

Tannery Solid Waste Incorporated Glass Products

IPR STATUS

Patented: Patent No. 435493 (Indian)

APPLICATION/USES

Toxic waste immobilized decorative glass articles, environment protection and human safety, signal glass, green filter glass etc.

SALIENT FEATURES

- Glass products developed with immobilized Tannery Solid Waste (TSW) containing **toxic Cr**.
- Entrapping TSW into glass matrix ensures environmental protection and human safety.
- Visible Transmission from melted glass: 50-65 % (at 550 nm for 2 mm thick sample); TSW incorporation: 5-10 wt%. Potential decorative glass article with various greenish shade
- UV Transmission from the melted glass: 90% Transmission within 350-370 nm for 2 mm thick sample with 10% TSW containing glass.
- Maximum Waste loading: 40 wt%
- Negligible leaching of toxic Cr from the glass

LEVEL/SCALE OF DEVELOPMENT

- 500g glass prepared and green glass souvenir developed

LINE MINISTRY MAPPING/USER SECTOR

- Ministry of Environment, Forest and Climate Change (MoEF&CC)
- Ministry of Housing and Urban Affairs (MoHUA)
- Ministry of Defence
- Ministry of Commerce and Industry

TRL: 4/5

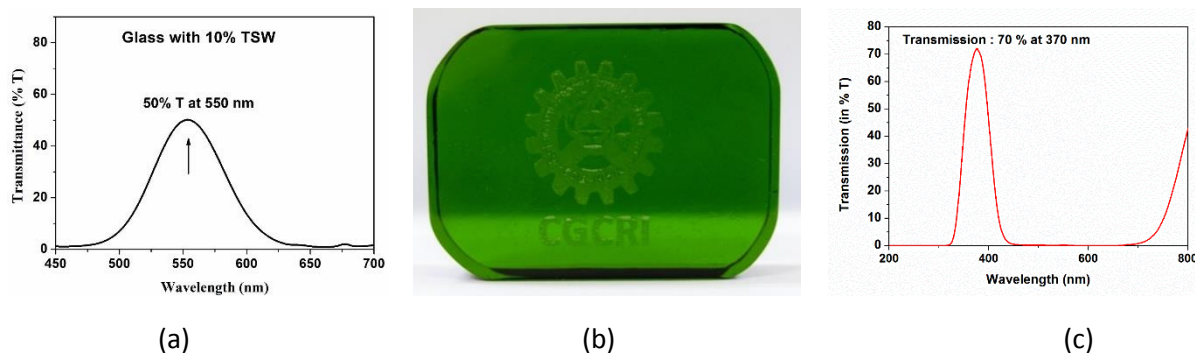


Figure 1: (a) Visible transmission from the TSW loaded glass; (b) TSW loaded glass article; (c) UV transmission from the TSW loaded glass