



Practical Exercise 9

Pasteurization of milk

Objective

To study pasteurization of milk.

Requirements

Electric batch pasteurizer or steam batch pasteurizer or steam jacketed kettle, digital thermometer, stop watch

Procedure (Electric batch pasteurizer)

- i. Fill electric batch pasteurizer upto three fourth volume of the heating vessel or marked level (Fig.9.1).
- ii. Switch on the equipment and agitator.
- iii. Set thermostat temperature control at 63 °C.



Fig.9.1. Electric batch pasteurizer



- iv. Start measuring the time with a stop watch after milk temperature reaches 63 °C.
- v. If temperature is uniformly maintained at 63 °C, milk will be pasteurized in 30 minutes.

Procedure (steam batch pasteurizer or steam jacketed kettle)

- i. Fill steam batch pasteurizer (Fig. 9.2) or steam jacketed kettle (Fig. 9.3) upto three fourth volume.
- ii. Open the steam valve to supply steam to the pasteurizer or steam jacketed kettle.
- iii. Set steam pressure to maintain the temperature of milk at 63 °C.
- iv. Start measuring the time with a stop watch after milk temperature reaches 63 °C.
- v. If temperature is uniformly maintained at 63 °C, milk will be pasteurized in 30 minutes.

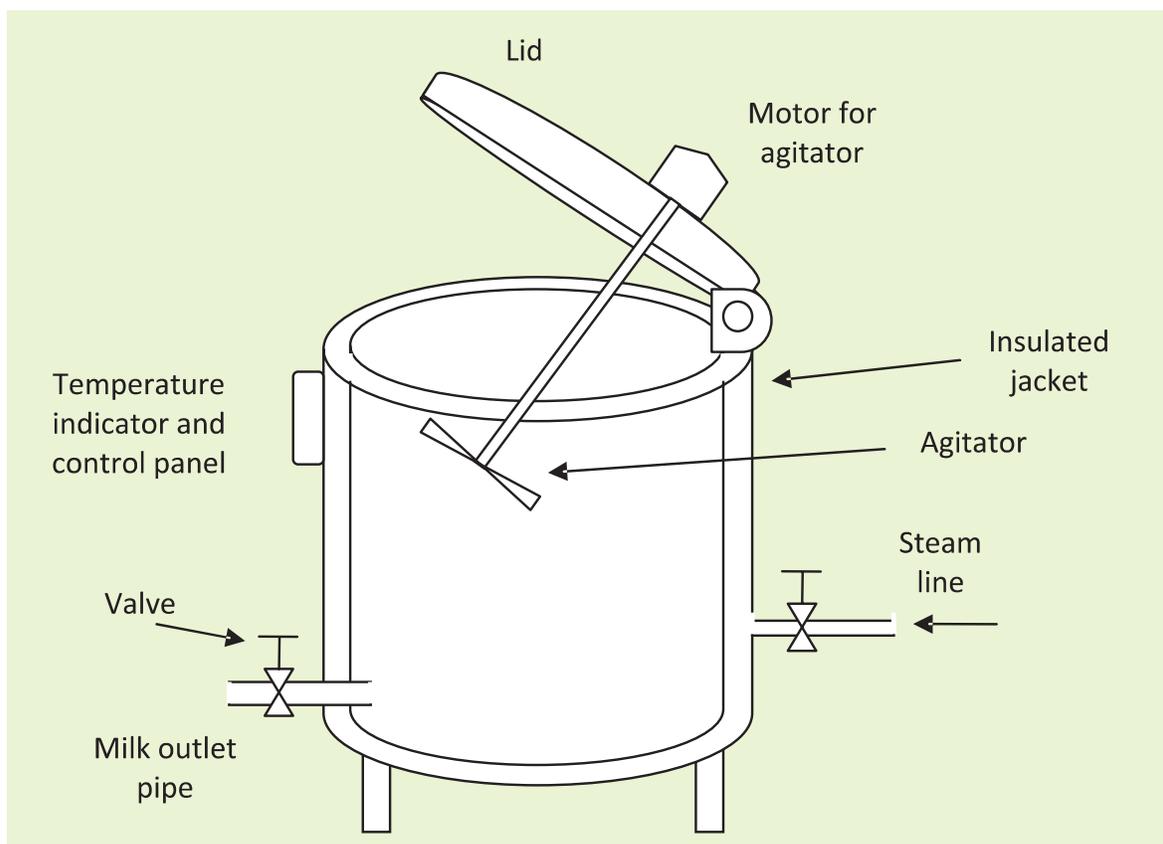


Fig.9.2. Steam batch pasteurizer



Fig.9.3. Steam jacketed kettle

REVIEW QUESTIONS

1. Describe procedure for electric batch pasteurization.
2. Describe procedure for steam batch pasteurization.
3. What is the function of thermostat?