J Food Process Technol 2012, 3:10
http://dx.doi.org/10.4172/2157-7110.S1.010

OMICS Group Conferences
Accelerating Scientific Discovery

International Conference and Exhibition on
Food Processing & Technology

November 22-24, 2012 Hyderabad International Convention Centre, India

Macro and micronutrient composition of biofortified (Iron and Zinc) aerobic rice varieties

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Rice provides 20 per cent of the world's dietary energy supply, while wheat supplies 19 per cent and maize 5 per cent. In addition to being a rich source of dietary energy, rice is a good source of thiamine, riboflavin and niacin. Aerobic rice cultivation helps to reduce labour costs particularly where irrigation water is not a constraint and weeds can effectively be controlled. The new strategy for supplying micronutrients to the poor in developing countries involves making the staple foods they eat more nutritious through the use of conventional plant breeding and biotechnology. An experiment was conducted to study milling characteristics, macro and micronutrient composition of selected varieties of biofortified aerobic rice and along with control (aerobic rice). Milling yield ranged from 77.02 to 83.03 per cent. The moisture content ranged from 9.10 to 9.38 g, protein content 9.28 to 12.50 g, fat content 0.55 to 1.55 g and crude fiber 0.24 to 0.55 g respectively. Ash and minerals such as calcium, phosphorus, iron and zinc ranged from 0.78 to 0.92 g, 10.26 to 12.70 mg, 155.27 to 166.14 mg, 2.20 to 4.86 mg, 4.80 to 5.45 mg respectively. Among all the varieties IVT (SHW) 91 which had good nutritional value. Significant differences between biofortified aerobic rice varieties for moisture, protein, fat, crude fiber, calcium, phosphorous, iron and zinc were observed. There was no significant difference between the varieties for ash content.

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Value added instant beverage mixes from Ash Gourd and Amla

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In human diet beverages from fruits and vegetables plays a vital role, as they are pleasant and satisfying. Most of the fruits and vegetables have a wholesome therapeutic effect and can be consumed as refreshing drinks. Hence, there is a huge scope for the development of low cost beverages of high nutritional value using locally available fruits and vegetables with prolonged shelf life. Hence, an attempt was made to develop Instant beverage mixes by standardizing the juice and soup samples using different variations of Ash gourd and Amla.

Sensory evaluation was done before dehydration of standardized samples. The best accepted juice (AGJ4) and soup (AGS3) samples were subjected for dehydration using Hot air oven. The percent recovery of juice and soup mixes was 100:10 and 100:15 respectively. Physico-chemical analysis was done for all the juice and soup variations and maximum nutrients were found for Juice mix of (AGJ5): protein (0.59g),fat (0.50g), crude fiber (1.21g), calcium (33.02mg), iron (1.10mg),ascorbic acid (56.49mg), TSS (2.780B), and titrable acidity(4.53%).However, Soup mix(AGS5) : protein(0.82g), fat (0.51g), crude fiber (2.01g),calcium (35.02mg), iron (1.98mg), ascorbic acid (70.89mg), and titrable acidity(4.13%). Consumer evaluation was also done by taking 50 students from Under graduate and Post-graduate. Results revealed that, both the instant mixes were accepted by the consumers since; the Instant mix were natural nutri-mix, save cooking time and also provides additional nutrients.

Biography

Sudharani N has graduated her Master Course at the age of 24 years from University of Agricultural Sciences, GKVK, Bangalore. She is working as an officer in Canara Bank. She has published more than 3 abstract papers and 1 full length paper in National Conferences and aspiring to publish good paper in this International Conference also.

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