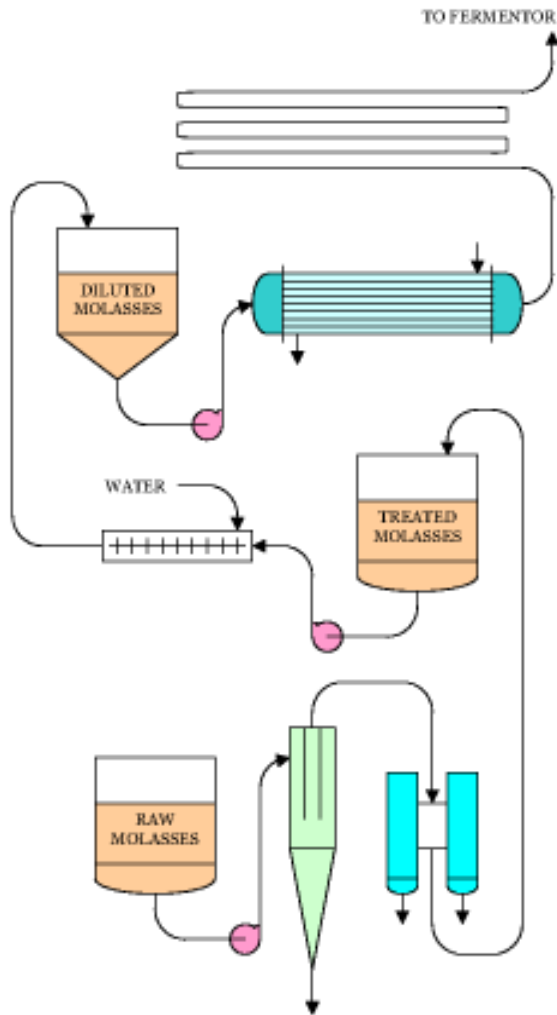


## CONTINUOUS MEDIA STERILIZATION UNIT



We offer continuous media sterilization units suitable for a wide range of fermentor media, ranging from molasses for yeast & ethanol fermentation, up to sensitive media for antibiotics & vaccines.

Continuous media sterilization offers the following advantages over batch sterilization :-

1. Nutritive value of media is less affected since it is subjected to high temperature for a shorter time
2. Sterilization cycle time is less hence turnaround time is shortened
3. Sterilization parameters can be controlled more precisely

The system is custom-designed on a case-to-case basis, & can involve some or all of the following operations :-

1. Media mixing &/or dilution
  - a. Continuous (on-line) mode
  - b. Batch mode
2. Prefiltration
  - a. Coarse separation
  - b. Fine separation
3. Sterilization
  - a. Heating type
    - i. Indirect type without agitation
    - ii. Indirect type with agitation
    - iii. Contact type without agitation
    - iv. Contact type with agitation
  - b. Non-heating type
    - i. Sterile filtration
    - ii. Ultraviolet treatment
    - iii. Combination of both
4. Holding at sterilization temperature
5. Cooling
6. Aseptic transfer to fermentor

Salient features of our product are as follows :-

1. Suitable for fermentors of 1 – 1000 kL capacity
2. Proper design/selection of heat exchanger module to suit different media & process conditions
3. On-line monitoring & control of process parameters such as temperature, flow, pressure, density, etc.
4. PU foam insulation provided for safety & energy conservation
5. Adequate safety devices installed for operator safety
6. PC-based process control with SCADA fermentation software available
7. cGMP-compliant version available

Manufactured in India by :-

### NAVIN PROCESS SYSTEMS

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