

Kamolrat Rugkitsiri 2006: Quality and Shelf Life Extension of Thai Fresh Noodles (Bamee). Master of Science (Agro-Industrial Product Development), Major Field: Agro-Industrial Product Development, Department of Product Development. Thesis Advisor: Assistant Professor Thongchai Suwonsichon, Ph.D. 224 pages.
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Fresh noodles (Bamee) are very popular food in Thailand but their shelf life are very short about seven days at 25 ± 3 °C and fourteen days at 6 ± 2 °C. The objectives of this study were to investigate the factors affecting consumers buying decision, to investigate the quality properties affecting consumer preference and to investigate a method of shelf life extension. Results of one hundred and eighty consumers living in Bangkok showed that there were five important factors of buying decision composing of 1) safety consumption factor consisting of nutrition, expiration date, FDA mark, and no preservatives 2) label and packaging factor consisting of information labelling on package such as cooking time, long shelf life, famous brand, net weights, and packaging design 3) shape and size factor 4) color and flavor factor and 5) texture and freshness factor. For noodle qualities and consumer preference studies, eight commercial fresh noodles were investigated by physical, chemical, and sensory test. Results demonstrated that lightness color, moisture content, distance of cutting test, cooking loss, cooking time, water absorption and sensory qualities which were alkaline odor, elasticity and wetness were highly related to consumer preference. Physical and chemical specifications of fresh noodles comprise L* value of 72.44-73.93, distance of 1.60-1.73 mm and 0.99-1.40 mm for raw and cooked noodle, respectively, moisture content of 30.10-32.52%, cooking loss of 10.11-12.26%, cooking time of 40-60 sec and water absorption of 71.58-84.16%. The sensory specifications were alkaline odor, elasticity, raw noodle wetness and cooked noodle wetness intensities. Their intensities were 1.96-2.79, 2.21-2.79, 3.90-4.17 and 6.25-6.29, respectively. Finally, the shelf life extending method used in this study was adding 2% propyleneglycol in fresh noodles and packing them in nylon bag having moisture and oxygen absorber under modified atmosphere with nitrogen gas. This method could prolong shelf life of fresh noodles for 60 days at 6 ± 2 °C and 20 days at 30 ± 2 °C.

Kamolrat Rugkitsiri

Student's signature

Thongchai Suwonsichon 25 / 05 / 2006

Thesis Advisor's signature