

This term is more appropriate as most of the microorganisms grow as single or filamentous individuals.

- SCP contains high protein content (60 – 80% of dry cell weight), fats, carbohydrates, nucleic acids, vitamins, and minerals. It is also rich in essential amino acids such as Lys and Met.
- ADVANTAGES OF USING MICROORGANISMS FOR SCP PRODUCTION
  - Protein synthesis is much more rapid than higher living systems.
  - Microbes have short generation time.
  - Easily modifiable genetically for determining the amino acid composition.
  - Microbes have high protein content (7.12g protein Nitrogen/100g dry weight).
  - Microbes can be grown on media containing cheap sources of C and N.
  - Easy regulation of environmental factors for efficient yield.
- For industrial purposes Hydrogen utilizing bacteria and Methanol using bacteria are utilized.

#### SAFETY, ACCEPTABILITY, AND TOXICOLOGY OF SCP

- There are several limitations regarding the widespread use of SCP:
    - The nucleic acid content of microbial biomass is very high. This is highly hazardous, since humans have limited capacity to degrade nucleic acids and results in the development of kidney stones, and gout, if consumed in large quantities.
    - Possibility of contamination with pathological organisms in SCP.
    - Association of carcinogenic and other toxic substances with SCP is often observed. The nature and production of these
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