

Novel Electric Bhatta for button lac production

In India, *bhatta* process is the only process used for produce commercial lac resin i.e. button lac. There are about 150 units of *bhatta* in Jharkhand, West Bengal and Chhattisgarh. *Bhatta* process is a small-scale, traditional process, uses a clay furnace (*bhatta*) as heat source. It is heated with wood/charcoal. Burning of wood/charcoal adversely affects environment and, causes operator drudgery.

Hence, ICAR-NISA, Ranchi developed Electric *Bhatta* that completely excludes use of wood/charcoal and minimizes operator drudgery. Developed *bhatta* resembles the traditional clay *bhatta* in terms of shape and size; It is comprised of three units: oven, operator-seat and stone-slab. Single phase (220 V, 50 Hz) electric power supply is provided to the heaters. Successful trials were also conducted to operate developed *bhatta* using PV-based 2 solar power.



Business potential:

A small scale industry can be set-up for fabrication of developed electric *Bhatta*. Presently, only wood charcoal fired *Bhatta* is available for button lac production. There is a long-pending demand from industry/lac producers' side that an electric *Bhatta* should be developed to replace the existing one.

Salient Features:

- Developed *bhatta* filters about 3.0 - 3.5 kg seedlac per hour
- It consumes about 2.85 kW-h electricity per hour.
- 100 % Saving of wood/charcoal
- Improved and uniform quality of button lac
- Precise control over heat generation, and reduction in operator drudgery
- Clean production of button lac
- Efficiency is parallel with the traditional clay *bhatta*
- Elimination of wood/charcoal in button lac production

Benefits:

- Button lac yield (kg/h): **2.7 – 3.2**
- Kiri yield (Lac remained in the bad after filtration) (%): **7-10**
- Filtered lac (buttons + breakens) yield (%): **88-91**



Developed by
ICAR- National Institute of Secondary Agriculture, Ranchi, Jharkhand
Contact: Director, ICAR-NISA, Ranchi, Ph: 0651-2261156
E-mail: director.nisa@icar.gov.in

