

CHAPTER - 11

BIOTECHNOLOGY

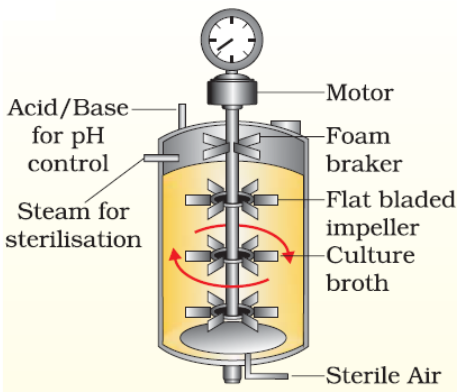
- PRINCIPLES AND PROCESS

Obtaining the Foreign Gene product:

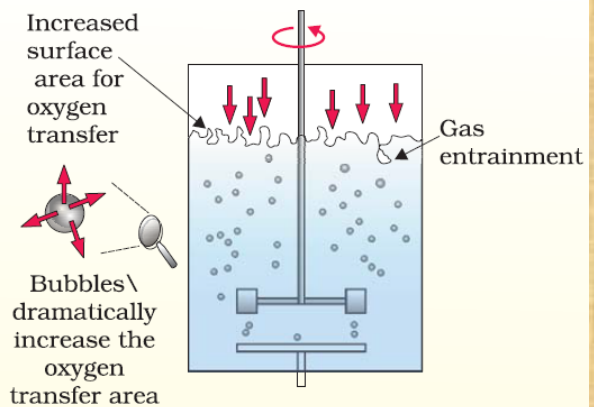
After insertion of r-DNA into host organism undergo divisions and make multiple copies of r-DNA. So the Foreign Gene expressed under suitable conditions.

In industrial level bioreactors are used in this raw material can be converted into products bioreactor provide optimum conditions for growth of bacteria (Temp, pH, Oxygen, Vitamins).

Stirring tank can be commonly used



Simple stirred-tank bioreactor



Sparged stirred-tank bioreactor through which sterile air bubbles are sparged

A bioreactor usually contains,

Agitator system

Oxygen delivery system

Foam controlling system



Temperature controlling system

Sample ports

Downstream Processing:

After completion of biosynthetic stage the product has to be subjected through a series of process before it is ready for marketing. The process includes separation and purification which are collectively referred as Downstream Processing.

