** : Analysis of halogenic carrier using Gas Chromatograph with FID
- Effluent Analysis** : Estimation of total organic carbon content in textile effluents using TOC
- Colourfastness** : Evaluation of colourfastness to washing and light using Xenon lamp



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Weatherometer