

Chanon Sarasuk 2012: Development of Sensory Lexicon of Some Thai Fruits and Thai Mangoes' Driver of Liking. 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. 345 pages.

Sensory characteristics are product descriptor and some characteristics could be representative to the whole product or demonstrate how uniqueness. Sensory characteristics could be driven consumers liking or disliking because consumers differ dramatically in their sensory preference. The objective of this study was identified and understood what and how sensory characteristics driven the liking. This study had four stages; the first stage was to identify sensory characteristics of three Thai commercial fruits (Banana 'Hom Thong', Mangosteen and Mango 'Nam Dok Mai'). Sensory profile were determined by using trained panel (n=8) from KUSCR with Generic Descriptive Analysis (GDA) then obtained 30, 29 and 24 sensory characteristics which separated by sequence of perceptual. Three fruits shared 16 sensory characteristics which defined as 'general descriptor' for example favour, taste and texture. The second stage was focused on ripen mango, refer to results from the first stage. GDA was conducted with eight mangoes varies from difference cultivar (Aok Rong, Choak Anan, Khiao Sawoei, Khiao Yhai, Mahajanaka, Nam Dok Mai, Ngam Muang Ya and Tong Dum). Result showed more sensory characteristics from 29 to 50 attributes. Some attributes do not appear in first stage, such as metallic group or fruity group. PCA and CA were performed, the result showed that sensory characteristics of eight mangoes can be divided into five groups due to odour, taste and flavour attributes. The third stage was to compare the PREFMAP using several techniques. The Pseudorandom Integers were used to generate a data set of overall liking score at different number of judge (n=30, 100, 500 and 1,000, respectively). The result of PREFMAP performed by PLS-1 showed that when the number of 'n' different, the graphical PREFMAP displayed the same agreement due to the overall liking vector obtained from preference mean score. While the PREFMAP performed by PCA combined with CA demonstrated the difference graphical PREFMAP. The last stage was to identify drivers of liking of eight ripen Thai mangoes from using sensory profiles from second stage. Overall liking score were obtained from untrained panel (n=100) and physicochemical properties of eight mangoes cultivars also were investigated. EPM was performed by PLS-1 and showed that overall liking positively correlated with total soluble solid and negatively correlated with fruity odour, fruity flavour and tongue irritation (after taste).

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Thesis Advisor's signature