

SENSORY CHARACTERISTICS OF FRESH EXTRUDED *PEDA*

Kushal Kumar Sandey^{1*}, Bhawtosh Goel², Subramaniam Karthikeyan², Ashok Kumar Agrawal¹, Sudhir Uprit² and Krishan Kumar Choudhary³

¹Department of Dairy Engineering, College of Dairy Science and Food Technology, Raipur –492012 Chhattisgarh (India)

²Department of Dairy Technology, College of Dairy Science and Food Technology, Raipur –492012 Chhattisgarh (India)

³College of Fisheries, Chhattisgarh Kamdhenu Vishwavidyalaya, Kawardha (Kabirdham) – 491995, Chhattisgarh, India
Email: kksandey@gmail.com

Received-08.06.2018, Revised-25.06.2018

Abstract: The traditional dairy products carry value in the Indian society as they are nutritious and have become the inevitable part of feasts, celebrations, festivals and religious rites. *Peda* is one of the most popular khoa based traditional dairy sweets enjoyed by everyone due to its taste and health aspects. Traditionally, it is prepared by heating a mixture of khoa and sugar in a *karahi* (iron pan) with the help of *khunti* until the desired granular, hard texture and flavour develops. Present study was undertaken to investigate the possibilities of inducing extrusion technology for production of acceptable quality *peda*. The extruded *peda* were prepared by introducing product mixes C₀ (70% khoa & 30% sugar); C₁ (60% khoa, 05% SMP, 05% ghee & 30% sugar); C₂ (55% khoa, 10% SMP, 05% ghee & 30% sugar) and C₃ (50% khoa, 15% SMP, 05% ghee & 30% sugar) into the extruder system and processed at barrel temperature of 60, 70 & 80°C and screw speed 14, 21 & 28 rpm. Among different set of treatment combinations, product mix C₂ (i.e. 55% khoa, 10% SMP, 05% ghee & 30% sugar) processed at 80°C barrel temperature and 28 rpm screw speed resulted in most acceptable extruded *peda* in terms of sensory characteristics.

Keywords: Khoa, Peda, Extruded peda, Extrusion technology

REFERENCES

- Adhikari, K., Cole, A., Grun, I., Heymann, H., Hsieh, F.H. and Huff, H.** (2009). Physical and sensory characteristics of processed cheeses manufactured by extrusion technology. *Journal of the Science of Food and Agriculture*, 89 (8):1428–1433.
- Bandyopadhyay, M., Mukherjee, R.S., Chakraborty, R. and Raychaudhari, U.** (2006). A survey on formulations and process techniques of some special Indian traditional sweets and herbal sweets. *Indian Dairyman*, 58 (5):23-25.
- Banerjee, A.K.** (1997). Processes for commercial production. In: Dairy India, Published by P.R. Gupta, 5th Edn, pp.387
- Boghra, V.R. and Mathur, B.N.** (1996). Physico-chemical status of major milk constituents and minerals at various stages of khoa preparation. *Indian J. Dairy Sci.*, 49:286.
- Chennigararaju, B. H., Agrawala, S.P. and Makker, S.K.** (2005). Evaluation of improvised plasticizer for continuous manufacture of Butter-G. *Indian J. of Dairy Sci.*, 58 (2): 80-84.
- Ferrari, E., Gamberi, M., Manzini, R., Pareschi, A., Persona, A. and Regattieri, A.** (2003). Redesign of the mozzarella cheese production process through development of a micro-forming and stretching extruder system. *J. Food Eng.*, 59: 13–23.
- Fichtali, J.** (1990). Production of caseins using extrusion technology. Ph. D. Dissertation, McGill University, Montreal, Canada.
- Gupta, S. A.** (1976). Sensory evaluation in food industry. *Indian Dairyman*, 28(8): 293-295.
- Guy, R.** (2001). Extrusion cooking: technologies and applications. CRC Press/Woodhead Pub., Boca Raton/Cambridge, England.
- Kazuo, I., Tsuguaki, N., Kiyoshi, T. and Haruyoshi, Y.** (1993). Preparation of the processed cheese possessing fibrous structure by extrusion cooking. *Nippon Shokuhin Kogyo Gakkaishi*, 40 (3): 170-175.
- Kumar, R. and Das, H.** (2007). Performance evaluation of single screw vented extruder for production of *sandesh*. *J. Food Sci. & Technol.*, 44 (1): 100-105.
- Londhe, G.K.** (2006). Development of a process for manufacture and shelf life extension of brown *peda*. Ph. D. Dissertation, National Dairy Research Institute, Karnal., India.
- Naresh, L., Venkateshaiah, B.V., Arun Kumar, H. and Venkatesh, M.** (2009). Studies on effect of microwave heat processing on physio-chemical sensory and shelf life of *peda*. *Indian J. Dairy. Sci.*, 62 (4):262-266.
- Narwade, S.G., Bhosale, D.N., Patange, D.D., Londhe, G.K. and Patil, G.R.** (2007). Effect of processing conditions and appeal enhancement factors on quality of *pedha*. *Indian J. Dairy Sci.*, 60 (1): 12-15.

*Corresponding Author

Reddy, C.R. (1985). Process modifications for production of khoa based sweets. Ph.D. Thesis, Kurukshetra University, Kurukshetra.

Renda, A., Barbano, D.M., Yun, J., Kindstedt, P.S. and Mulvaney, S.J. (1997). Influence of screw speeds of the mixer at low temperature on characteristics of Mozzarella cheese. *Journal of Dairy Science*, 80: 1901-1907.

Riaz, M.N. (2000). Extruders in food applications. Technomic Publishing Co. Inc., Lancaster, Pennsylvania.

Suryawanshi, S.V., Wadhwa, S.N. and Kokate, P.G. (2014). Chemical composition of *peda* prepared from cow milk blended with skimmed milk powder. *Asian J. Animal Sci.*, 9(1): 106-108.

Zuber, F., Megard, D. and Cheftel, J.C. (1987). Continuous emulsification and gelation of dairy ingredients by HTST extrusion cooking: production of processed cheeses. *Int. J. Food Sci. & Technol.*, 22(6): 607-626.