



RESEARCH PAPER

Process optimization for mechanized production of Doda Burfi using scraped surface heat exchanger

■ R. DEVARAJU*, MOHANJEE LAL, G. MAHESH KUMAR¹ AND R.K. KHOLI²

Department of Dairy Engineering, Dairy Science College, GULBARGA (KARNATAKA) INDIA (Email : draj.raju20@gmail.com, mohanjeelal@gmail.com)

¹Department of Dairy Engineering, Dairy Science College, BENGALURU (KARNATAKA) INDIA (Email : dairyengineer@gmail.com)

²National Dairy Research Institute, KARNAL (HARYANA) INDIA

*Author for Correspondence

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SUMMARY:

Doda Burfi is region specific traditional Indian dairy product popular in northern states specially Punjab and Haryana. The product has pleasant characteristic nutty flavor. This product is highly nutritious. But even today it is manufactured by traditional method, which inherently suffers from various limitations, viz., non-uniform quality, batch to batch variations etc. Scraped surface heat exchanger (SSHE) seems to be most suitable heat exchanger for handling high viscosity and heat sensitive products, which tend to foam and foul heat transfer surface. Therefore, it was planned to study on mechanized production of Doda Burfi using SSHE. Doda Burfi was manufactured by adding precooked germinated wheat flour, colour, skim milk powder, citric acid solution, sugar (50% of total sugar initially added into milk at 70°C and remaining 50% sugar at 40% total solids). The investigation was carried out to optimize the various process parameter like scrapper speed (100, 125 and 175 RPM), steam pressure (1, 1.5, 2 and 2.5 kg/cm²) The performance was evaluated on the basis of sensory evaluation (9 point hedonic scale). The best quality of Doda Burfi was found at scrapper speed of 100 RPM, 2 kg/cm² steam pressure, decrease in overall acceptability score was found by further increase in scraper speed and steam pressure. Scrapper speed and steam pressure have shown significant effect (P<0.05) on sensory scores.

KEY WORDS : Doda Burfi, Germinated wheat flour, Skimmed milk powder, Sugar, SSHE

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