

**QUALITY COMPARISION AND ACCEPTABILITYOF FRUIT YOGHURT WITHDIFFERENT FRUIT JUICES**

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**Session: 2016-2017**

**The thesis submitted in the partial fulfillment of the requirements for the degree of Masters of Science in Food Processing and Engineering**

**Department of Food Processing and Engineering**

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**Chittagong-4225, Bangladesh**

**JUNE, 2018**

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**Tanbin Sultana**

**JUNE,2018**

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**This is to certify that we have examined the above Master’s thesis and have found that is complete and satisfactory in all respects, and that all revisions required by the thesis examination committee have been made**

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**JUNE 2018**

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**List of abbreviation**

|  |  |
| --- | --- |
| **Abbreviation** | **Elaboration** |
| % | Percentage |
| °C | Degree centigrade |
| CVASU | Chittagong Veterinary and Animal Sciences University |
| CFU | Colony forming unit |
| F.A.O | Food and Agricultural Organization |
| Gm | Gram |
| HCl | Hydrochloric acid |
| Hrs | Hours |
| LAB | Lactic acid bacteria |
| Log | Logarithm |
| Mg | Milligram |
| Ml | Milliliter |
| N | Normality |
| PRTC | Poultry Research and Training Center |
| SLSI | Sri Lanka Standards Institute |
| TVC | Total viable Count |
| USA | United States of America |
| USDA | United States Department of Agriculture |
| W | Weight |
| W.H.O | World Health Organization |

**Abstract**

This study was carried out to develop and evaluate physicochemical property, microbial quality and sensory acceptance of fruit yoghurt and plain yoghurt. Fruit yoghurt with three different fruit juice types: strawberry, mango and orange were prepared with different proportions. Each of the fruit juices were added to yoghurt at the rate of 5%, 10%, 15%. Fruit yoghurt and plain samples (no fruit juice added) were analyzed for physicochemical and microbial quality and sensorial acceptance.Quality of the yoghurts was improved due to incorporation of low level of fruit juice. Yoghurts fortified with 10% orange juice was the best in quality among the others. The smell and taste, body and consistency and color and texture of the fruit yoghurts were equally acceptable. 10 and 15% strawberry fruit yoghurt contain more acid and its texture was cracked down in refrigeration temperature. The moisture and acidity content of fruit yoghurts were increased than plain yoghurt because of high content of these in the fruits. The fat, protein content of strawberry and orange fruit yoghurt were decreased than normal plain yoghurt. But the carbohydrates content of fruit yoghurt were increased because fruit contains more sugar than milk. Statistical analysis showed that yoghurt fortified with 10% orange juice was more acceptable than others comparing all quality characteristics. The microbiological quality of the fruit yoghurts was also acceptable because of acid content of the fruits. In case of strawberry yoghurt, fruit juice concentration more than 5% was not suitable for fruit yoghurt because that are highly acidic and curd was cracked down at refrigerated condition. The findings of this research may give an overall idea about manufacturing of fruit yoghurt incorporating different level of fruit juice and appropriate technology of fruit yoghurt preparation.The results of current study confirm that, addition of fruit juice to the yoghurt significantly improved the sensorial acceptability and physicochemical properties of yoghurt.

**Keywords**: Fruit yoghurt, Fruit juices, Acceptability, Microbial quality, Sensory quality, chemical properties.