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COIMBATORE-641 035, TAMIL NADU

DEPARTMENT OF FOOD TECHNOLOGY

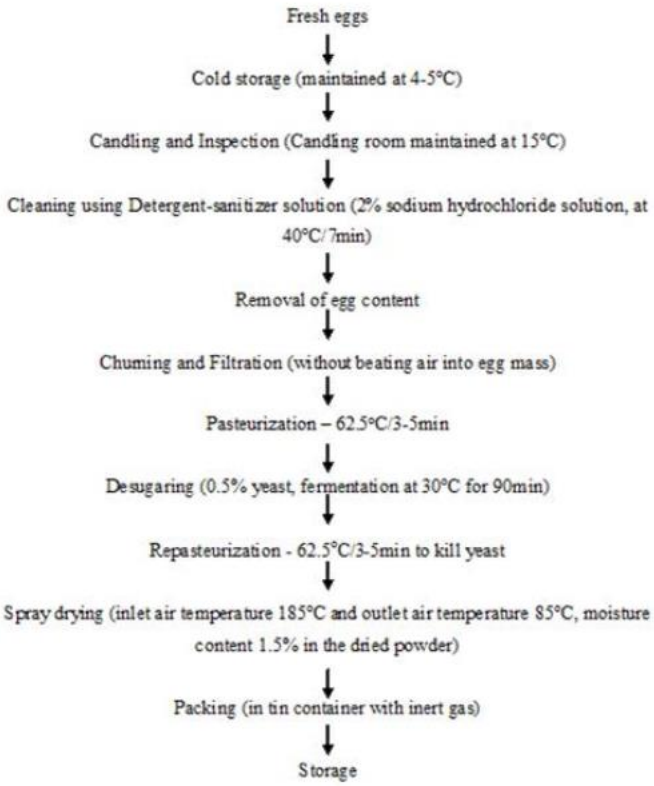
19FTE402 &

MEAT, FISH AND POULTRY PROCESS TECHNOLOGY

UNIT IV – EGG PROCESSING

Topic: Egg powder processing-spray drying, Foam mat drying

Spray drying:



The whites, Yolks and whole eggs may be dried by several methods, like spray drying, tray drying, foam drying or freeze drying. Egg white contains traces of glucose and galactose which react with egg protein leading to maillard browning. This discolors the dried egg white. Browning can be prevented by removing glucose through fermentation by yeast or with commercial enzymes. This is known as desugaring and this is practiced prior to the drying of all egg white.

Prepared by Ms. Mohana Priya R AP/FT

The initial moisture content of the fresh, as well as dried sample was determined using AOAC (2000) method. The cleaned eggs were soaked in 2 per cent bleaching powder solution for 30 min. Finally, they were washed and dried at room temperature to remove surface moisture. The eggs were broken and egg liquid was inspected visually for any spoilage. The egg liquid was filtered through muslin cloth to remove the shell pieces and any other foreign materials. The eggs liquid were weighed and mixed thoroughly in electric blender.

For foam -mat tray drying, the foamed egg liquid, were evenly spread on the aluminium trays at a thickness of 3 and 5 mm. The trays were placed on the tray stand in drying chamber. The temperature was maintained at 60, 65 and 70 °C. The trays were taken out of the drying chamber initially at 10 minutes interval after some time it was increases to 20 or 30 min for weight loss determination. The drying rate was computed at different moisture content. Drying was continued till the moisture content of the samples