RELEASE OF DEVICE

by the then Governor of Jharkhand, Shri CP Radhakrishnan

PATENT

Indian Patent Office Application No. 202331062688.

ECONOMICS

Bill of materials	:	Rs. 15000 (Approx.) including parts and labour
Market Price	:	Rs. 25000 (Approx.)
Profit per unit	:	Rs. 10000 (Approx.)

Potential users: Lac processing centres, Quality Control & Assurance Labs, Food Regulatory Authorities, the Lac-based industry, the Paint Industry, and ICAR- KVK.

Technology Transferred: M/s Mansa Enterprises, Chandigarh

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LAC COLOR INDEX ANALYSER

An electronic, handheld, low cost and Make in India device for the quality analysis of lac resin

भाकृअनुप
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LAC COLOR INDEX ANALYSER (LACILYSER)

WHAT IS COLOR INDEX?

The color index of lac is a standardized numerical or categorical value that represents the color characteristics of lac. It provides a simplified way to assess and communicate the color properties of lac, allowing for easy comparison and specification compliance in various industries.

HOW IS IT MEASURED CONVENTIONALLY?

According to the Indian Standard IS 6921:1973 (Methods of sampling and test for lac and lac products), the colour index of lac is estimated by visually comparing the lac solution with a standard iodine solution of known colour intensity. The lac solution appears darker, and it is diluted step by step with alcohol until its colour matches the iodine standard. The final colour index value is calculated based on the volume of alcohol added to achieve the match. The darker the sample, the higher its colour index will be.

LIMITATIONS OF CONVENTIONAL METHODS

- Time-consuming
- Subjective in analysis
- Required skilled workforce
- Accuracy and precision are compromised

HOW IS THE LACILYSER UNIQUE?

LaCilyser: The Lac Color Index Analyser is an integrated device designed to measure the color index of lac precisely. With its pre-calibrated system and resolution of color index ±1.0, the device offers accurate results across a wide range of lac color index values. Operating on a user-friendly interface, the device incorporates data acquisition and processing capabilities, providing quick and reliable measurements. The standardized preparation of the lac solution, as per IS:6921-1973, ensures consistency and adherence to recognized protocols. The LaCilyser is a valuable tool for industries requiring precise color values, contributing to quality control.

HOW ARE SAMPLES TESTED USING LACILYSER?

Step 1: Prepare lac samples as per BIS standards and pour in the sampling tube.

Step 2: Insert the sampling test tube in the testing chamber.

Step 3: Press the measuring button on the left side of the device. Color Index value is displayed on the screen.

SALIENT FEATURES

- No Titration Rapid Analysis
- Minimal Safety Requirement
- Precise and Accurate
- Low Cost of Analysis
- Low Maintenance
- Low Operations Cost
- Easy Sample Preparation
- Easy Operation
- Portable and Ergonomic
- Customizable to any resins

SPECIFICATIONS

Measurement	: Range 0 to 40 color index values
Analysis time	: 5 sec
Accuracy	: +/- 1.0 Color index
Precision	: +/- 0.5 Color index
Resolution	: - 0.1 Color index
Error	: 1.0 Color index
Sensor Type	: Spectral Sensor
Display	: 2.5" LCD
Flexibility	: Logically Programmable, Customized and User friendly
Sensitivity	: +/- 1.0 Color index
Repeatability	: 0.01 decimal place value
Battery backup	: 10 hours per full charge