

Satheuane Thykeo 2008: Process Development of Roasted Arabica and Robusta Coffee from Lao People Democratic Republic. Master of Science (Agro-Industrial Product Development), Major Field: Agro-Industrial Product Development, Department of Product Development. Thesis Advisor: Associate Professor Anuvat Jangchud, Ph.D. 101 pages

The objectives of this research were to develop the process of roasted Arabica and Robusta Coffee from Laos. The results of consumer behavior and attitude on roasted coffee found that the consumer like ice coffee rather than hot coffee as its taste and refreshing. In term of coffee variety, about 68 % of respondent preferred Espresso and this survey found that most respondents were undertaken their own coffee shopping. The effect of roasting temperature and time was conducted using factorial 3x3 in CRD for each cultivar (Arabica and Robusta). The results showed that increasing of roasting time and temperature caused the L* value decreasing to dark brown. The range of roasted Arabica color (L* a* b*) ranged from 19.76-44.53 4.94-12.38 and 6.42-28.61, respectively, and roasted Robusta color (L* a* b*) ranged from 17.63-30.32 4.94-12.10 and 4.04-22.81, respectively. The difference of cultivar, temperature and roasting time contribute to different moisture content and pH. The result showed that moisture and pH lost when the time and temperature was increased. In this experiment, the moisture of Arabica had valued between 0.53–3.43% and 0.90–3.47% for Robusta. In contrast, pH of Arabica coffee increased from 5.16 to 5.76 and pH of Robusta increased from 5.10 to 5.87 as temperature and roasting time increasing. Sensory evaluation showed that Arabica was more favorable than that of Robusta and the optimum of roasting time and temperature was determined at 180°C for 10 minute. The storage test of roasted coffee in aluminum foil was conducted at 25°C 35°C and 45°C. Results showed that the qualities of stored coffee at 25 and 35°C were comparative to commercial coffee during 20 days of storage. Stored coffee at 45°C showed the comparative qualities during 10 days. However, occurrence of off flavor during storage resulted in lower liking of consumer. The shelf life of roasted coffee for this study was recommended not more than 10 days at 25 and 35°C of storage.

Student's signature

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