

## Chemical changes during natural fermentation of sauerkraut by capillary gas chromatography analysis

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The aim of this study was to profile the chemical changes in sauerkraut juice during natural fermentation of sauerkraut (*Brassica oleracea* variety capitata) using capillary gas chromatography. Flavour compounds in juices from sauerkraut were naturally fermented for 5, 10, 20 and 30 days from five geographically different regions in Rajasthan and they were extracted using dichloromethane. By using capillary gas chromatography, the compounds were separated, detected and quantitated, which were interfaced with flame ionization and a mass selective detector. The compounds were identified using mass spectral database and retention times of the corresponding pure chemical standards. Volatile organic acids, aldehydes, ketones, alcohols and phenols, were the chemical constituents found which were irrespective of sauerkraut source and duration of fermentation. Juices had different constituent's profiles with significant differences in the amounts of the compounds by region and duration of fermentation. These results indicate that the duration of fermentation influence the flavour compounds profile of fermented sauerkraut juice. It was concluded that the flavour volatile oils from sauerkraut juice may be important for the identity of sauerkraut juice and in fermentation process which would enhance the bioactive compounds, including phenolics and glucosinolates which persists bio-preservative possibilities for meat preservation in the food industry.

### Biography

Dhruti Bhatt is appearing final year in Bachelor of Pharmacy at the age of 23 years from Rajasthan University of Health Science, Jaipur. She is student of Geetanjali Institute of Pharmacy, Dabok, Udaipur. She is interested in research field and has attended various research oriented conferences and seminars.

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