

## DISINFECTANTS

Disinfectant is a general term used to describe a broad class of chemicals employed to destroy harmful bacteria, fungi and other microorganisms. They are part of many of the products like household cleaners, tooth pastes, shaving creams.

Wide range of chemical products are classified as disinfectants. These include Chlorine and chloro compounds, Iodine and Iodophors, alcohols, aldehydes, phenols, quaternary ammonium compounds.

This group of specialty chemicals is a fast growing segment.

### **Proposal:**

There is good scope for a new entrant in to this area, as the growth phase has just started. A medium scale unit manufacturing the basic ingredients for supply to small formulators can be a good start up venture that can subsequently move into branded products and exports.

### **Product mix:**

1. Sodium hypochlorite 600 Tons / yr
2. Cresols and chloro cresols 600 Tons / yr
3. Others 300 Tons / yr

### **Market:**

Disinfectant market can be divided into Domestic and Institutional segments. Domestic segment includes disinfectants and cleaners for floor, kitchen, sinks and toilet bowls. Institutions include commercial places, Offices, hotels, hospitals, public rest rooms and industries like dairy, poultry, food processing units, and sugar plants. Proposed product mix can cater to both segments.

Sodium hypochlorite based disinfectants: Household bleach (5 % sodium hypochlorite) is a cheap source of active chlorine. When diluted (up to 50 times) and used on surfaces like tiles, it effectively disinfects the surface. "CLOROX" is the most popular brand bleach in USA. Hypo combined with cleaning agents is used as disinfectant cum cleaner, for floors and toilet bowls. Such products are now available in our stores (ex: Domex). The potential market for this class of products is very high

Compared to material costs, the marketing costs are high, if the products are to be sold through super markets. Economical way is direct selling. This can be done by concentrating on tier two markets and encouraging small formulators cum marketers by providing materials.

Cresols and chloro cresols: Products known as "Phenyl" are made from mixed cresols obtained as coke oven by products. Marketing strategy similar to that of bleach can be followed for this class of products.

**Others:**

For Institutional market like hospitals and Industries special products like Chlorhexidine, Glutaraldehyde, Chloro xyleneol, Benzalkonium chloride are in the market. They are used for hand scrub, equipment disinfection etc. This is small but high value market. There is scope for export of these products. Manufacture and marketing small volumes can be taken up to seed and test the market.

**Manufacturing process:**

Sodium hypochlorite is produced by reaction of caustic soda with chlorine. This is also available as a by-product in chlor alkali Industry. Manufacturing / buying from outside decision can be made based on economics. This product decomposes on exposure to sunlight and on long storage. Manufacturing on demand is preferable.

Cresols are available in market. These can be chlorinated to increase the disinfection strength. Manufacturing process involves, passing chlorine into the chemicals under controlled conditions.

Other Specialty disinfectants are produced in processes similar to small volume chemical manufacture.

**Technology:**

The technology involved in the manufacture of the proposed chemicals is simple. The technology can be sourced from private consultants.

Apart from process technology there is need to source formulation technology. This is important in developing the small formulator / marketers network.

**Plant and Machinery:**

The plant and machinery consists of stirred tank reactors, absorbers, storage tanks and utility equipment like boiler and chilling plant.

**Raw materials:**

The raw materials required are chlorine, caustic soda, cresylic acid etc. Apart from the raw materials for producing the main ingredients, chemicals that go into the formulations have to be procured in bulk and supplied to the formulators.

Utilities: Power, water and steam are the utilities required.

**Project cost:**

Capital outlay of Rs. 5 crores is required for the proposed project.

**Turnover and profitability:**

Annual sales of Rs. 12 crores with net profit margin 10 to 12 % is possible

**Suggested location:**

The Unit can be set up in any chemical zone

**Entrepreneur profile:**

The project is suitable for entrepreneurs who have marketing experience in chemicals or products like disinfectants.

**Consultancy services from Apitco:**

1. Technology tie-up
2. Project planning