World Journal of Pharmaceutical and Life Sciences
WJPLS
www.wjpls.org
SJIF Impact Factor: 6.129

MICROBIOLOGICAL QUALITY OF CONFECTIONARY PRODUCTS

Rupali Rajiv Kumar*

Post Graduate Scholar, Industrial Biotechnology Dept. Aribas, V.V. Nagar, India.

Corresponding Author: Rupali Rajiv Kumar

Post Graduate Scholar, Industrial Biotechnology Dept. Aribas, V.V. Nagar, India.

Article Received on 21/07/2020 **Article Revised on 11/08/2020** **Article Accepted on 01/09/2020**

ABSTRACT

The point of this work is to decide microbiological nature of ice cream parlor items. In candy parlor items microbiological boundaries: complete check of microorganisms, coliforms microbes, mesophilic aerobes microscopic organisms and tiny filamentous growths were watched. The dessert shop items were assessed: Kremeš and Venček cake. For microbiological tests 20 examples of dessert shop items were utilized. The quantities of complete check of microorganisms ran from 3.29 log CFU.g-1, the quantity of mesophilic aerobes microbes went from 1.86 to 2.85 log CFU.g-1, coliforms microscopic organisms in candy store items ran from 0 to 2.06 CFU.g-1 and the quantity of minute growths ran from 1.13 to 1.96 CFU.g1. The examples of cake prom private creation indicated better microbiological quality as tests from advertise creation.

KEYWORDS: confectionary item, Kremeš, Venček, microorganisms, minute growths.

INTRODUCTION

The issue of security and healthiness (wellbeing), food assumes a unique job in the prioritization of control during production and treatment of food. Alongside building up the abilities and precision of recognition strategies utilized for expanding the significance of evaluating the nature of food items and the nature of their individual segments, from a microbiological perspective in all phases of creation and preparing. As a benchmark shows its significance, along with innovative, clean and dietary boundaries. Inquiries of value and healthiness of food, along with respect to natural security are turning out to be progressively of concern not just among specialists from different callings and controls, yet additionally the overall population. Relationship of Food and Drug Officials, straightforward bundling or repackaging activities can realize an open door for the tainting or recontamination with microbes if exacting aseptic conditions are not clung to. Desserts get the vast majority of their defilement from their fixings, albeit a few contaminants might be included by opened up pieces via air, residue and taking care of. Extra sullying may originate from gear interacting with food from bundling materials and from work force. For the most part, poor sterile conditions and the earth being exceptionally accused of waste and pathogenic verdure could be the wellspring of defilement to food things presented to it. In this manner, retailers of food items, which incorporate desserts, have been embroiled in the spread of food-borne illnesses. Different items have been embroiled in food contamination because of their quality, creation and general taking care of.

The current examination targets inspecting the microbiological nature of confectionary items sold at market and made in private pastry kitchen a view to surveying their microbiological readiness for human utilization. In ice cream parlor items microbiological boundaries: all out tally of microorganisms, coliforms microscopic organisms, mesophilic aerobes microscopic organisms and minuscule filamentous parasites were watched.

MATERIAL AND METHODS

Collection of confectionery samples

The examples of ice cream parlor items chose types were included from showcase creation and private creation. For microbiological investigations Kremeš (5 examples from showcase), Kremeš (5 examples from private creation), Venček (5 examples from market) and Venček (5 examples from private creation) were utilized. For microbiological tests together 20 examples of sweet shop items were utilized before lapse date.

Determination of CFU counts

For microbiological examination the confectionary tests were handled following assortment. The all out tally of microbes (TCB), mesophilic aerobes microorganisms (MAB) coliforms microbes (CB) and minuscule filamentous parasites (MF) were watched. Plate weakening technique was applied for quantitative CFU

(Colony Forming Units) checks assurance of separate gatherings of microorganisms in 1 g of dessert shop items. Petri dishes of coagulated nutritive substrate were vaccinated with 1 mL of candy store tests (TCB, MAB, CB, MF) in three replications. Homogenized examples of sweet shop were set up ahead of time by successive weakening dependent on decimal weakening framework application. For microorganism development three sorts of developing mediums were utilized, to isolate singular microorganism gatherings. Plate tally agar was utilized for CFU isolation of TCB (brooding 48-72 h at 30 °C, oxygen consuming development strategy). Meat peptone agar was utilized for CFU isolation of MAB (hatching 48-72 h at 25 °C, oxygen consuming development technique). Violet red bile agar was utilized for CFU isolation of CB (hatching 24 h at 37 °C, oxygen consuming development strategy). Malt agar was utilized for CFU isolation of MF (hatching 5-7 days at 25 °C, vigorous development technique). Developing medium organization related to maker presentations (BiomarkTM, Pune, India). Essential weakening (10−1) was set up as follows: 5 g of ice cream parlor was added to the bank containing 45 mL of refined water. The cells were isolated from substrate in shaking machine (30 minutes). Arranged essential substance was weakened to lessen the substance of microorganisms under 300 CFU level.

RESULTS AND DISCUSSION

The control of crude materials, handling and condition are basic components in the anticipation of microbial defilement in sweet shop. *Salmonella* has been seen as the significant risk in sweet shop. Testing for this life form at explicit control focuses gives the best methods for quality control. Consistent reconnaissance and great assembling practice are the best techniques for counteraction of defilement.

In Kremeš (tab. 1) from showcase creation the all-out number of microscopic organisms went from 3.72 to 4.08 log CFU.g-1. The quantity of mesophilic aerobes microorganisms ran from 2.53 to 2.85 log CFU.g-1, number of coliforms microbes ran from 0 to 1.47 log CFU.g-1 and number of infinitesimal filamentous organisms extended from 1.56 to 1.93 log CFU.g-1.

Table 1: Microbiological quality of Kremeš from market production.

	The group of microorganisms in log CFU.g-1			
Number of sample	**TCB**	**MAB**	**CB**	**MF**
1	4.08	2.56	0	1.69
2	3.84	2.85	1.47	1.59
3	3.89	2.53	0	1.93
4	3.72	2.42	0	1.56
5	4.03	2.58	0	1.74

TCB-total count of bacteria; MAB-mesophilic aerobes bacteria; CB-coliforms bacteria; MF-microscopic filamentous fungi.

In Kremeš (tab. 2) from private creation the complete number of microbes ran from 2.95 to 3.25 log CFU.g-1. The quantity of mesophilic aerobes microbes ran from 1.89 to 2.51 log CFU.g-1, number of coliforms microorganisms were not found and number of minute filamentous growths went from 1.13 to 1.23 log CFU.g-1. The consequences of microbiological nature of Kremeš from private creation indicated better microbiological quality in totally tried microorganisms. In investigation of Kačániová and Juhaniaková (2011) were found in nectar solid shape Kremeš number of coliforms microbes 4x102 CFU.g-1. Number of yeast in this examination was 1.2x102 CFU.g-1. Zero quantities of tiny parasites and *staphylococci* and the nonattendance of cells *Salmonella* sp. were found.

Table 2: Microbiological quality of Kremeš from private production.

	The group of microorganisms in log CFU.g-1			
Number of sample	**TCB**	**MAF**	**CB**	**MF**
1	3.25	2.15	0	1.23
2	3.15	2.11	0	1.15
3	3.30	2.51	0	1.21
4	2.95	2.05	0	1.13
5	3.10	1.89	0	1.23

TCB-total count of bacteria; MAB-mesophilic aerobes bacteria; CB-coliforms bacteria; MF-microscopic filamentous fungi.

In Venček (tab. 3) from advertise creation the all-out number of microorganisms ran from 3.59 to 3.86 log CFU.g-1. The quantity of mesophilic aerobes microbes extended from 2.18 to 2.41 log CFU.g-1, number of

coliforms microorganisms ran from 0 to 2.06 log CFU.g-1 and number of infinitesimal filamentous growths went from 1.53 to 1.96 log CFU.g-1.

Table 3: Microbiological quality of Venček from market production.

	The group of microorganisms in log CFU.g-1			
Number of sample	**TCB**	**MAF**	**CB**	**MF**
1	3.78	2.18	0	1.59
2	3.59	2.31	0	1.63
3	3.79	2.25	2.06	1.53
4	3.59	2.41	0	1.96
5	3.86	2.32	0	1.56

TCB-total count of bacteria; MAB-mesophilic aerobes bacteria; CB-coliforms bacteria; MF-microscopic filamentous fungi.

In Venček (tab. 4) from private creation the all-out number of microorganisms ran from 3.29 to 3.71 log CFU.g-1. The quantity of mesophilic aerobes microbes went from 1.86 to 2.01 log CFU.g-1, number of coliforms microorganisms were not found in completely tried examples and number of infinitesimal filamentous organisms extended from 1.15 to 1.29 log CFU.g-1. The aftereffects of microbiological nature of Venček from private creation demonstrated better microbiological quality in totally tried microorganisms.

Table 4: Microbiological quality of Venček from private production.

	The group of microorganisms in log CFU.g-1			
Number of sample	**TCB**	**MAF**	**CB**	**MF**
1	3.66	1.89	0	1.25
2	3.55	1.95	0	1.29
3	3.50	1.86	0	1.24
4	3.29	2.01	0	1.15
5	3.71	1.93	0	1.19

TCB-total count of bacteria; MAB-mesophilic aerobes bacteria; CB-coliforms bacteria; MF-microscopic filamentous fungi

CONCLUSION

The point of this investigation was acquired microbiological nature of confectionary items from two distinct creations as were production and private. The better microbiological nature of confectionary items in completely followed microbial boundaries were in private creation. Understanding the idea of microorganisms (counting their sources and development attributes) is vital to microbial control in candy parlor items. Microorganisms access food-preparing territories through various courses (e.g., crude materials, faculty and hardware traffic, water holes and nuisances). Inability to actualize fitting and powerful procedure and sterilization controls could permit these microorganisms, including microbes, to get set up in the preparing condition where they might have the option to get by for expanded timeframes and re-sully item.

REFERENCES

1. OYEYI, T.I. - LUM-NWI, M.E.F. 2008. Bacteriological quality of some street-vended foods in Bayero University campuses, Kano, Nigeria. In Biological and environmental sciences journal for the tropics, 2008; 5(4): 239-243.
2. SHAMSUDDEEN, U. - AMEH, J.B. - OYEYI, T.I. Survey on the possible critical control points during the production of 'Dambun nama' in Kano. In Biological and environmental sciences journal for the tropics, 2008; 5(4): 1-5.
3. WADA-KURA, A. - MAXWELL, R.G. - SADIQ, H.Y. - TIJJANI, M.B. - ABDULLAHI, I.O. - ALIYU, M.S. - ADETUNJI, O.A. 2009. Microbiological quality of some ready-to-eat foods and fomites in some cafeterias in Ahmadu Bello University, Zaria. In Biological and environmental sciences journal for the Tropics, 2009; 6(1): 6-9.
4. FRAZIER, W.C. - WESTHOFF, D.C. Food microbiology. 2nd Edition. McGraw-Hill company ltd.: New York, 1978; 185-239.
5. AMINU, A. - UMAR, G.C. - MUHAMMAD, B.A. Public awareness on food-borne illnesses: a review. In Biological and environmental sciences journal for the tropics, 2006; 2: 114-117.