ABSTRACT

Citrus fruits peels are the major agro-industrial waste in canned fruit manufacture and fruit juice processing, which make it worth to investigate on their bioactive compounds. This study focused on extraction of essential oils from peels of *Citrus sinensis* var. Mousami and *Citrus Limon* var. Lemon. The peel essential oils and methanol extract of *Citrus Sinensis* and *Citrus Limon* were analyzed for Phenolic compounds, flavonoids, ascorbic acid contents, radical scavenging capacity and ferric reducing capacity. Result shows that *Citrus Sinensis* var. Mousami peels oil contained relatively high values as compared to *Citrus Limon* var. Lemon of 204.0 mg GAE/ 100 g total phenolics, 81.33µg QE/ml total flavonoids, 57.3% % inhibition of DPPH radical scavenging capacity, 249.0 mg/ 100g Ascorbic acid content and Mousami peel extract had 304 424.5µg/ml of total reducing capacity. The results reveal that peels of Citrus fruits are valuable source of health benefiting bioactive components, like phenolics, flavonoids, monoterpene etc which have significantly high antioxidant properties, hence they are considered for use of in food, cosmetics, pharmaceutical products which increased the potential for prevention of oxidative stress. So the Citrus peels essential oils are the most promising natural antioxidants as potent as the synthetic antioxidants BHA, BHT etc.