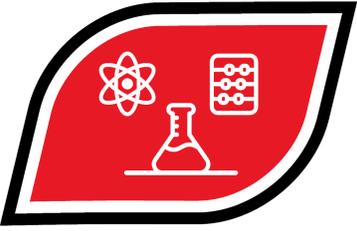


How Safe Is Ice Cream In Tabora Town?



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Introduction

Determination of micro-organisms present in the ice-creams made from water fetched from local wells which are not boiled then used to make ice-creams.

The objectives of the experiment are:

1. Identification of disease causing micro-organism in the sample used to make ice-cream
2. Identification of disease or the effect of consuming the ice-cream made from water sample.
3. Experimentation.

Method

Identification of disease causing micro-organisms in the sample used to make ice-creams.

The sample used to make ice-creams from the local well examined to identify the disease causing micro-organism like total coliform, fecal, coliforms and the E.Coli, psychrophiles example Archaea bacteria. These were done under the portable colon counter 40ml of the sample used during examination.

Experimentation

The sample fetched from the local wells

The sample is divided into 4 containers each with 40ml. Each container underwent the examination (experiment). The 4 containers are taken to the refrigerator so as to freeze.

Results

Identification of diseases or the effects of consuming the ice-creams made from water sample.

Once a person consumes the total coliforms or the fecal coliform these can lead to diarrhea but the total coliforms survive best in 37°C. The E.coli also survive best in 37°C, the archae bacteria (psychrophiles) survive below 20°C but it seems to have no effect on the human body since above 20°C it will not survive and the human body has 37°C as the body temperature so when consumed it will not survive. Also the coliform will not survive when taken to cooler environments below 37°C.

SAMPLE NO.	INITIAL TEMP. IN DEGREE CELSIUS	DURATION	FINAL TEMP. IN DEGREE CELSIUS
1	22	4hours	60
2	22	6hours	40
3	22	8hours	0

Table of result

SAMPLE NO.	PARAMETERS TESTED	UNITS	RESULTS	PERCENTAGE%
1.	Total coliforms(TC)	Cfu/100ml	12	40
	Psychrophiles	Cfu/100ml	8	26
	FecialColiforms(FC)	Cfu/100ml	12	40
	E.Coli	Cfu/100ml	10	33

RESULTS

SAMPLE NO.	TURBIDITY (NTU)	PHYSICAL APPEARANCE	TEMP	E.COL 0/100	REMARKS
1	2	Clear	21	2	Contaminated
2	2	Clear	21	2	Contaminated
3	1	Clear	22	1	Good

The result shows that the psychrophiles (Archae bacteria) are the only ones which survive best in temperature range of 0°C-20°C. But the total and fecal coliforms and E.coli are no more present in the sample since they do not survive in the moderate temperature at range 20°C-45°C, the best temperature for them to survive is 37°C so below 20°C will not survive. But the psychrophiles (Archae bacteria) who survived at cooler temperature has no effects on the human body.

Conclusion

The aim of the experiment was to know the safeness of ice-creams made from the water fetched from the local wells, therefore the ice-creams are safe since the psychrophiles (Archae bacteria) are the only ones remained in the sample and has no effects on the human body. Thus ice-creams are safe for consumption.

References

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