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SUMMARY

Twenty five random samples each of raw milk, cream, ice cream and kareish cheese were collected from different localities for enumeration, isolation and identification of psychrotrophic bacteria. The counts was determined according to the technique recommended by **APHA (1992)** using standard plate count agar and incubated at $7^{\circ}C/10$ days, as well as using modified rapid method ($32^{\circ}C/2$ days).

The mean values of psychrotrophic bacterial counts using standard method were $1.9x\ 10^{7}$, $3.1x10^{8}$, $3.3x10^{6}$ and $2.6x10^{7}$ /ml of raw milk samples, cream samples, ice cream samples and Kareish cheese samples respectively. While their counts by modified rapid method were $2.3x10^{7}$, $2.5x10^{8}$, $2.8x10^{6}$ and $1.7x10^{8}$ /ml respectively.

These high counts indicate the inadequate hygienic measures adopted in production and storge and will result in their deterioration and unacceptability.

Out of 169 isolated psychrotrophes ($7^{\circ}C/10$ days) from raw milk. 38(22.5%) were Pseudomonas spp.; 23 (13.6%) were Aeromonas spp.; 15 (8.9%) were Staphylococcus spp.; 14 (8.3%) were Bacillus spp., 15 (8.9%) were Micro coccus spp., 17 (10.1%) were Enterobacteriaceae, 10 (5.9%) were Chromobacterium spp., 13(7.7%) were Acinetobacter spp., 12(7.1%) were Flavobacterium spp., 10(5.9%) were Streptococcus spp. and 2 (1.1%) were. Alcaligens spp., while out of 180 isolates at $32^{\circ}C/2$ days were, 60 (33.3%) were Pseudomonas spp., 19(10.6%) were. Aeromonas spp., 17 (9.5%) were Staphylococcus spp., 16 (8.9%) were Bacillus spp., 14 (7.8%) were Micrococcus spp., 8 (4.4%) were Enterobacteriaceae, 9 (5%) were Chromobacterium spp., 17(9.4%) were Acinetobacter spp., 9 (5%) were Flavobacterium spp., 7 (3.9%) were Streptococcus spp and 4 (2.2%) were Alcaligenes spp.

Differentiation of 182 isolates from cream at $7^{\circ}C/10$ days revealed that, 27 (14.8%) were Pseudomonas spp., 18 (9.9%) were Aeromonas spp., 15 (8.2%) were Alcaligenes spp., 20 (11%) were Acinetobacter spp., 16 (8.8%) were Chromobacterium spp., 11(6.1%) were Flavobacterium spp., 28 (15.4%) were Enterobacteriaceae, 22 (12.1%) were Bacillus spp., 15 (8.2%) were Micrococcus spp. and 10 (5.5%) were Staphylococcus spp. while at $32^{\circ}C/2$ days, out of 198 isolates were 38 (19.2%) were Pseudomoras spp., 25 (12.6%) were Aeromonas spp., 20 (10.1%) were Alcaligenes spp., 25 (12.6%) were Acinetobacter spp., 11 (5.6%) were Chromobacterium spp., 14 (7.1%) were Flavobacterium spp., 32 (16.1%) were Enterobacteriaceae, 18 (9.1%) were Bacillus spp., 10 (5.1%) were Micrococcus spp. and 5 (2.5%) were Staphylococcus spp.

Differentiation of 73 isolates from ice cream samples at $7^{\circ}C/10$ days revealed that, 15 (20.6%) were Pseudomonas spp., 10 (13.7%) were Alcaligenes spp., 7 (9.6%) were Acinetobacter spp., 4 (5.4%) were Flavobacterium spp., 15 (20.6%) were Enterobacteriaceae, 15 (20.9%) were Staphylococcus spp., 5 (6.8%) were Aeromonas spp. and 2 (2.7%) were Bacillus spp. while out of 76 isolates at $32^{\circ}C/2$ days, were 10 (13.2%) were Pseudomonas spp., 11 (14.5%) were Alcaligenes, spp., 9 (11.8%) were Acinetobacter spp., 2 (2.6%) were Flavobacterium spp., 16 (21.1%) were Enterobacteriaceae, 14 (18.4%) were Staphylococcus spp., 5 (6.6%) were Micrococcus spp., 4 (5.2%) were Aeromonas spp., and 5 (6.6%) were Bacillus spp.

Differentiation of 150 isolates from kareish cheese samples, at $7^{\circ}C/10$ days, revealed that, 23 (15.3%) were Pseudomonas spp., 18 (12%) were Alcaligenes spp., spp., 8 (5.3%) were Acinetobacter spp., 6 (4%) were Flavobacterium, spp., 15 (10.7%) were Staplylococcus spp., 26 (17.3%) were Enterobacteriaceae, 12 (8%) were Streptococcus spp., 10 (6.7%) were Micrococcus spp., 15 (10%) were Aeromonas spp. and 16

(10.7%) were Bacillus spp. while out of 156 isolates at 32°C/2 days, were 28 (17.9%) were Pseudomonas spp., 14(9%) were Alcaligenes spp., 10 (6.4%) were Acinetobacter spp., 8 (5.1%) were Flavobacterium spp., 19 (12.2%) were Staphylococcus spp., 20 (12.8%) were Enterobacteriaceae, 10 (6.4%) were Streptococcus spp., 9 (5.8%) were Micrococcus spp., 19 (12.2%) were Bacillus spp. and 19 (12.2%) were Aeromonas spp.

Comparing the psychrotrophic types recovered from dairy products by appplying standard and modified rapid method, it is recommended according to our results that modified rapid method could be applied for detection of psychrotrophic species.

The ecnomic and sanitary importance of psychrotrophs isolated from examined samples are discussed. Moreover, suggestion control measures to improve the quality of raw milk as well as other dairy products were discussed.