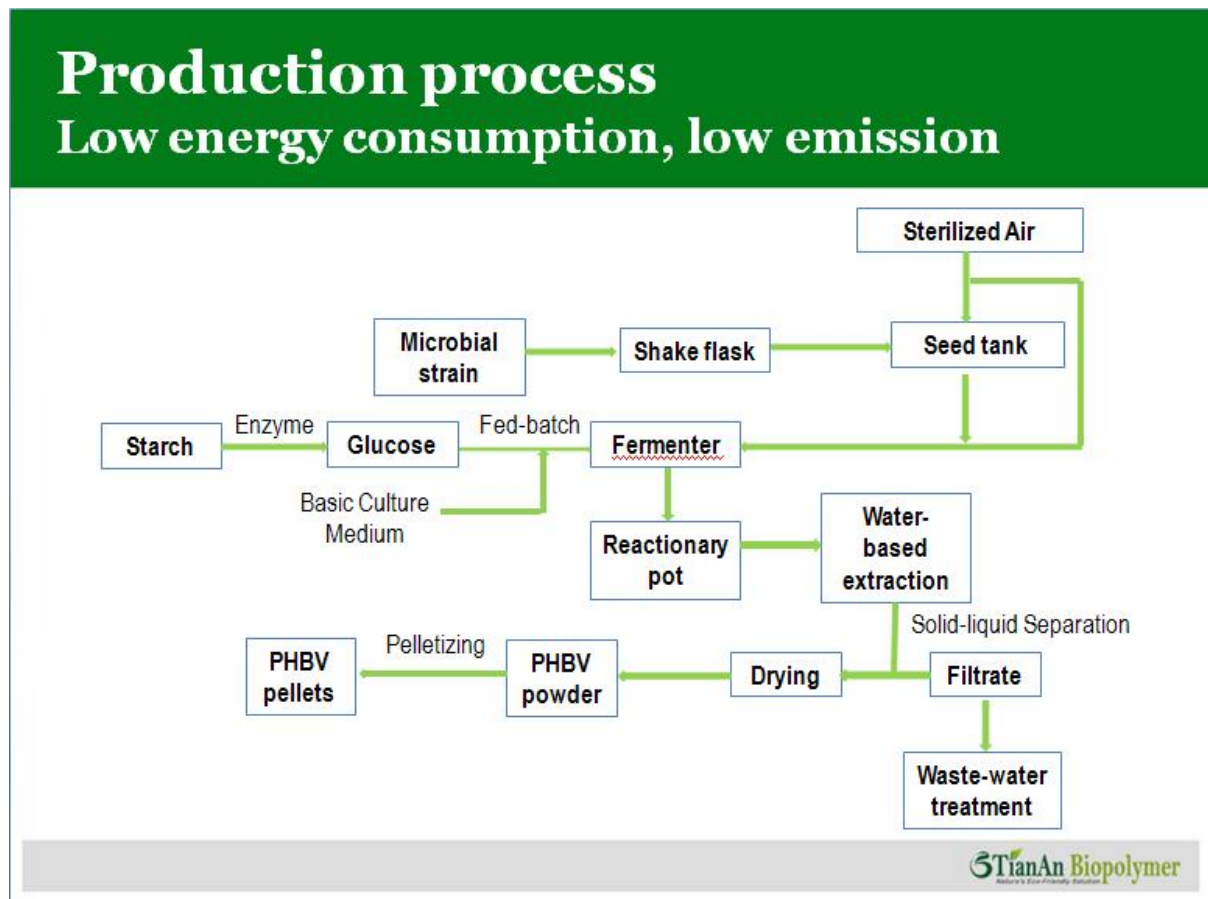


The description of manufacturing PHBV

The manufacturing of PHBV involves providing a nature microorganism (bacteria: *Ralstonia Entrophus*) a carbon feed source such as dextrose or glucose and a small amount of propionic acid along with suitable nutrients, such as nitrogen, phosphorus or oxygen which encourage growth and multiplication of the microorganisms. Once the number of microorganisms reaches the required point, the nutrients are reduced to create an imbalance, which puts the microorganisms under stress. The microorganism then begins to convert the extracellular carbon source through a series of enzymatic pathways to a reserve energy source in the form of polymeric inclusions within their cell. Under ideal conditions, typically, from 80% to 90% of the cell can comprise the polymeric form of the hydroxy esters conventionally referred to as PHBV. When the mass of the polymer within the cell reaches the maximum level, the process is terminated and the polymeric material is extracted from the cells.

The technical process of manufacturing PHBV



The bacteria is from nature, non-GMO. The feed stock is edible glucose from non-GMO corn starch. Especially Tianan uses the water extraction technology during production and there is no organic solvent involved. The whole process is eco-friendly with low energy consumption and low emission.