AGRICULTURE

CHEMICAL SUSBTITUTE FOR BHIDAR FORT CLAY USED IN BIDRIWARE HANDICRAFTS

APPLICATION :

Bhidar Fort has been declared a protected monument. However, Bidriware artisans no longer have access to the mud from the fort, which was essential for providing the distinctive black surface color to Bidriware articles. Developing an alternative chemical to replace the Bhidar Fort mud is crucial for protecting archaeological monuments.

ORGANISATION/INSTITUTION : RUTAG IIT MADRAS

TECHNOLOGY READINESS LEVEL : Ready for Technology transfer

PRINCIPAL INVESTIGATORS : Prof. Lakshamana Neelakantan, IIT-Madras
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PROBLEM ADDRESSED :

A specific type of slightly clayey sand or mud from the 300 to 400-year-old Bidar Fort is traditionally mixed with ammonium chloride, boiled, and then used to dip Bidriware articles for a minute. This process turns the surface of the article black while leaving the silver portion unaffected. However, the clay from old forts is now prohibited, necessitating the development of an alternative material. The main objective of this project is to synthesize alternative media to the clay component for producing the black coating on Bidriware.

ABOUT THE TECHNOLOGY :

Bidriwares are produced in India in the early 17th century. These are basically made from Zn- Cu (Zn:Cu = 90:10, approximately) alloy and then surface treated in appropriate conditions. The alloy comprises of Zn as an active metal and Cu the noble counterpart. Upon treatment in clay (Bidar fort soil) and ammonium chloride, the surface forms a black patina (oxide)

FUND RAISED/ACHIEVEMENTS :

Seed funding by RuTAG: **Rs.2,80,000**

PRODUCT IMAGE

USP

- Eliminated need of local mud(Bidar fort) from process of making bidriware articles
- This technology development enables preservation of monuments of archeological value viz.Bidar fort.

END USERS/CUSTOMERS

Artisans engaged in Bidriware handicrafts activity.