



TECHNOLOGY FOR SCALE-UP STUDIES & DEMONSTRATION

Greener Process for Alpha-Campholenic Aldehyde

Molecular Formula - C₁₀H₁₆O

Molecular Weight - 152.2



Current Problem

- Due to high demand, CA is primarily imported from China
- Existing processes employ environmentally questionable raw materials producing large quantity of non-disposable wastes

Why CSMCRI Process?

- The process includes a two-step synthetic route starting from inexpensive alpha-pinene
- A clean process giving water as the by-product
- High yield (>85%) and purity (>93%)
- The process is consistently reproducible and, thus, reliable and scalable for industrial production

Existing Opportunity

- Green process (Use of non-toxic & less hazardous raw materials, water as byproduct)
- Huge import substitution (use of locally available raw materials)
- Cost efficient (low cost starting material)

Demonstration capacity

- Demonstration is ready @1 kg level