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STUDIES ON PREPARATION OF MISTI BIOYOGHURT ENRICHED WITH DIFFERENT FIBRES

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ABSTRACT

The present paper deals with the preparation of quality Misti bioyoghurt enriched with different fibres. Misti bioyoghurt is a popular ethnic delicacy. It is added with commercial dietary fibres such as Inulin, Wheat fibre, Maida, Tomato, Fructo oligosaccharides, with cultures like Streptococcus thermophilus, Lactobacillus bifidum were incorporated and their effect on the product quality in terms of physiochemical, sensory and texture quality were observed. These dietary fibres shows decrease in viscosity and firmness,, increase in lightness, yellowness, percentage of Brix, Acidity, protein, and Microbial ratio.

Keywords: Streptococcus thermophilus, Lactobacillus bifidum, viscosity, Brix, Firmness.

INTRODUCTION

Mistidahi is a probiotic which are common in India. It is cultured fermented milk is known to provide several health benefits to the consumer. It also contains growth promoting factors like Alanine, Glycine, Methionine, Asparagine, and Cysteine. It also shows an increase of Niacin and Riboflavin in yoghurt. Bioavailability of copper, calcium, iron, magnesium and phosphorus is also increased in yoghurt compared to milk [1 4]. It acts as a stabilizer of modified starches, Hydroolloids/pectin. It improves gastrointestinal function, reduction in cholesterol and boost immune system. The five dietary fibres includes are Inulin, Tomato, Wheat fibre, Maida, Fructo oligosaccharides [1 5]. Inulin is a group of naturally occurring poly saccharides produced by many products. Industrially most often extracted from chicory. They belong to a class of dietary fibers known as 'FRUCTANS'. Tomato is a globally cultivated for fleshy fruits it is known for its special nutritive value. It is the richest source of nutrients dietary fibres. Antioxidants like lycopene and

beta carotene compounds protect cells from cancer. Maida flour is super refined wheat flour [1 12]. It is a finely and milled refined flour. It contains traces amounts of alloxan which gives its softness and white color. Wheat fibre is a leading source of cereal protein in human food having protein content. The whole grain is a concentrated source of vitamins, minerals and protein while the refined grain is mostly starch [1 14].

MATERIALS AND METHOD

CHEMICALS REAGENTS:

Sodium hydroxide, Phenolphthalein indicator, Sulphuric acid, Iso-amyl alcohol, Formaldehyde, Tryphase Glucose Yeast Agar culture media, Eosin Methylene Blue agar.

CHEMICAL ANALYSIS: Determination of pH, Acidity, Fat by Gerber Method [1 9], Carbohydrate [1 3], Protein by Pyne`s method [12 15].

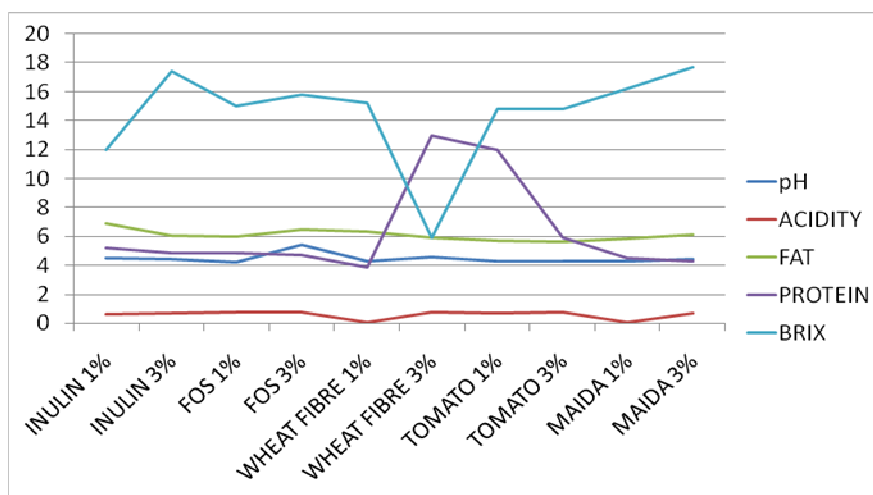
MICROBIOLOGICAL ANALYSIS: Total Bacterial count, Coliform count, Yeast and Molds count, Methylene Blue Reductase Test.

SENSORY ANALYSIS: It was done using Point Hedonic scale where its characteristics like color, body, texture, taste and flavor were evaluated.

RESULTS AND DISCUSSION

CHEMICAL ANALYSIS:

Chemical analysis of Misti bioyoghurt with different fibres (Inulin, Fos, wheat fibre, tomato , Maida)



INTERPRETATION: Mistidahi subjected to a chemical quality analysis. The table shows the average fat and protein content. Average Acidity content was found to be 70% ratio of ST:Bi:LA

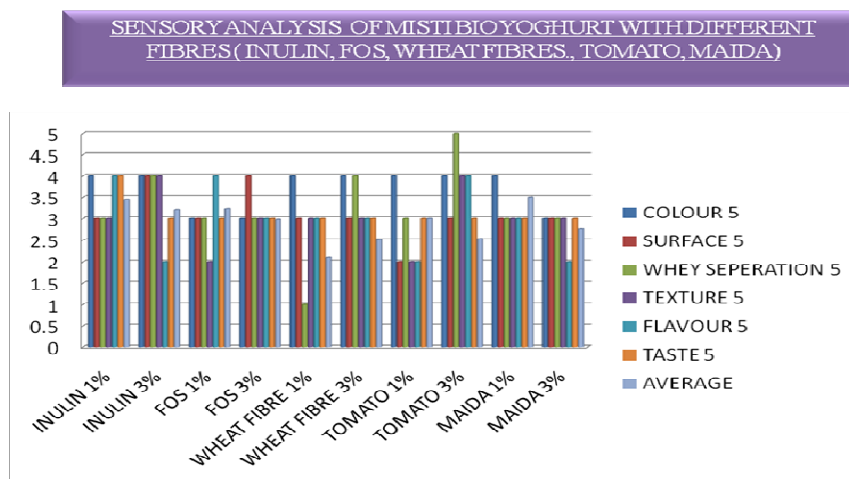
was found to be very close to equal proportion overall chemical quality of control Mistidahi is found to meet the prescribed and their regarded as a good quality.

MICROBIOLOGICAL ANALYSIS:

MICRO BIOLOGICAL ANALYSIS	CONCENTRATION	COLIFORM COUNT	YEAST AND MOLD COUNT	TOTAL BACTERIAL COUNTX10 ⁷	MICRO SCOPIC RATIO ST:Bi:LA
INULIN	1%	NIL	NIL	22.8	26:36:38
	3%	NIL	NIL	22.6	47:31:22
FOS	1%	NIL	NIL	23.0	24:38:38
	3%	NIL	NIL	23.0	18:42:40
WHEAT FIBRE	1%	NIL	NIL	25.4	28:43:29
	3%	NIL	NIL	30.4	25:49:25
MAIDA	1%	NIL	NIL	23.0	23:61:18
	3%	NIL	NIL	51.4	23:41:36
TOMATO	1%	NIL	NIL	17.0	18:65:17
	3%	NIL	NIL	30.6	27:39:34

INTERPRETATION: Mistidahi was examined for the microbiological quality. The Total Bacterial count was found to range to 40x10⁷ which exceeds the standard count of more than 1x10⁷. As per the standard falls under the grade of good quality.

SENSORY ANALYSIS:



INTERPRETATION: Evaluated by a panel of five judges adopting five points Hedonic scale. The sensory score exceeded to Bioyoghurt Mistidahi ranged over 3.5 out of 5. As per the standard grade Mistidahi is a graded as a good quality.

DISCUSSION:

Dietary fibre is the group of food component that pass through the stomach and small intestine in undigested state and reach the large intestine virtually unchanged. During its passage through the large intestine some components of dietary fibres are broken down by varying degrees and absorbed by the body. However fibre does play a very important role in human health. Whole foods contain two essential forms of fibres, soluble and insoluble fibres. They are needed to maintain a healthy intestinal tract and promote healthy and regular bowel movement. Fibres are well known to impart several health benefits particularly to comeback constipation and also helpful in controlling constipation in diabetic patients. Mistidahi obtained by fortification of fibres inulin is found to increase the biomass with the addition of probiotic culture in the equal proportion. Inulin is known as the fibre endowed with health properties. Inulin and probiotic culture would offer health benefits to the consumers a large extent.

CONCLUSION

Fermented milk is consumed early in day to day diet which ensures providing quality milk, nutrients to the consumers in recommended for regular consumption. Mistidahi is a popular dessert is prepared by using probiotic lactic culture and five fibres such as Inulin, Tomato, Wheat fibre, FOS, Maida. Fortification of these fibres with the 1% and 3% where inulin was found to secure higher sensory score as well as enriched within high biomass of probiotic. Inulin is considered as effective health providing fibre and is also known to improve the texture and firmness of Mistidahi. So by this finding would highly benefit the consumer imparting health benefits.

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