

Probability Tables: identifying a contaminant in a food

Batch contains 1000 possible samples (e.g. 1000 x 25g samples analysed for *Listeria monocytogenes*).

The 'prevalence' is the proportion of samples which contain the contaminant.

The sample number (n) is the number of samples analysed.

Number of Samples (n)	Proportion of cheeses in lot which contain contaminant (Prevalence)							
	50%	20%	10%	5%	2%	1%	0.50%	0.20%
1	0.50	0.20	0.10	0.05	0.02	0.01	0.00	0.00
2	0.75	0.36	0.19	0.10	0.04	0.02	0.01	0.00
3	0.88	0.49	0.27	0.14	0.06	0.03	0.01	0.01
4	0.94	0.59	0.34	0.19	0.08	0.04	0.02	0.01
5	0.97	0.67	0.41	0.23	0.10	0.05	0.02	0.01
10	1.00	0.89	0.65	0.40	0.18	0.10	0.05	0.02
25	1.00	1.00	0.93	0.73	0.40	0.22	0.12	0.05
50	1.00	1.00	1.00	0.93	0.65	0.40	0.23	0.10
75	1.00	1.00	1.00	0.98	0.79	0.54	0.32	0.14
100	1.00	1.00	1.00	1.00	0.88	0.65	0.41	0.19
125	1.00	1.00	1.00	1.00	0.93	0.74	0.49	0.23
150	1.00	1.00	1.00	1.00	0.96	0.80	0.56	0.28
175	1.00	1.00	1.00	1.00	0.98	0.86	0.62	0.32
200	1.00	1.00	1.00	1.00	0.99	0.89	0.67	0.36
225	1.00	1.00	1.00	1.00	0.99	0.92	0.72	0.40
250	1.00	1.00	1.00	1.00	1.00	0.94	0.76	0.44
300	1.00	1.00	1.00	1.00	1.00	0.97	0.83	0.51
400	1.00	1.00	1.00	1.00	1.00	0.99	0.92	0.64
500	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.75
600	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.84
700	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91
800	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.96
900	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99
1000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

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Batch contains 10000 possible samples (e.g. 10000 x 25g samples analysed for *Listeria monocytogenes*).

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The sample number (n) is the number of samples analysed.

Number of Samples (n)	Proportion of cheeses in lot which contain contaminant (Prevalence)							
	50%	20%	10%	5%	2%	1%	0.50%	0.20%
1	0.50	0.20	0.10	0.05	0.02	0.01	0.01	0.00
2	0.75	0.36	0.19	0.10	0.04	0.02	0.01	0.00
3	0.88	0.49	0.27	0.14	0.06	0.03	0.01	0.01
4	0.94	0.59	0.34	0.19	0.08	0.04	0.02	0.01
5	0.97	0.67	0.41	0.23	0.10	0.05	0.02	0.01
10	1.00	0.89	0.65	0.40	0.18	0.10	0.05	0.02
25	1.00	1.00	0.93	0.72	0.40	0.22	0.12	0.05
50	1.00	1.00	0.99	0.92	0.64	0.40	0.22	0.10
100	1.00	1.00	1.00	0.99	0.87	0.64	0.40	0.18
150	1.00	1.00	1.00	1.00	0.95	0.78	0.53	0.26
200	1.00	1.00	1.00	1.00	0.98	0.87	0.64	0.33
300	1.00	1.00	1.00	1.00	1.00	0.95	0.78	0.46
400	1.00	1.00	1.00	1.00	1.00	0.98	0.87	0.56
500	1.00	1.00	1.00	1.00	1.00	0.99	0.92	0.64
1000	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.88
2000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99
3000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
4000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
5000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
6000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
7000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
8000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
9000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
10000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00