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Extraction of thyme essential oil using two different solvents and its effect to enhance shelf life and quality of masala tikki and tomato paste

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Thyme (*Thymus vulgaris* L.), an aromatic plant of the Labiatae family, has been long used in foods for culinary purposes. The aim of this study was to evaluate the feasibility of replacing n-hexane with methanol for the extraction of oil from *Thymus vulgaris*. Thyme essential oil contains more than 60 constituents, most of which possess important antioxidant and antimicrobial properties. The most important compounds of thyme essential oil are the phenols like thymol and carvacrol which constitute the major and more active constituents, as well as the monoterpene hydrocarbons p-cymene and C-terpinene. These compounds possess antimicrobial activity against a broad spectrum of microbes. Therefore, the present study aimed to investigate the effect of addition of different concentrations (0.25%, 0.50%, 0.75% and 1%) of essential oil of thyme on the quality and stability of tomato paste and masala tikki. The obtained results indicated that the masala tikki and tomato paste containing 0.25% and 0.5% thyme oil, respectively were of acceptable quality as compared to control samples. Furthermore, the storage time significantly increased with increase in concentration of thyme oil. Various analytical techniques (UV-Vis and ATR-FTIR) were performed to check the quality and composition of thyme essential oil extracted from two different solvents. Analytical results envisaged that essential oil from both solvents have same features.

Biography

Nadiya Rashid Malik has completed her MTech from Sam Higginbottom Institute of Agriculture, Sciences and Technology, Allahabad. Currently, she is working as an Assistant Professor (Food Engineering) at Lovely Professional University, Phagwara, India.

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