

Formulation & Sensory Assessment of Snack Bars Enriched with Spirulina

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Abstract—Significant increase in fast food and snack consumption has been observed as a response to the changing lifestyle patterns. Consumers are looking for easy and fast prepared foods, and ease in the acquisition of pre-prepared, frozen, and ready-to-use products in the market. The tendency to consume more nutritious foods instead of sweets and candies has led to the emergence of various bar types, including variations like chocolate coating or incorporation of different fruits and nuts. Keeping in the aforesaid view, this study aimed at formulation of different snack bars with varied spirulina concentrations along with flaxseeds, nigella seeds and almond butter. Spirulina is eaten as a nourishing food concentrate as it is highly rich in proteins, vitamins, essential fatty acid and antioxidants. Snack bars made with different concentrations of spirulina (1-5%) (corresponding to sample-S₁ to S₆) were given to sensory panellists (20 semi-trained and 30 untrained). The samples presented to the panellists also contained one control sample, which did not contain spirulina. The samples were blinded to avoid any bias. The sensory evaluation was carried using a 5-point hedonic scale. On applying statistical tests, it was reported that sample-S₆ (i.e. containing 5% spirulina) was most perceptible with respect to taste, colour, texture and overall acceptability. The following study can prove to be an accompaniment to already existing health snack food shelf. Future advancements in flavour can lead to more variations and further it may prove to be a boon for the snack food industry.

Keywords: Spirulina, snack bars, flax seeds, etc.