

**Table S2: Microbiological results of the ice cream samples with inclusion**

Results of different microbiological parameters obtained for 119 samples of industrial ice cream sampled at different stores of the mass-market retailers in Italy. All ice cream samples were milk-based and had at least one inclusion (toppings or decorations). See the specific ID in Table S1 for details about ice cream flavor and type of inclusion. Analyzes were performed on 25 g of sample and the results are expressed as colony forming units (cfu)/g.

ID	Aerobic colonies enumeration	<i>Enterobacteriaceae</i> enumeration	Coagulase-positive Staphylococci enumeration	<i>Listeria monocytogenes</i> detection	<i>Listeria monocytogenes</i> enumeration	<i>Salmonella</i> spp. detection
1	90	< 10	< 100	Not detected	Not detected	Not detected
2	1620	140	< 100	Not detected	Not detected	Not detected
3	1200	10	< 100	Detected	< 10	Not detected
4	< 10	< 10	< 100	Not detected	Not detected	Not detected
5	980	10	< 100	Not detected	Not detected	Not detected
6	1890	< 10	< 100	Not detected	Not detected	Not detected
8	100	< 10	< 100	Not detected	Not detected	Not detected
9	40	< 10	< 100	Detected	< 10	Not detected
10	20	< 10	< 100	Not detected	Not detected	Not detected
11	20	< 10	< 100	Not detected	Not detected	Not detected
12	510	< 10	< 100	Not detected	Not detected	Not detected
13	80	< 10	< 100	Not detected	Not detected	Not detected
15	640	10	< 100	Detected	< 10	Not detected
16	140	< 10	< 100	Not detected	Not detected	Not detected
17	70	< 10	< 100	Not detected	Not detected	Not detected
20	300	< 10	< 100	Not detected	Not detected	Not detected
21	480	< 10	< 100	Not detected	Not detected	Not detected
22	60	< 10	100	Not detected	Not detected	Not detected
23	2600	< 10	< 100	Not detected	Not detected	Not detected
25	150	< 10	< 100	Not detected	Not detected	Not detected
26	4000	< 10	< 100	Not detected	Not detected	Not detected
27	2000	< 10	100	Not detected	Not detected	Not detected
28	30	< 10	< 100	Not detected	Not detected	Not detected
29	210	< 10	< 100	Not detected	Not detected	Not detected
31	130	< 10	< 100	Not detected	Not detected	Not detected
32	280	< 10	< 100	Not detected	Not detected	Not detected

33	710	< 10	< 100	Not detected	Not detected	Not detected
34	390	< 10	< 100	Not detected	Not detected	Not detected
35	30	< 10	< 100	Not detected	Not detected	Not detected
36	20	< 10	< 100	Not detected	Not detected	Not detected
37	270	< 10	< 100	Not detected	Not detected	Not detected
38	390	< 10	< 100	Not detected	Not detected	Not detected
39	600	< 10	< 100	Not detected	Not detected	Not detected
40	100	< 10	< 100	Not detected	Not detected	Not detected
41	100	< 10	< 100	Not detected	Not detected	Not detected
42	50	< 10	< 100	Not detected	Not detected	Not detected
43	230	< 10	< 100	Not detected	Not detected	Not detected
44	2120	< 10	< 100	Not detected	Not detected	Not detected
45	30	< 10	< 100	Not detected	Not detected	Not detected
46	100	< 10	< 100	Not detected	Not detected	Not detected
49	40	< 10	< 100	Not detected	Not detected	Not detected
51	110	10	< 100	Not detected	Not detected	Not detected
52	9800	100	700	Detected	20	Not detected
53	350000	16000	< 100	Not detected	Not detected	Not detected
54	1300	30	< 100	Detected	< 10	Not detected
55	860	40	< 100	Detected	70	Not detected
56	12000	230	< 100	Detected	110	Not detected
57	350	20	< 100	Detected	< 10	Not detected
59	570	< 10	< 100	Not detected	Not detected	Not detected
60	420	< 10	< 100	Detected	350	Not detected
61	30	< 10	< 100	Not detected	Not detected	Not detected
62	40	< 10	< 100	Not detected	Not detected	Not detected
63	100	< 10	< 100	Not detected	Not detected	Not detected
64	170	< 10	< 100	Not detected	Not detected	Not detected
65	190	80	< 100	Not detected	Not detected	Not detected
66	40	10	< 100	Not detected	Not detected	Not detected
67	46000	20	< 100	Not detected	Not detected	Not detected
68	350	10	< 100	Not detected	Not detected	Not detected
69	5000	4000	< 100	Not detected	Not detected	Not detected
71	230	30	< 100	Not detected	Not detected	Not detected

72	230	< 10	< 100	Not detected	Not detected	Not detected
73	180	< 10	< 100	Not detected	Not detected	Not detected
74	330	< 10	< 100	Not detected	Not detected	Not detected
75	110	< 10	< 100	Not detected	Not detected	Not detected
76	260	< 10	< 100	Not detected	Not detected	Not detected
77	710000	< 10	< 100	Not detected	Not detected	Not detected
78	360	< 10	< 100	Not detected	Not detected	Not detected
81	50	< 10	< 100	Not detected	Not detected	Not detected
83	80	< 10	< 100	Not detected	Not detected	Not detected
85	450	10	< 100	Not detected	Not detected	Not detected
86	70	< 10	< 100	Not detected	Not detected	Not detected
88	10000	20	< 100	Detected	< 10	Not detected
90	20	< 10	< 100	Not detected	Not detected	Not detected
91	60	< 10	< 100	Not detected	Not detected	Not detected
93	620	10	< 100	Not detected	Not detected	Not detected
96	30	< 10	< 100	Not detected	Not detected	Not detected
99	310	< 10	< 100	Not detected	Not detected	Not detected
100	50	< 10	< 100	Not detected	Not detected	Not detected
102	760	< 10	< 100	Not detected	Not detected	Not detected
106	330	< 10	< 100	Not detected	Not detected	Not detected
108	330000	440	< 100	Detected	30	Not detected
110	610	< 10	< 100	Not detected	Not detected	Not detected
116	880	< 10	< 100	Not detected	Not detected	Not detected
118	210	< 10	< 100	Not detected	Not detected	Not detected
119	320	20	100	Not detected	Not detected	Not detected
121	110	< 10	< 100	Not detected	Not detected	Not detected
123	20	< 10	< 100	Not detected	Not detected	Not detected
126	980	< 10	< 100	Not detected	Not detected	Not detected
131	40	< 10	< 100	Not detected	Not detected	Not detected
132	240	< 10	< 100	Not detected	Not detected	Not detected
135	4000	< 10	< 100	Not detected	Not detected	Not detected
139	680000	60	< 100	Detected	120	Not detected
145	30	< 10	< 100	Not detected	Not detected	Not detected
146	420	< 10	< 100	Not detected	Not detected	Not detected

148	48000	50	< 100	Detected	< 10	Not detected
152	290	< 10	< 100	Not detected	Not detected	Not detected
154	90	< 10	< 100	Not detected	Not detected	Not detected
156	20	< 10	< 100	Not detected	Not detected	Not detected
158	7000	110	300	Not detected	Not detected	Not detected
160	40	< 10	< 100	Not detected	Not detected	Not detected
163	130000	10	900	Detected	10	Not detected
165	7400	< 10	< 100	Not detected	Not detected	Not detected
166	670	< 10	< 100	Not detected	Not detected	Not detected
167	150	< 10	< 100	Not detected	Not detected	Not detected
169	1000	90	< 100	Not detected	Not detected	Not detected
172	2300	< 10	< 100	Not detected	Not detected	Not detected
178	90	< 10	< 100	Not detected	Not detected	Not detected
180	310	< 10	< 100	Not detected	Not detected	Not detected
181	180	< 10	< 100	Not detected	Not detected	Not detected
182	220000	220	< 100	Detected	< 10	Not detected
183	480	< 10	< 100	Not detected	Not detected	Not detected
185	100	< 10	< 100	Not detected	Not detected	Not detected
186	200	< 10	< 100	Not detected	Not detected	Not detected
188	530	80	< 100	Not detected	Not detected	Not detected
189	40	< 10	< 100	Not detected	Not detected	Not detected
191	120	< 10	< 100	Not detected	Not detected	Not detected
194	80	< 10	< 100	Not detected	Not detected	Not detected
197	38000	380	< 100	Detected	< 10	Not detected
199	190	< 10	< 100	Not detected	Not detected	Not detected