

Attention to these and similar points has resulted in a great improvement in bacteriological quality. In 1946 it was not unusual to find that samples of ice-cream at the factory gave analyses as under :—

Total Count Per Cubic Centimetre.

13,300,000

2,180,000

B. Coli.

P. in 0.1 c.c.

P. in 0.0001 c.c.

These might be compared with recent analyses:—

Pasteurizer mix—						Total Count.	<i>B. Coli.</i>
A ..	..	..	..	..	..	2,600	A in 1 c.c.
						..	A in 1 c.c.
B ..	..	..	..	..	..	1,400	A in 1 c.c.
						..	A in 1 c.c.
C ..	..	..	..	..	..	0	A in 1 c.c.
D ..	..	..	..	..	..	..	A in 1 c.c.
Homogenizer—							
A ..	..	..	..	..	..	2,400	A in 1 c.c.
						..	A in 1 c.c.
B ..	..	..	..	..	..	15,000	A in 1 c.c.
						..	A in 1 c.c.
C ..	..	..	..	..	..	0	A in 1 c.c.
D ..	..	..	..	..	..	..	A in 1 c.c.
Cooler—							
A ..	..	..	..	..	..	5,000	A in 1 c.c.
						..	A in 1 c.c.
B ..	..	..	..	..	..	4,200	A in 1 c.c.
						..	A in 1 c.c.
C ..	..	..	..	..	..	100	A in 1 c.c.
D ..	..	..	..	..	..	..	A in 1 c.c.
Ageing-vat—							
B ..	..	..	..	..	..	16,500	A in 1 c.c.
						..	A in 1 c.c.
C ..	..	..	..	..	..	0	A in 1 c.c.
D ..	..	..	..	..	..	..	A in 0.001 c.c.
Churn—							
A ..	..	..	..	..	..	1,600	A in 1 c.c.
						..	A in 1 c.c.
B ..	..	..	..	..	..	9,200	A in 0.1 c.c.
						..	A in 1 c.c.
C ..	..	..	..	..	..	300	A in 1 c.c.
D ..	..	..	..	..	..	..	A in 0.01 c.c.
Container—							
A ..	..	..	..	..	..	1,800	A in 1 c.c.
						200	A in 1 c.c.
B ..	..	..	..	..	..	5,200	A in 0.01 c.c.
						..	A in 1 c.c.
C ..	..	..	..	..	..	2,100	A in 0.001 c.c.
D ..	..	..	..	..	..	..	A in 0.01 c.c.

Although the quality of ice-cream as it now leaves the factory may be considered as satisfactory the position with regard to retail sale in shops is very different, a marked deterioration in quality being evident. The same degeneration in the quality of ice-cream during retail sale was commented on by Turbott in a survey carried out in Gisborne in 1933(2). This is indicated by the following table. The tests were made on the ordinary 3d. ice-cream served from a bulk container in a retail shop. Sampling was done with a sterile spoon and not with the shop server, which is well known as a fertile source of contamination. In one instance the water in which the ice-cream dipper was stored showed a plate count of 8,400,000 organisms per cubic centimetre.

Manufacturer.					Plate Count.	<i>B. coli.</i>
A	..	..	..	..	9,000	A in 0.001 c.c.
B	..	..	..	..	190,000	A in 0.001 c.c.
					110,000	A in 0.001 c.c.
					1,530,000	A in 0.0001 c.c.
					65,000	A in 0.001 c.c.
					156,000	A in 0.001 c.c.
					69,000	A in 0.001 c.c.
					29,000	P in 0.0001 c.c.
					120,000	A in 0.001 c.c.
C	..	..	..	..	51,000	P in 0.0001 c.c.
					950,000	P in 0.0001 c.c.
D	..	..	..	..	910,000	P in 0.0001 c.c.