



# Recovery of Lac dye Of improved Quality

## Technology Description

Sticklac wash water is acidified with mineral acid and the supernatant clear liquor is further processed to recover Lac Dye in Ca-salt form which on further acidification, crystallization, filtration, washing and drying yields bright

## Country

India

## Scalability

Yes this technology is scalable.

Name of institute:  
IINRG, Ranchi, Jharkhand.  
Stage of development:  
Ready for commercialization  
Patent status: No

Scientific Experts:  
Dr. N. Prasad  
Dr. S.K Pandey

## Background

From ancient times, Lac Dye has been used in India as a skin cosmetic and for the dyeing of wool and silk, while China has a tradition of usage for leather dyeing! The present production of this dye in India is limited to crude grade (dull red) used only for dyeing purpose and also restricted to only few industries. The process developed and standardized at IINRG, Ranchi, (lead centre of NAIP project) can be used for recovering of Lac Dye (bright red) of improved quality.

## Benefits / Utility

Used in textile as mordant dye for dyeing animal fibres like wool and silk  
The colour of the dye can be modified by the appropriate choice of mordant from violet to red and brown  
The yield of this dye is 0.17-0.30% (by wt. of seedlac)  
Since non-toxic, so use of proper chemical and process with proper material of construction (M.O.C.) of plant gives bright red lac dye of improved quality for dyeing purpose. It also

## Business and Commercial Potential

Good quality Lac dye (above dye content-50%) fetches higher price above Rs. 2,500/-kg in domestic market. The product is thus of considerable commercial importance. The production potential for the product is very high as only few Lac processing industry in India, manufacture good quality Lac Dye. There is also good scope for the export of Lac dye to other countries. The establishment of such type of unit has very good future keeping in view that Lac Dye can be used for further purification for food application apart from dyeing use and has advantage of being natural over synthetic dyes, which are generally

## Potential investors to this technical innovation

Lac processing industries are the potential Investors.



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## Financials

The processing cost of lac dye is Rs 800-900/kg. Whereas good qualities Lac dye fetches higher price above Rs. 2,500/-kg in domestic market

## Target Market / Customer

Textile, cosmetic, painting, leather dyeing and Food stuff

## Limiting factors for large scale commercialization

The lac dye recovery unit needs to be installed near cluster of lac processing industries due to requirement of large quantity wash water for large scale commercialization.

## Social impact of the technology

Lac dye is Non-Toxic in nature, so eco-friendly

## Any other relevant information

Details of clientele already developed or in the process of developing:  
M/s, Gupta Brothers Shellac (Pvt.) Bundu, Ranchi-Consortium Partner

