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Preparation of Curd for Natural Weight Loss: A Different Approach to Curd Preparation for Weight Loss in Overweight Peoples

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Abstract: ***Curd, a fermented dairy product rich in probiotics, has been widely recognized for its digestive and metabolic benefits. This study investigates standardized methods of curd preparation and analyzes how variations in fermentation conditions influence its nutritional and probiotic profile, with a focus on natural weight-loss potential. Curd was prepared using different milk types (skim, low-fat, and whole milk) and starter cultures under controlled temperature and incubation durations. Nutritional composition, microbial counts, and bioactive compounds were assessed. Results indicate that curd prepared from low-fat milk and fermented for 6–8 hours at 37–42°C demonstrates optimal probiotic viability and improved metabolic-supportive nutrients. Findings suggest that regular consumption of properly prepared curd may aid digestion, promote gut microbiota balance, enhance fat metabolism, and naturally support weight management. Further clinical studies are recommended to establish long-term effects and ideal consumption patterns.***

I. INTRODUCTION

Most health issues were arising due to the body being overweight. A total of 39% of the adult population in the world is overweight. The overweight population can be determined by Body Mass Index. Overweight peoples have a BMI index equal to or greater than 25. Being overweight and obese may increase your risk for certain health problems and may be linked to certain emotional and social problems. The health-related issues in overweight people are type 2 diabetes, high blood pressure, heart disease, stroke, sleep apnea, fatty liver diseases, osteoarthritis, gallbladder diseases, kidney disease, and pregnancy problems.

Even though various FDA-approved weight loss drugs are available in the market but most of the weight loss drugs may cause side effects to the human body such as increased blood pressure and heart rate, insomnia (trouble sleeping)nervousness, blurred vision, restlessness, headache, some forms may cause stomach side effects like constipation, dry mouth, nausea or vomiting.

We tried different concentrations of carrot juice in skimmed milk for curd preparation. We tried carrot juice in curd preparation because it contains high protein content per 100 g of carrot (0.9%), fibers per 100g (0.8g), and calcium (20 mg/1 medium-sized carrot). As per reviewing of research articles, we found that protein content, fibers, and minerals like calcium will help to reduce the weight of overweight people (Sarker *et al.*, 2017). This research aims to find the best combination of skimmed milk and carrot to help overweight people reduce weight loss. This preparation will give us a natural and safe alternative for weight loss in overweight people.

II. OBJECTIVES

1) Collection and extraction of juice from fresh market vegetables such as carrots.
2) Distribution and Pasteurization of skimmed milk and carrot juice in different flasks.
3) Fortification of 5%, 10%, 15%, 20%, and 25% concentrations of carrot juice in the Pasteurized skimmed milk separately to prepare curd and keep one control containing skimmed milk without carrot juice (Zaman *et al.*, 2016).
4) Inoculation of potential homemade curd as inoculum for making the curd.
5) Incubation of all inoculated flasks at 37^0C for 24 hours and results were recorded.

III. MATERIAL AND METHODS

1) Collection of Samples: Fresh market carrot vegetable was collected in a polythene bag and brought into the laboratory. Two carrots were cleaned and washed with tap water under tap water 2 to 3 times. Carrots were cut into smaller pieces and ground in the grinder for some time. The ground material was kept in a clean cloth and squeezed for the separation of juice.

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2) Pasteurization of Skimmed Milk: A total of 300 ml of a milk sample was taken in a 500 ml capacity glass beaker and kept on the gas burner for heating. During the heating, fat is collected at the top of the milk. This collected fat was removed frequently with the glass. This process of fat separation is known as skimming. Such skimmed milk was pasteurized at 62.5^0C for 30min. and used further for curd preparation.

3) Pasteurization of Carrot Juice: A total of 300 ml of carrot juice was taken in a 500 ml capacity glass beaker and kept on the gas burner for pasteurization at 62.5^0C for 30 min. This Pasteurized carrot juice was taken further for making curd (Desai *et.al.*,1994).

4) Fortification of Skimmed Milk: Fortification of skimmed milk was carried out in glass flasks. In this process, five 300 ml capacity flasks were arranged on the table. In each flask were added 5%, 10%, 15%, 20%, and 25% concentrations of the pasteurized carrot juice in proportion with the skimmed milk. One flask was taken as a control flask. In this flask, 50 ml of skimmed milk was added.

5) Inoculation and Testing: All six flasks containing 50 ml of fortified skimmed milk were added separately. This is followed by inoculation of 5% inoculum of potential homemade curd. All such flasks were kept at 37^0C for 24 hrs. of incubation. After 24 hrs. all flasks were examined on the ground of color, texture, aroma, and taste, and results were recorded.

IV. RESULTS AND DISCUSSION

All flasks were solid after 24 hours of incubation. Fortified curd-making flasks were compared with control flasks and the color, texture, aroma, and taste of all fortified flasks were shown in

Table no. 1

Sr. No.	Sample	Parameter	Incubation of fortified curd samples at 37^0C for 24 hrs.				
			5%	10%	15%	20%	25%
1	Fortified curd sample	Solidity	+	+	++	+	+
		Color	+	+	++	+	+
		Texture	+	+	++	+	+
		Aroma	+	+	++	+	+
		Taste	+	+	++	+	+

"+" = less potent

"++" = more potent

A fortified skimmed milk sample containing 15% carrot juice was the most efficient for curd preparation. The quality parameters of the 15% fortified curd sample were best in all respects.

A. Determination of Chemical Parameters

The protein, fiber, and mineral content were increased in the 15% carrot juice-fortified skimmed milk sample. There was an approximately 2-fold increase in protein, fiber, and mineral content. The 15% carrot juice fortified skimmed milk sample decreases half a fold decrease in cholesterol content.

V. CONCLUSIONS

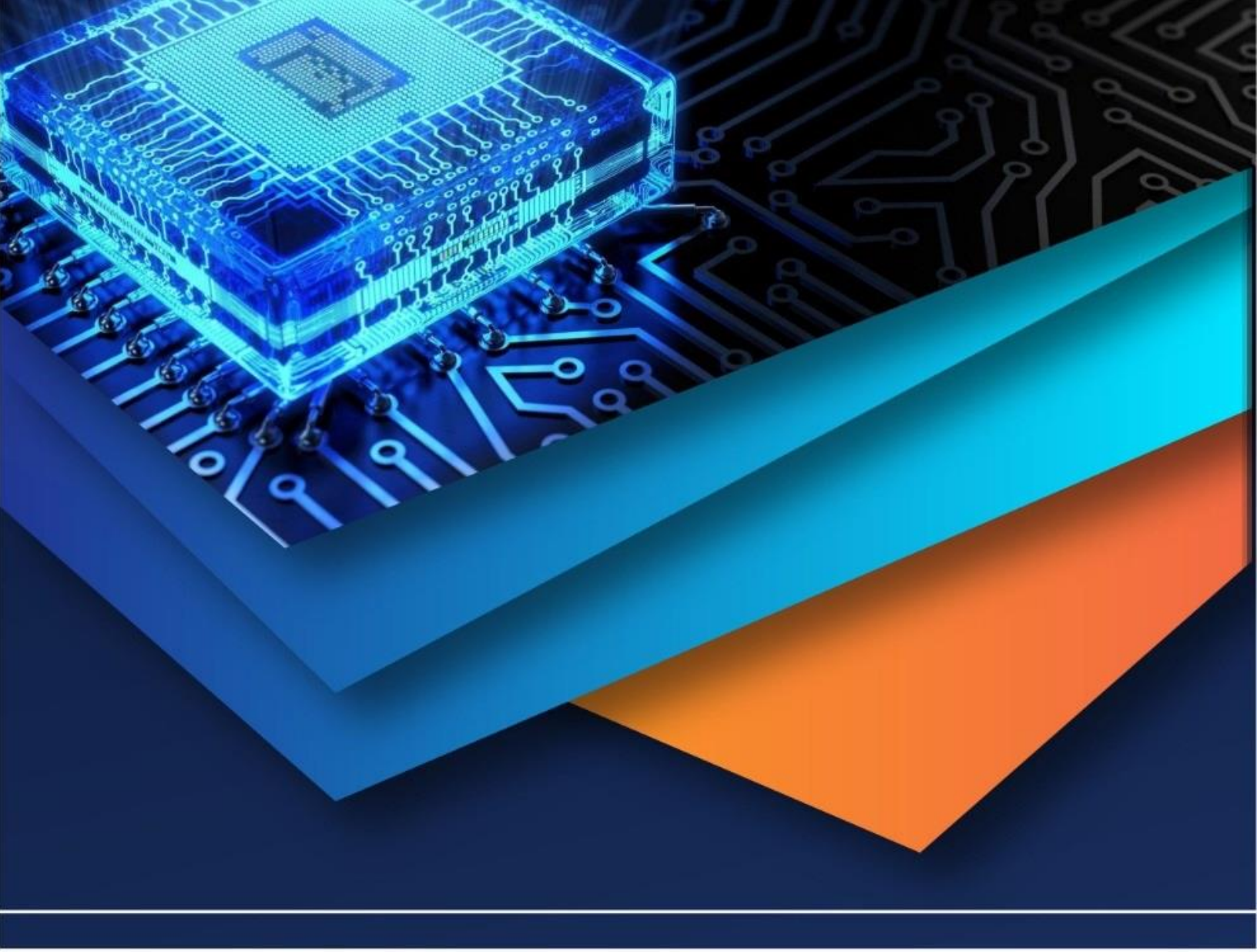
It was examined that a 15% carrot juice-fortified skimmed milk sample was the most significant for the making of curd. There was a significant increase in all chemical characteristics of 15% fortified carrot juice prepared curd. It was concluded that adding 15% fortified carrot juice was shown the better quality of the product better than other fortified samples. This study showed that using a 15% fortified skimmed milk sample for preparing high-quality fruit-flavored curd. This 15% carrot juice-fortified skimmed milk curd was most effective for reducing weight loss in overweight people. This can be achieved by high protein content and calcium decreases hunger and increases metabolic rate

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