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https://www.ejmanager.com/mnstemps/137/10032-27990-1-PB.pdf

Cited in:

Emir. J. Food Agric. 2011. 23 (6): 554-560
http://ejfa.info/ 554

Nutritional analysis of indigenous wild edible herbs used in eastern Chhattisgarh, India

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Abstract:

The communication deals with the native uses of ethnobotanical species identification and chemical analyses of different edible parts of wild plant species consumed by the local people inhabiting in the tribal areas of Bilaspur district, situated in the eastern part of Chhattisgarh state of India. Total seventy wild edible plant species were identified and recorded. Out of seventy plants species 25 are chemically analyzed and presented in this paper. The methods employed in this study were designed with the purpose of providing baseline information on the wild edible plant species in local system through surveys (field visits) and there nutritional potential through chemical analysis of different edible parts. Plants were collected, photographed, identified and voucher specimens prepared for the herbarium. The proximate nutritional composition, ash, moisture, carbohydrate, crude protein, crude fat, crude fiber, energy and iron were determined. The results of nutritional composition showed that the leaves have high moisture content from 93.45 ± 0.182% to 56.96 ± 0.255% which is highest in the leaves of Carthemus tinctorius and lowest in Cissus quadrangularis. Crude protein contents in the samples varied from 1.2 ± 0.602% to 17.84 ± 0.892%. Ipomoea aquatica showed the highest value of 17.84 ± 0.892%. Leaves of Amaranthus virdis, Chenopodium album, Centella asiatica, Commelina benghalensis, Moringa oleifera have also been found to be very good sources of protein. Out of 25 vegetables, crude lipid content ranged from 0.72 ± 0.409% to 30.02 ± 0.461.The lowest value of crude lipid was found in Aegle marmelos 0.77 ± 0.046% which was low as compared to the previously reported value of 2.66% in Momordica species. Energy in terms of calorific value was found to be in the normal range of 134.6 kcal/100 gm to 431.6 kcal/100 gm. Iron content in these samples ranged from 21 ppm to 869 ppm. All the values are statistically analyzed and compared with previously reported values.

Key words: wild edible herbs, tribal areas, protein contents, nutritional composition

References

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