

SYNTHETIC SWEETENERS

Synthetic sweeteners or non calorie sweeteners are a group of chemicals that provide a sweet taste in diluted form. These products are extensively used in diet foods and soft drinks.

S. No	Product	Potency compared to sugar	Approx. price Rs / Kg
1	Saccharin	300 times	250
2	Aspartame	200	2000
3	Ace Sulfam - K	150	Not available

Saccharin is the cheapest among non calorie sweeteners. It leaves a metallic after taste and has not been popular in foods or as a table top sweetener. Its use is mainly in soft drinks and in products like tooth pastes. Aspartame is closest in price to sugar.

Proposal:

Manufacture of Synthetic sweeteners for domestic and export markets is a good proposal.

Product mix:

Aspartame	600 Tons / yr
Table top sweeteners (Aspartame based)	100 Tons / yr
Formulation for sweets (Aspartame based)	200 Tons / yr

Market:

Consumption of synthetic sweeteners in the U.S.A. is valued at \$ 8 billion. Consumption in the rest of the world may be around \$ 20 billion.

Non calorie sweetener market in India is pegged at Rs. 80 crores and growing at 20 % per year. The potential demand is much more.

India is consuming around 180 lac tons of sugar every year. Even 1 % of this translates into 900 tons of non calorie sweeteners valued at Rs 180 Crore.

Manufacturing process :

The manufacturing process of Synthetic sweeteners is similar to manufacture of bulk drugs / small volume chemicals. Aspartame manufacture involves chemical synthesis extending to seven / eight stages of different type of chemical reactions.

Technology :

Technology for manufacturing Aspartame is available from China. Some of Indian research institutions have developed part of Aspartame technology.

There is possibility of taking up manufacture of Aspartame from advanced Intermediate products. This way the initial investment will be low. Backward integration can be taken up as the market is built up.

Plant and Machinery :

Plant and Machinery required for Aspartame project consists of Glass lined, stainless steel reactors, heat exchangers, centrifuges, filters, dryers and tanks. The utility systems consist of boiler, chilling plants, and water purification systems. All the equipment is indigenously available.

Raw materials :

Raw materials consist of various chemicals and solvents. Some of the raw materials have to be imported. In case of deciding to manufacture Aspartame from intermediates, tie-up for the supply of intermediates is to be made.

Utilities :

Utilities required are, steam, Power and water.

Project cost:

600 Tons per annum Aspartame manufacturing plant will cost about Rs. 30 crores. If advanced intermediates can be sourced, the plant can be set up with much lower capital outlay.

Turnover and profitability:

Turnover of Rs.120 crores per annum can be achieved.

Suggested location:

Pharma city near Vizag

Entrepreneur profile:

This project needs good technical team and equally good marketing team.

Apitco's consultancy

1. Technology tie-up
2. Project planning.