

Novel bio-chemical profiling of Indian black teas and development of green tea based radical scavenging conserve as all natural antioxidant for health promotion

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Novel profiling of Indian black teas with reference to important physico-chemical as well as bio-chemical quality indices including volatile and non-volatile constituents, covering several Indian regions, over four seasons (s1:April-June, s2:July-September, s3:October-December, s4:January-March) from select gardens, cutting across all climatic conditions was carried out. Different fingerprint markers (volatiles and non-volatiles) were identified and their seasonal variation determined. The seasonal variation of sum of Yamanishi-Botheju and Mahanta ratio and concomitant quality profile has been delineated. The sum of TF/TR (non-volatiles), Yamanishi-Botheju and Mahanta (volatiles) ratios is proposed for the first time as a novel overall quality indicator (Borse-Rao quality index) for black teas. Accordingly, black teas can be categorized as good (upto 1), better (>1- 4) and best (>4) quality teas respectively. Seasonal and regional bio-chemical variation fingerprint of Indian black teas using this quality indicator would be presented. Besides black tea profiling, select green tea's profiling and the novel technological approaches developed for radical scavenging conserve using green tea leaves, pruned tea leaves for preparation of value added products for health promotion will also be presented.

Biography

Dr. B. B. Borse, presently holds a regular post as Sr. Scientist at Dept. of Plantation Products Spices and Flavour Technology, CFTRI (CSIR), Mysore, India with R&D experience of 18 years. He obtained Doctorate in Food Sciences from CFTRI (Univ. of Mysore). He was at NFRI, Japan for a year as UNU-Kirin Fellow for advanced research on biomaterials (2009-10). He has over 50 publications including peer reviewed papers in national and international Journals, national and international patents, book chapters, conference presentations and serving as an editorial board member of repute. He has lead and contributed to a number of public/pvt. sponsored research/consultancy projects both from industry and government to innovative products, processes, patents (Indian/US/EU). He has more than a dozen conference presentations. He has guided ten postgraduate students for thesis, dissertations and investigations and he is a regular faculty for M.Sc. (Food Tech.) at CFTRI. He obtained training on ICP-AES at France. His research work comprises basic bio-chemical studies, bio-chemical activity aspects related to food, nutraceuticals and technology development on plantation products, herbs, spices including tea, beverages for health, wellness promotion and resource conservation for enhancing human lifestyle. He is also faculty for number of short term courses. He was awarded best Scientist award for research contributions in 2006-07 and best alumnus award as well. He has contributed actively as Hon. Secretary of CFTRI education society (2010-11) and presently nominated as Hon. Vice President elect, Food Research Institute Gymkhana (FRIG), CFTRI.

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