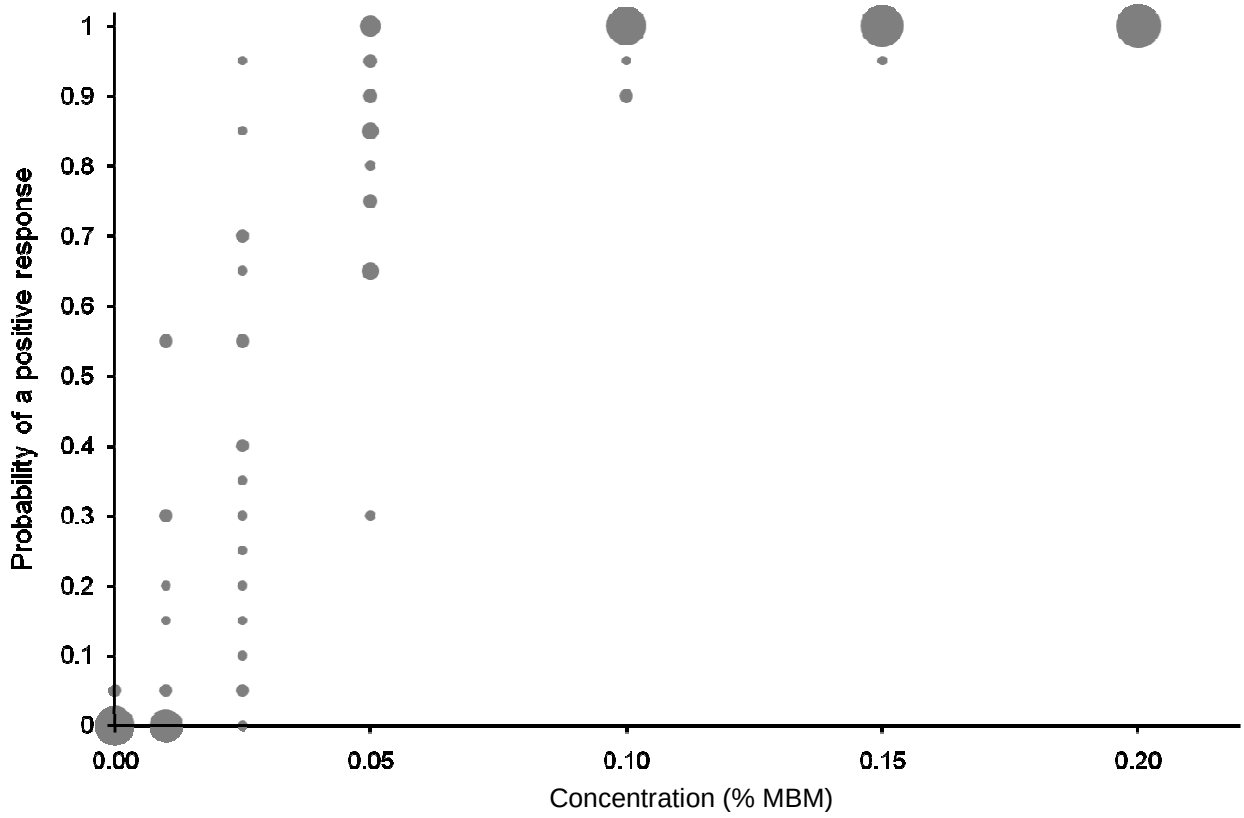



Figure 1: Probability of detection observed by each of 18 laboratories for samples containing between zero and 0.2% meat and bone meal (MBM)

Probability of detection observed by 18 laboratories; Probability of detection observed by 9 laboratories, Probability of detection observed by 3 laboratories, Probability of detection observed by 1 laboratory

Draft - Do

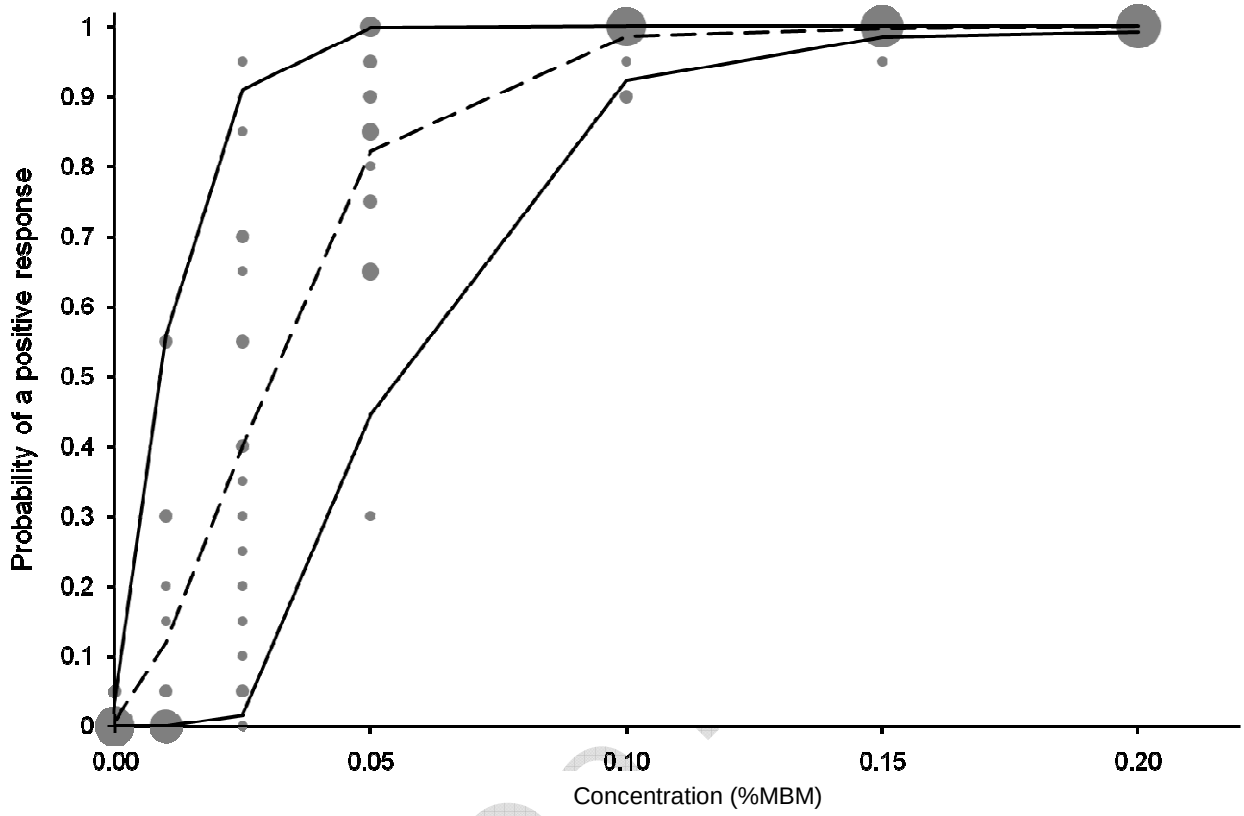



Figure 2: Probability of detection observed by each of 18 laboratories for samples containing between zero and 0.2% MBM with estimates of average probability of detection and the probability of detection for the 5$^{th}$ and 95$^{th}$ percentile of laboratories. ● Probability of detection observed by 18 laboratories; ● Probability of detection observed by 9 laboratories, ● Probability of detection observed by 3 laboratories, ● Probability of detection observed by 1 laboratory, — — — — Mean probability of detection, ——— Lower (5%) and upper (95%) limits of a prediction interval for probability of detection in a laboratory.

Draft - Do

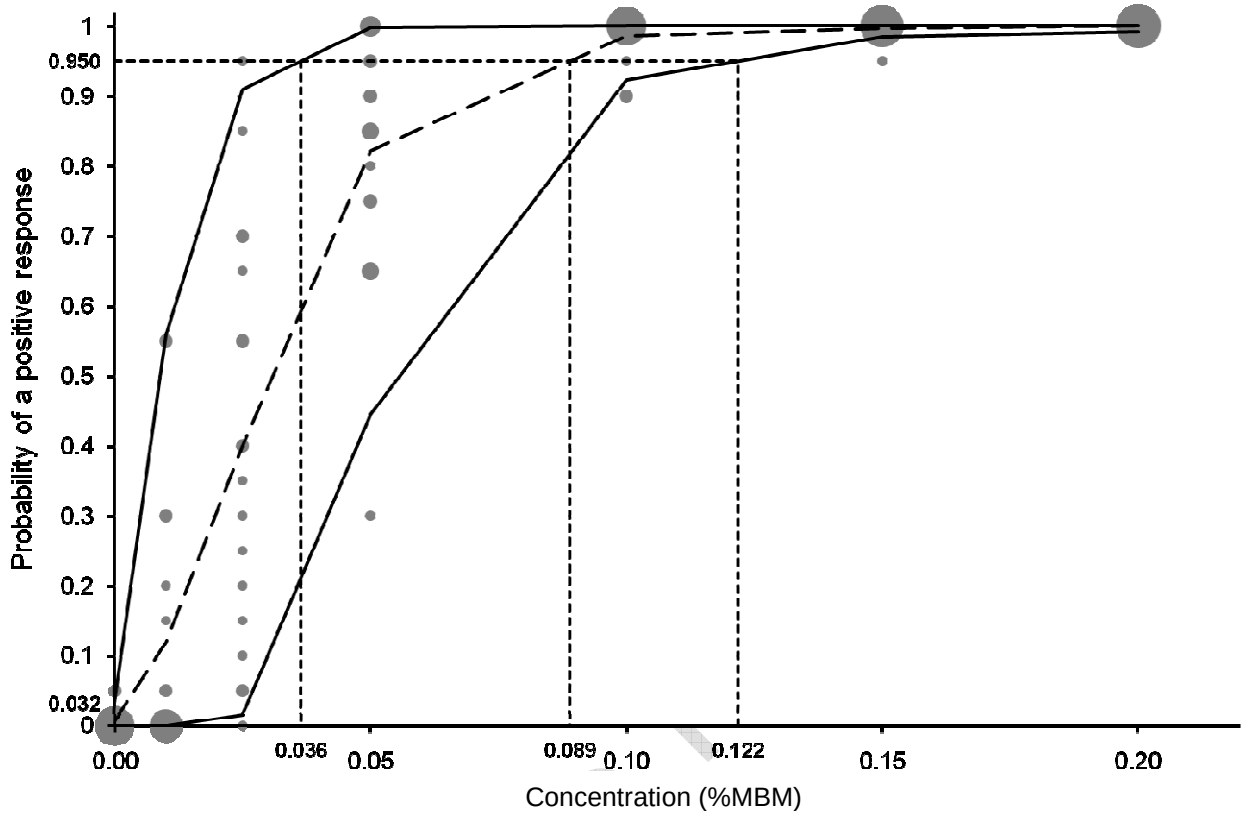



Figure 3: Estimates of an upper limit for the false positive probability prediction interval for the limit of detection for MBM. Probability of detection observed by 18 laboratories; Probability of detection observed by 9 laboratories, Probability of detection observed by 3 laboratories, Probability of detection observed by 1 laboratory, — — — — Mean probability of detection, ———— Lower (5%) and upper (95%) limits of a prediction interval for probability of detection in a laboratory. – – – – – Projection from probability of detection=0.95 to give lower(5%), expected and upper (95%) limits of a prediction interval for limit of detection in a laboratory.

Draft - Do

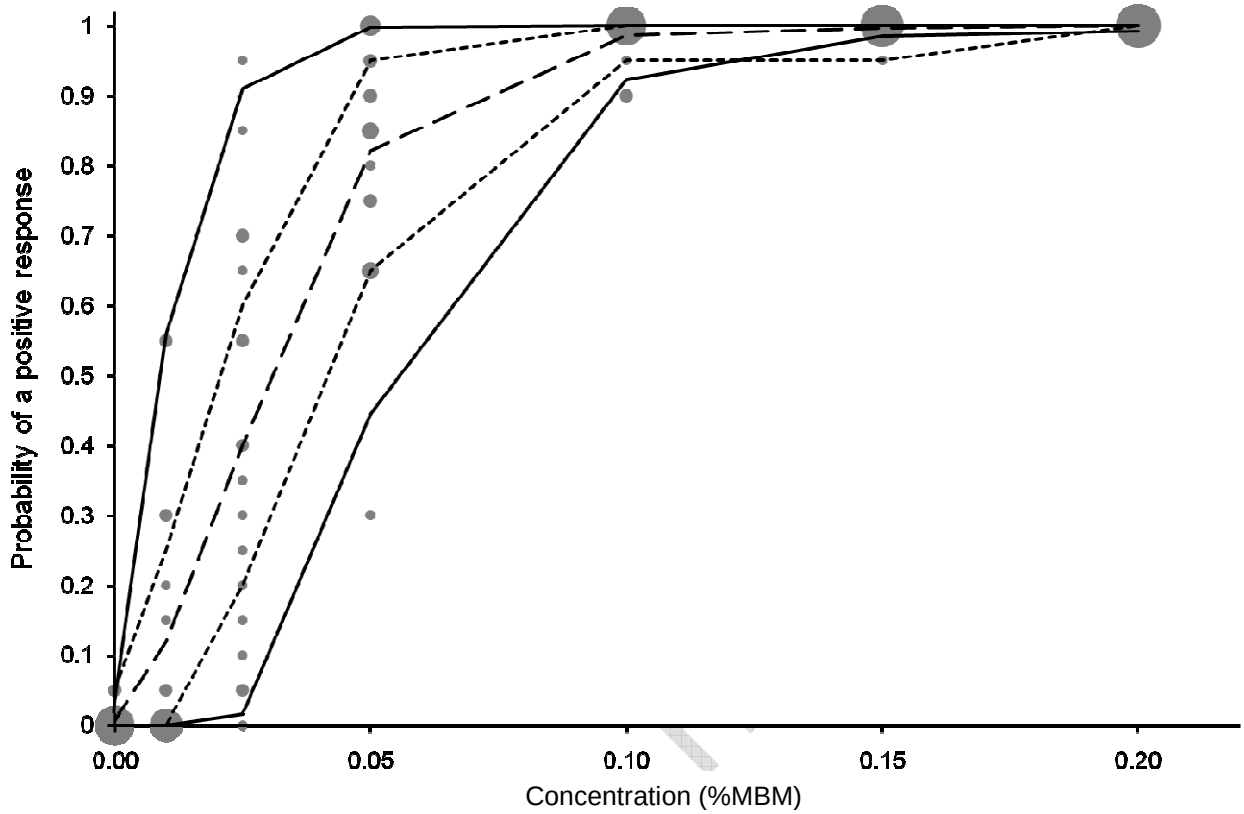



Figure 4: Comparison between the interval within which probabilities of detection lie and the interval that is given by the uncertainty associated with the use of a finite number of replicate analyses with no between-laboratory variation. ● Probability of detection observed by 18 laboratories; ● Probability of detection observed by 9 laboratories, ● Probability of detection observed by 3 laboratories, ● Probability of detection observed by 1 laboratory, — — — — Mean probability of detection, ———— Lower (5%) and upper (95%) limits of a prediction interval for probability of detection in a laboratory. – – – – – – Lower (5%) and upper (95%) for observed probabilities of detection if all observations are consistent with the estimated mean probability of detection with no between-laboratory variation.

Draft - Do

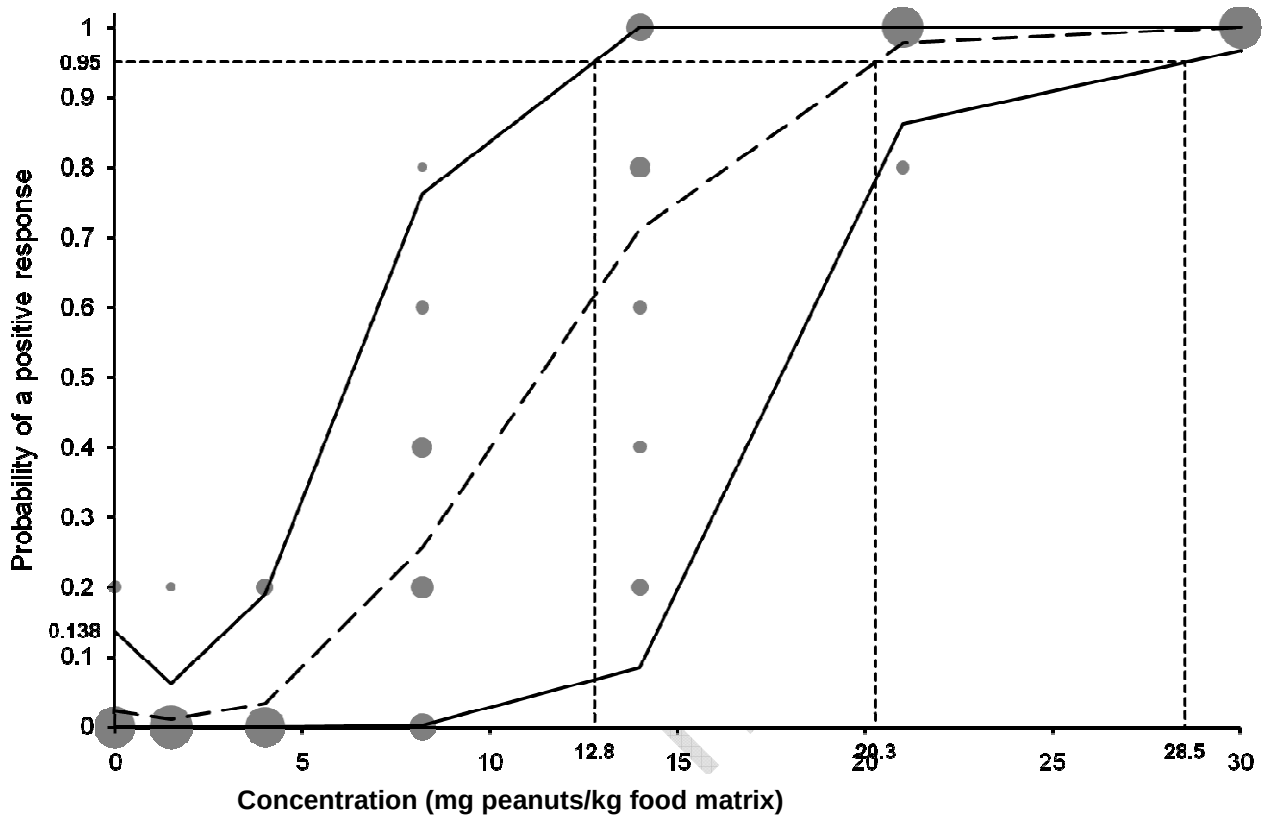



Figure 5: Estimates of an upper limit for the false positive probability and prediction interval for the limit of detection for peanut protein in cookies.

Probability of detection observed by 18 laboratories; Probability of detection observed by 9 laboratories; Probability of detection observed by 3 laboratories; Probability of detection observed by 1 laboratory; — — — — Mean probability of detection; ———— Lower (5%) and upper (95%) limits of a prediction interval for probability of detection in a laboratory; - - - - - - Projection from probability of detection=0.95 to give lower (5%), expected and upper (95%) limits of a prediction interval for limit of detection in a laboratory.

Draft - Do

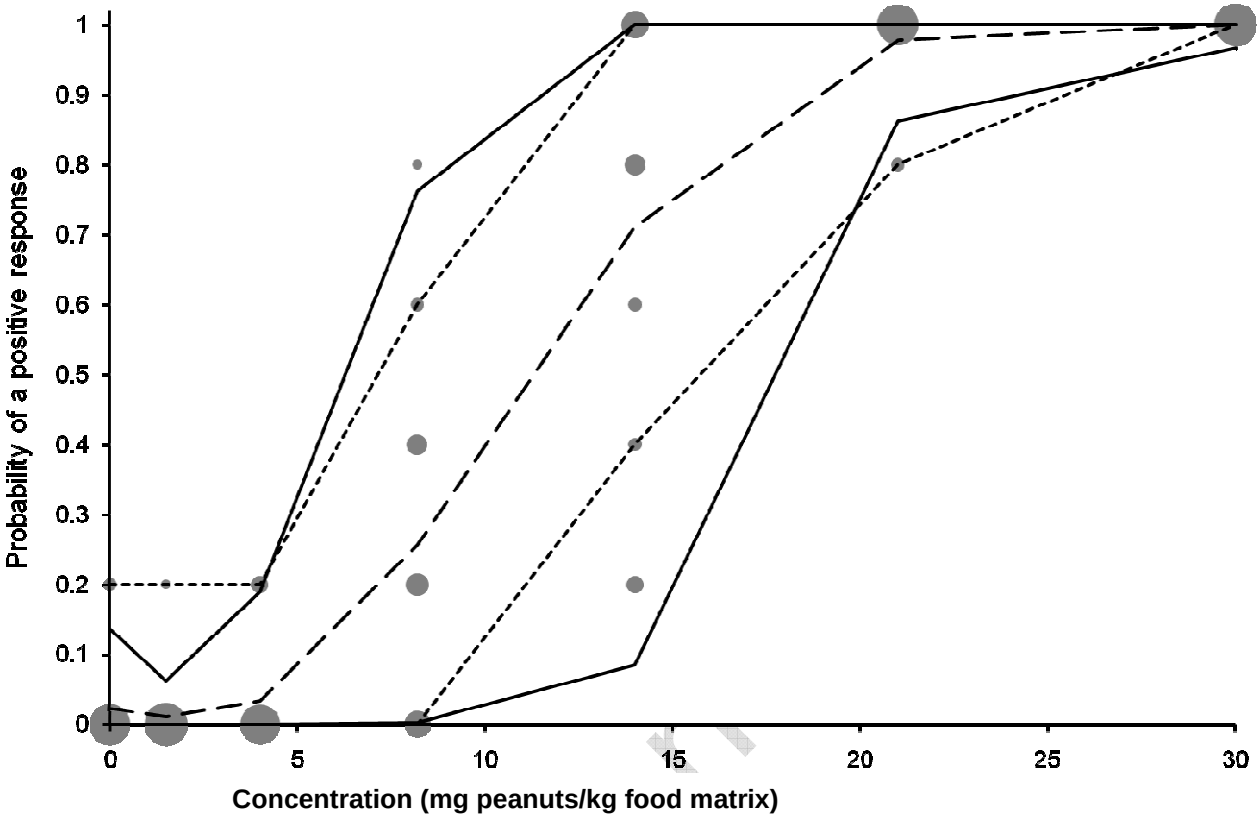



Figure 6: Comparison between the interval within which observed probabilities of detection lie and the interval that is consistent the uncertainty associated with the use of a finite number of replicate analyses for a method to detect peanut protein in cookies. ● Probability of detection observed by 18 laboratories; ● Probability of detection observed by 9 laboratories; ● Probability of detection observed by 3 laboratories; ● Probability of detection observed by 1 laboratory; — — — — Mean probability of detection; ——— Lower (5%) and upper (95%) limits of a prediction interval for probability of detection in a laboratory; – – – – – – Lower (5%) and upper (95%) limits for observed probabilities of detection if all observations are consistent with the estimated mean probability of detection with no between-laboratory variation.

Draft - Do

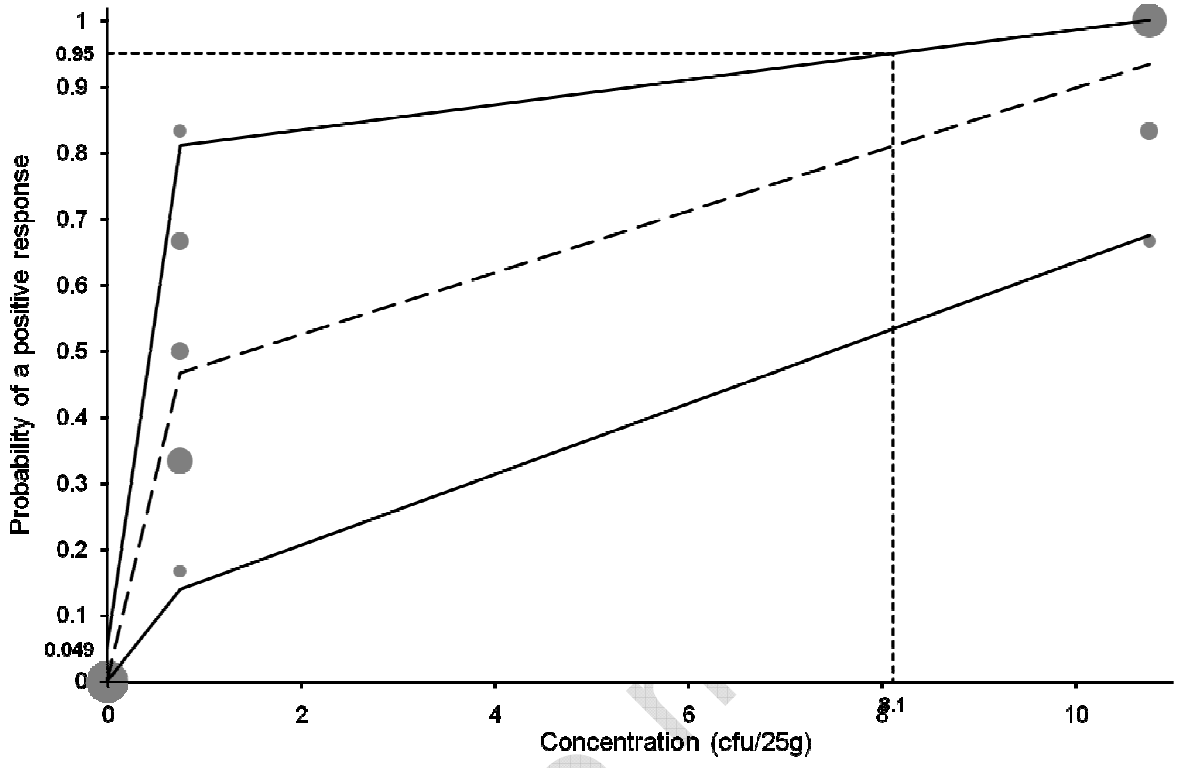



Figure 7: Estimates of an upper limit for the false positive probability and prediction interval for the limit of detection for salmonella in ground beef.

Probability of detection observed by 6 laboratories; Probability of detection observed by 3 laboratories; Probability of detection observed by 1 laboratory; — — — Mean probability of detection; ———— Lower (5%) and upper (95%) limits of a prediction interval for probability of detection in a laboratory; - - - - - Projection from probability of detection=0.95 to give lower (5%), expected and upper (95%) limits of a prediction interval for limit of detection in a laboratory.

Draft. Do n

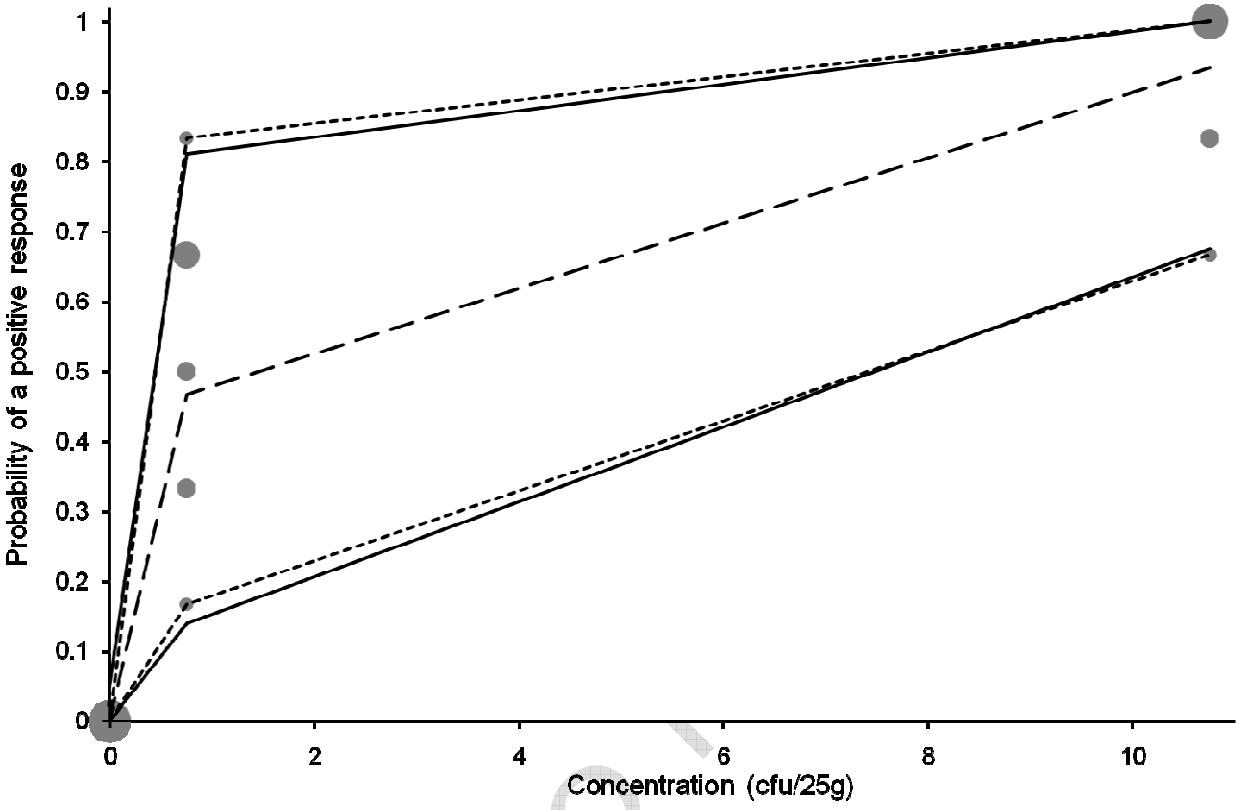
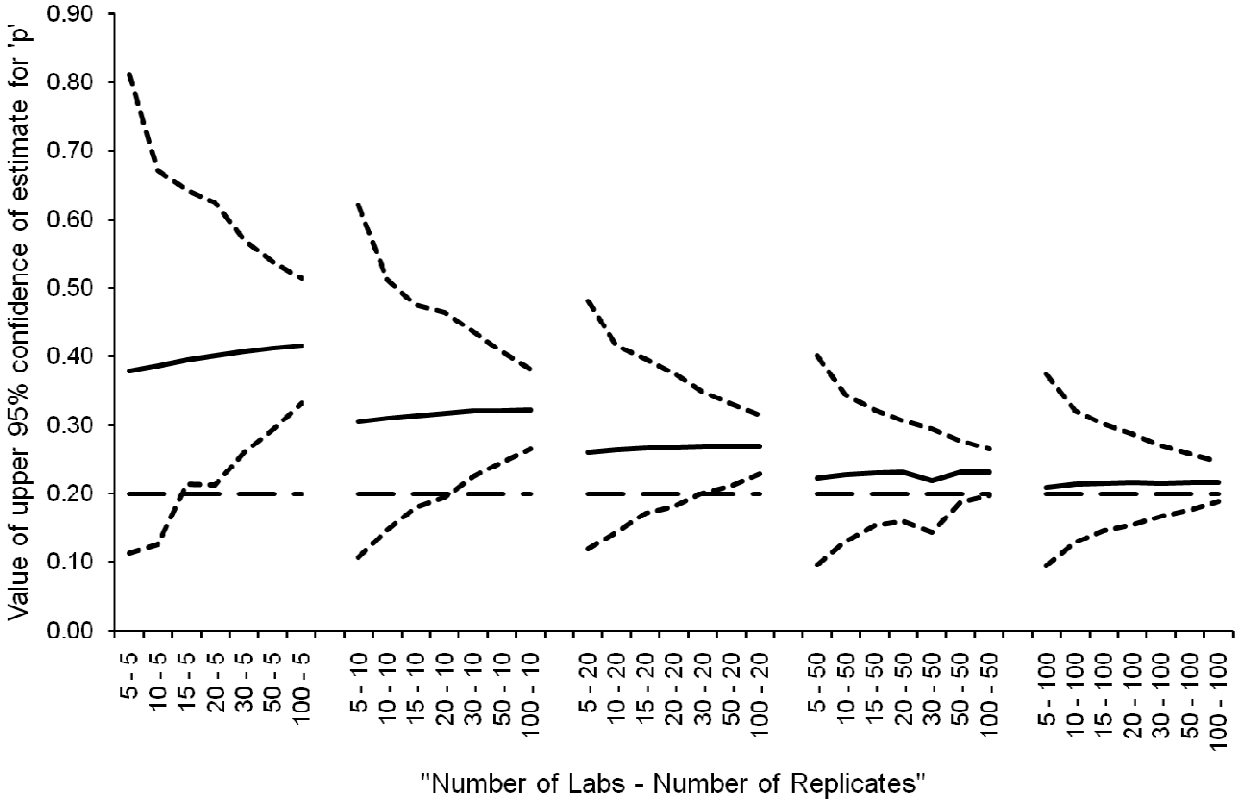



Figure 8: Comparison between the interval within which observed probabilities of detection lie and the interval that is consistent the uncertainty associated with the use of a finite number of replicate analyses for a method to detect salmonella in ground beef. ● Probability of detection observed by 6 laboratories; ● Probability of detection observed by 3 laboratories; ● Probability of detection observed by 1 laboratory; — — — — Mean probability of detection; ——— Lower (5%) and upper (95%) limits of a prediction interval for probability of detection in a laboratory; - - - - - - Lower (5%) and upper (95%) limits for observed probabilities of detection if all observations are consistent with the estimated mean probability of detection with no between-laboratory variation.

Draft - Do

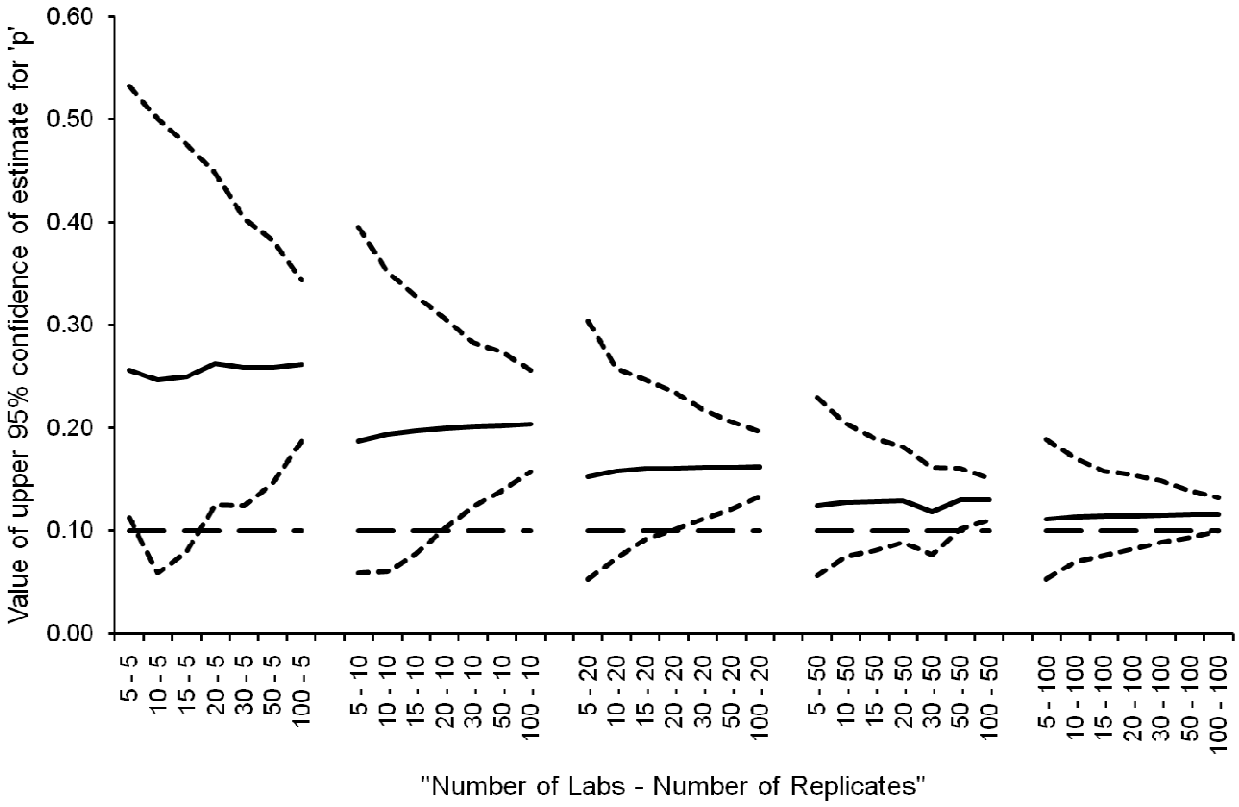
**Figure 9: Upper 95% confidence for probability of detection where true 95th percentile = 0.20**




**— — — — True upper 95th percentile of simulated laboratories, ———— Average estimate of probability of positive for upper 95th percentile of laboratories. _ _ _ _ _ _ 5th and 95th percentile of estimates.**

Draft - Do

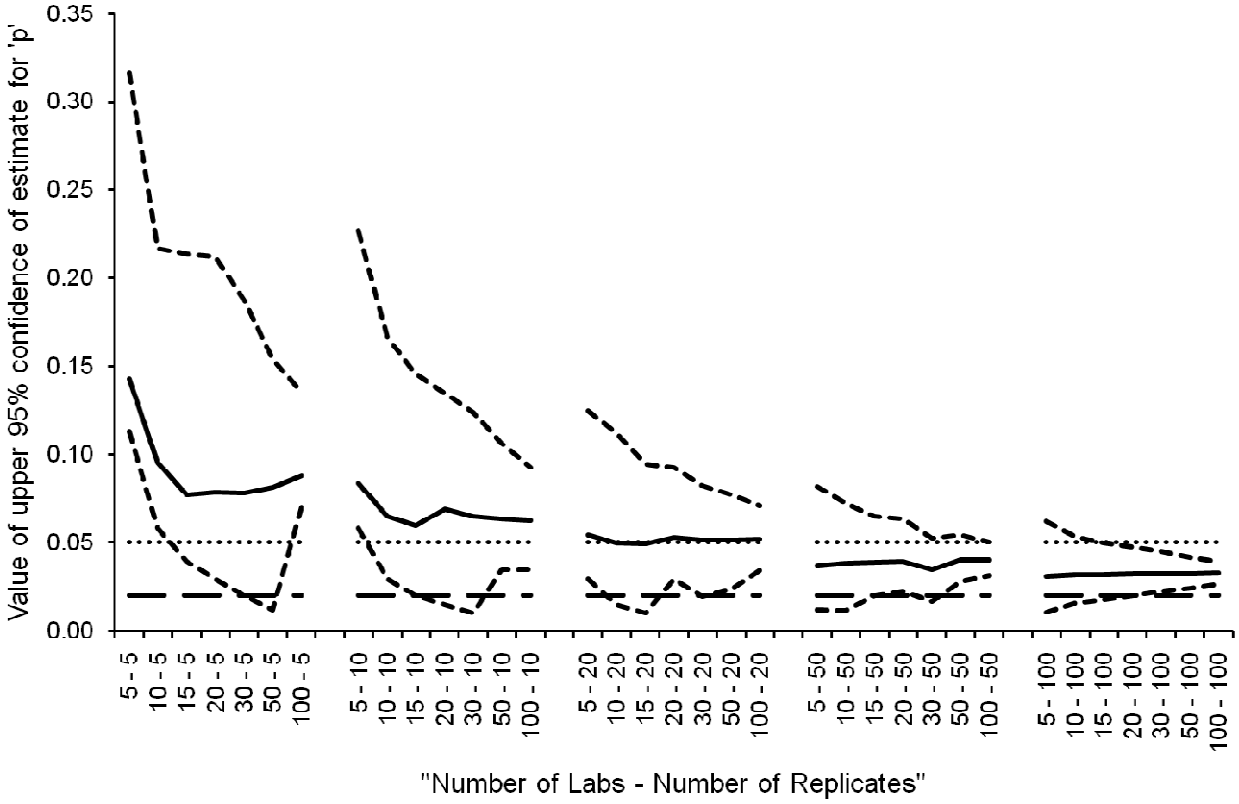
**Figure 10: Upper 95% confidence for probability of detection where true 95th percentile = 0.10**




**— — — — True upper 95th percentile of simulated laboratories, ———— Average estimate of probability of positive for upper 95th percentile of laboratories. – – – – – – 5th and 95th percentile of estimates.**

Draft - Do

**Figure 11 Upper 95% confidence for probability of detection where true 95th percentile = 0.02**




**— — — – True upper 95th percentile of simulated laboratories, ———— Average estimate of probability of positive for upper 95th percentile of laboratories. – – – – – – 5th and 95th percentile of estimates. ..... 'p'=0.05**

Draft - Do

**Table 1: Results produced during the collaborative trial of a method for the detection of MBM in animal feed**

| Concentration (% MBM) | Positive responses out of 20 | Number of laboratories |
|---|---|---|
| 0.000 | 0 | 16 |
| 0.000 | 1 | 2 |
| 0.010 | 0 | 10 |
| 0.010 | 1 | 2 |
| 0.010 | 3 | 1 |
| 0.010 | 4 | 1 |
| 0.010 | 6 | 2 |
| 0.010 | 11 | 2 |
| 0.025 | 0 | 1 |
| 0.025 | 1 | 2 |
| 0.025 | 2 | 1 |
| 0.025 | 3 | 1 |
| 0.025 | 4 | 1 |
| 0.025 | 5 | 1 |
| 0.025 | 6 | 1 |
| 0.025 | 7 | 1 |
| 0.025 | 8 | 2 |
| 0.025 | 11 | 2 |
| 0.025 | 13 | 1 |
| 0.025 | 14 | 2 |
| 0.025 | 17 | 1 |
| 0.025 | 19 | 1 |
| 0.050 | 6 | 1 |
| 0.050 | 13 | 3 |
| 0.050 | 15 | 2 |
| 0.050 | 16 | 1 |
| 0.050 | 17 | 3 |
| 0.050 | 18 | 2 |
| 0.050 | 19 | 2 |
| 0.050 | 20 | 4 |
| 0.100 | 18 | 2 |
| 0.100 | 19 | 1 |
| 0.100 | 20 | 15 |
| 0.150 | 19 | 1 |
| 0.150 | 20 | 17 |
| 0.200 | 20 | 18 |

Draft - Do not cite

**Table 2: Individual results reconstituted from result reported in Table 1 for samples containing 0.010% MBM**

| "Lab"(i)* | Number of samples ($n_i$) | Number of positive results ($x_i$) | Estimate of probability of detection ($p_i$) |
|---|---|---|---|
| 1 | 20 | 0 | 0 |
| 2 | 20 | 0 | 0 |
| 3 | 20 | 0 | 0 |
| 4 | 20 | 0 | 0 |
| 5 | 20 | 0 | 0 |
| 6 | 20 | 0 | 0 |
| 7 | 20 | 0 | 0 |
| 8 | 20 | 0 | 0 |
| 9 | 20 | 0 | 0 |
| 10 | 20 | 0 | 0 |
| 11 | 20 | 1 | 0.05 |
| 12 | 20 | 1 | 0.05 |
| 13 | 20 | 3 | 0.15 |
| 14 | 20 | 4 | 0.20 |
| 15 | 20 | 6 | 0.30 |
| 16 | 20 | 6 | 0.30 |
| 17 | 20 | 11 | 0.65 |
| 18 | 20 | 11 | 0.65 |

*This just indicates that each set of results comes from a different laboratory

Draft - Do not cite

**Table 3: Estimates of statistical parameters used to describe performance of a method to detect MBM in animal feed**

| Concentration (% MBM) | *N* | *X* | $\bar{p}(1)$ | $s_R$ | $v_s(2)$ | $w_s(3)$ | $v_h(4)$ | $w_h(5)$ |
|---|---|---|---|---|---|---|---|---|
| 0 | 360 | 2 | 0.00556 | 0.0162 | 0.1118 | 20.02 | 2.5 | 358.5 |
| 0.010 | 360 | 43 | 0.1194 | 0.1872 | 0.2391 | 1.762 | 43.5 | 317.5 |
| 0.025 | 360 | 144 | 0.4000 | 0.2895 | 0.7453 | 1.118 | 144.5 | 216.5 |
| 0.050 | 360 | 296 | 0.8222 | 0.1792 | 2.919 | 0.6311 | 296.5 | 64.5 |
| 0.100 | 360 | 355 | 0.9861 | 0.0335 | 11.08 | 0.1561 | 355.5 | 5.5 |
| 0.150 | 360 | 359 | 0.9972 | 0.0118 | 18.89 | 0.05262 | 359.5 | 1.5 |
| 0.200 | 360 | 360 | 1.0000 | 0.0000 | NC | NC | 360.5 | 0.5 |

***N:*** Total number of analyses, ***X:*** total number of positive results; $\bar{p}(1)$**:** estimated mean probability of detection (Equation 1); s: standard deviation of estimates of probability of detection from the individual laboratories; $v_s(2)$**:** shape parameter of beta distribution based on mean and standard deviation of probability of detection (Equation 2); $w_s(3)$**:** shape parameter of beta distribution based on mean and standard deviation of probability of detection (Equation 3); $v_h(4)$**:** shape parameter of beta distribution based on N and X (Equation 4), $w_h(5)$**:** shape parameter of beta distribution based on N and X (Equation 5). **NC:** Not calculated.

Draft - Do not cite

**Table 4: Estimated lower (95%) and upper (5%) limits for the probability of detection in a laboratory using the method to detect MBM in animal feed**

| Concentration (% MBM) | $L_s(6)$ | $U_s(7)$ | $L_h(8)$ | $U_h(9)$ | *Lowerlimit (10)* | *Upperlimit (11)* |
|---|---|---|---|---|---|---|
| 0 | 7.3E-14 | 0.0323 | 0.00159 | 0.0153 | 7.3E-14 | 0.0323 |
| 0.010 | 1.7E-06 | 0.5588 | 0.0936 | 0.1498 | 1.7E-06 | 0.5588 |
| 0.025 | 0.0159 | 0.9102 | 0.3582 | 0.4430 | 0.0159 | 0.9102 |
| 0.050 | 0.4452 | 0.9973 | 0.7872 | 0.8534 | 0.4452 | 0.9973 |
| 0.100 | 0.9232 | 1.0000 | 0.9729 | 0.9936 | 0.9232 | 1.0000 |
| 0.150 | 0.9847 | 1.0000 | 0.9892 | 0.9995 | 0.9847 | 1.0000 |
| 0.200 | NC | NC | NC | NC | 0.9917[b] | 1.0000[b] |

***$L_s(6)$:*** $5^{th}$ percentile of beta distribution with $v_s$ and $w_s$ shape parameters (Equation 6); ***$U_s(7)$:*** $95^{th}$ percentile of beta distribution with $v_s$ and $w_s$ shape parameters (Equation 7); ***$L_h(8)$:*** $5^{th}$ percentile of beta distribution with $v_h$ and $w_h$ shape parameters (Equation 8); ***$U_h(9)$:*** $95^{th}$ percentile of beta distribution with $v_h$ and $w_h$ shape parameters (Equation 9); ***Lowerlimit(10):*** Lower limit of prediction interval for probability of detection when the method is applied in a laboratory (Equation 10); ***Upperlimit(10):*** Upper limit of prediction interval for probability of detection when the method is applied in a laboratory (Equation 11); **b:** these values were calculated using Equation 10b and 11b. **NC:** Not calculated.

Draft - Do not cite

**Table 5: Results produced during the collaborative trial of a method for the detection of peanut protein in cookies**

| Concentration (mg/kg) | Positive responses out of 5 | Number of laboratories |
|---|---|---|
| 0 | 0 | 16 |
| 0 | 1 | 2 |
| 1.5 | 0 | 17 |
| 1.5 | 1 | 1 |
| 4 | 0 | 15 |
| 4 | 1 | 3 |
| 8.2 | 0 | 6 |
| 8.2 | 1 | 5 |
| 8.2 | 2 | 4 |
| 8.2 | 3 | 2 |
| 8.2 | 4 | 1 |
| 14 | 1 | 3 |
| 14 | 2 | 2 |
| 14 | 3 | 2 |
| 14 | 4 | 4 |
| 14 | 5 | 7 |
| 21 | 4 | 2 |
| 21 | 5 | 16 |
| 30 | 5 | 18 |

Draft - Do not cite

**Table 6: Estimates of statistical parameters used to describe performance of a method to detect peanut protein in cookies**

| Concentration (mg/kg) | *N* | *X* | $\bar{p}(1)$ | $s_R$ | $v_s(2)$ | $w_s(3)$ | $v_h(4)$ | $w_h(5)$ |
|---|---|---|---|---|---|---|---|---|
| 0 | 90 | 2 | 0.0222 | 0.0647 | 0.0932 | 4.101 | 2.5 | 88.5 |
| 1.5 | 90 | 1 | 0.0111 | 0.0471 | 0.0438 | 3.901 | 1.5 | 89.5 |
| 4 | 90 | 3 | 0.0333 | 0.0767 | 0.1493 | 4.329 | 3.5 | 87.5 |
| 8.2 | 90 | 23 | 0.2556 | 0.2455 | 0.5512 | 1.606 | 23.5 | 67.5 |
| 14 | 90 | 64 | 0.7111 | 0.3085 | 0.8240 | 0.3347 | 64.5 | 26.5 |
| 21 | 90 | 88 | 0.9778 | 0.0647 | 4.101 | 0.0932 | 88.5 | 2.5 |
| 30 | 90 | 90 | 1.0000 | 0.0000 | NC | NC | 90.5 | 0.5 |

***N:*** Total number of analyses, ***X:*** total number of positive results; $\bar{p}(1)$**:** estimated mean probability of detection (Equation 1); s: standard deviation of estimates of probability of detection from the individual laboratories; $v_s(2)$**:** shape parameter of beta distribution based on mean and standard deviation of probability of detection (Equation 2); $w_s(3)$**:** shape parameter of beta distribution based on mean and standard deviation of probability of detection (Equation 3); $v_h(4)$**:** shape parameter of beta distribution based on N and X (Equation 4), $w_h(5)$**:** shape parameter of beta distribution based on N and X (Equation 5). **NC:** Not calculated.

Draft - Do not cite

**Table 7: Estimates lower (95%) and upper (5%) limits for the probability of detection in a laboratory using the method to detect peanut protein in cookies**

| Concentration (% mg/kg) | $L_s(6)$ | $U_s(7)$ | $L_h(8)$ | $U_h(9)$ | *Lowerlimit (10)* | *Upperlimit (11)* |
|---|---|---|---|---|---|---|
| 0 | 1.8E-15 | 0.1376 | 0.00640 | 0.0601 | 1.8E-15 | 0.0323 |
| 1.5 | <7E-28 | 0.0622 | 0.00196 | 0.0426 | <7E-28 | 0.5588 |
| 4 | 3.1E-10 | 0.1892 | 0.01214 | 0.0762 | 3.1E-10 | 0.9102 |
| 8.2 | 0.00252 | 0.7617 | 0.1863 | 0.3363 | 0.00252 | 0.9973 |
| 14 | 0.0848 | 0.9998 | 0.6283 | 0.7841 | 0.0848 | 1.0000 |
| 21 | 0.8624 | 1.0000 | 0.9398 | 0.9936 | 0.8624 | 1.0000 |
| 30 | NC | NC | NC | NC | 0.9673[b] | 1.0000[b] |

***$L_s(6)$:*** $5^{th}$ percentile of beta distribution with $v_s$ and $w_s$ shape parameters (Equation 6); ***$U_s(7)$:*** $95^{th}$ percentile of beta distribution with $v_s$ and $w_s$ shape parameters (Equation 7); ***$L_h(8)$:*** $5^{th}$ percentile of beta distribution with $v_h$ and $w_h$ shape parameters (Equation 8); ***$U_h(9)$:*** $95^{th}$ percentile of beta distribution with $v_h$ and $w_h$ shape parameters (Equation 9); ***Lowerlimit(10):*** Lower limit of prediction interval for probability of detection when the method is applied in a laboratory (Equation 10); ***Upperlimit(10):*** Upper limit of prediction interval for probability of detection when the method is applied in a laboratory (Equation 11); **b:** these values were calculated using Equation 10b and 11b. **NC:** Not calculated.

Draft - Do not cite

**Table 8: Results produced during the collaborative trial of a method for the detection of salmonella in ground beef**

| Concentration (cfu/25g) | Positive responses out of 6 | Number of laboratories |
|---|---|---|
| 0 | 0 | 10 |
| 0.75 | 1 | 1 |
| 0.75 | 2 | 4 |
| 0.75 | 3 | 2 |
| 0.75 | 4 | 2 |
| 0.75 | 5 | 1 |
| 10.75 | 4 | 1 |
| 10.75 | 5 | 2 |
| 10.75 | 6 | 7 |

Draft - Do not cite

**Table 9: Estimates of statistical parameters used to describe performance of a method to detect salmonella in ground beef**

| Concentration (cfu/25g) | *N* | *X* | $\bar{p}(1)$ | $s_R$ | $v_s(2)$ | $w_s(3)$ | $v_h(4)$ | $w_h(5)$ |
|---|---|---|---|---|---|---|---|---|
| 0 | 60 | 0 | 0.0000 | 0.0000 | NC | NC | 0.5 | 60.5 |
| 0.75 | 60 | 28 | 0.4667 | 0.2049 | 2.300 | 2.63 | 28.5 | 32.5 |
| 10.75 | 60 | 56 | 0.9333 | 0.1165 | 3.343 | 0.2388 | 56.5 | 4.5 |

***N:*** Total number of analyses, ***X:*** total number of positive results; $\bar{p}$***(1)*****:** estimated mean probability of detection (Equation 1); s: standard deviation of estimates of probability of detection from the individual laboratories; $v_s$***(2):*** shape parameter of beta distribution based on mean and standard deviation of probability of detection (Equation 2); $w_s$***(3):*** shape parameter of beta distribution based on mean and standard deviation of probability of detection (Equation 3); $v_h$***(4):*** shape parameter of beta distribution based on N and X (Equation 4), $w_h$***(5):*** shape parameter of beta distribution based on N and X (Equation 5).

Draft - Do not cite

**Table 10: Estimates lower (95%) and upper (5%) limits for the probability of detection in a laboratory using the method to detect salmonella in ground beef**

| Concentration (cfu/25g) | $L_s(6)$ | $U_s(7)$ | $L_h(8)$ | $U_h(9)$ | *Lowerlimit (10)* | *Upperlimit (11)* |
|---|---|---|---|---|---|---|
| 0 | NC | NC | NC | NC | 0[c] | 0.0487[c] |
| 0.75 | 0.1392 | 0.8107 | 0.3635 | 0.5722 | 0.1392 | 0.5588 |
| 10.75 | 0.6756 | 1.0000 | 0.8648 | 0.9719 | 0.6756 | 1.0000 |

***$L_s(6)$:*** $5^{th}$ percentile of beta distribution with $v_s$ and $w_s$ shape parameters (Equation 6); ***$U_s(6)$:*** $95^{th}$ percentile of beta distribution with $v_s$ and $w_s$ shape parameters (Equation 7); ***$L_h(8)$:*** $5^{th}$ percentile of beta distribution with $v_h$ and $w_h$ shape parameters (Equation 8); ***$U_h(9)$:*** $95^{th}$ percentile of beta distribution with $v_h$ and $w_h$ shape parameters (Equation 9); ***Lowerlimit(10):*** Lower limit of prediction interval for probability of detection when the method is applied in a laboratory (Equation 10); ***Upperlimit(10):*** Upper limit of prediction interval for probability of detection when the method is applied in a laboratory (Equation 11); **c:** these values were calculated using Equation 10c and 11c

Draft - Do not cite

**Table 11: Results produced by a fictional study using the minimum design**

| Method | Concentration mg/kg | Number of positive results out of 6 | Number of laboratories |
|---|---|---|---|
| A | 0 | 0 | 10 |
| A | 1 | 6 | 10 |
| B | 0 | 6 | 9 |
| B | 1 | 5 | 2 |
| B | 1 | 6 | 8 |

Draft - Do not cite

**Table 12: Estimates of statistical parameters used to describe performance of fictional method A**

| Concentration (mg/kg) | *N* | *X* | $\bar{p}(1)$ | $s_R$ | $v_s(2)$ | $w_s(3)$ | $v_h(4)$ | $w_h(5)$ |
|---|---|---|---|---|---|---|---|---|
| 0 | 60 | 0 | 0.0000 | 0.0000 | NC | NC | 0.5 | 60.5 |
| 1 | 60 | 60 | 1.0000 | 0.0000 | NC | NC | 60.5 | 0.5 |

***N:*** Total number of analyses, ***X:*** total number of positive results; $\bar{p}(1)$**:** estimated mean probability of detection (Equation 1); s: standard deviation of estimates of probability of detection from the individual laboratories; $v_s(2)$**:** shape parameter of beta distribution based on mean and standard deviation of probability of detection (Equation 2); $w_s(3)$**:** shape parameter of beta distribution based on mean and standard deviation of probability of detection (Equation 3); $v_h(4)$**:** shape parameter of beta distribution based on N and X (Equation 4), $w_h(5)$**:** shape parameter of beta distribution based on N and X (Equation 5).

Draft - Do not cite

**Table 13: Estimates lower (95%) and upper (5%) limits for the probability of detection in a laboratory using fictional method A**

| Concentration (mg/kg) | $L_s(6)$ | $U_s(7)$ | $L_h(8)$ | $U_h(9)$ | *Lowerlimit (10)* | *Upperlimit (11)* |
|---|---|---|---|---|---|---|
| 0 | NC | NC | NC | NC | 0.0000[c] | 0.0487[c] |
| 1 | NC | NC | NC | NC | 0.9513[b] | 1.0000[b] |

***$L_s(6)$:*** $5^{th}$ percentile of beta distribution with $v_s$ and $w_s$ shape parameters (Equation 6); ***$U_s(6)$:*** $95^{th}$ percentile of beta distribution with $v_s$ and $w_s$ shape parameters (Equation 7); ***$L_h(8)$:*** $5^{th}$ percentile of beta distribution with $v_h$ and $w_h$ shape parameters (Equation 8); ***$U_h(9)$:*** $95^{th}$ percentile of beta distribution with $v_h$ and $w_h$ shape parameters (Equation 9); ***Lowerlimit(10):*** Lower limit of prediction interval for probability of detection when the method is applied in a laboratory (Equation 10); ***Upperlimit(10):*** Upper limit of prediction interval for probability of detection when the method is applied in a laboratory (Equation 11); **b:** these values were calculated using Equation 10b and 11b, **c:** these values were calculated using Equation 10c and 11c

Draft - Do not cite

**Table 14: Estimates of statistical parameters used to describe performance of fictional method B**

| Concentration (mg/kg) | *N* | *X* | $\bar{p}(1)$ | $s_R$ | $v_s(2)$ | $w_s(3)$ | $v_h(4)$ | $w_h(5)$ |
|---|---|---|---|---|---|---|---|---|
| 0 | 54 | 0 | 0.0000 | 0.0000 | NC | NC | 0.5 | 54.5 |
| 1 | 60 | 58 | 0.9667 | 0.0703 | 5.341 | 0.1842 | 58.5 | 2.5 |

***N:*** Total number of analyses, ***X:*** total number of positive results; $\bar{p}(1)$**:** estimated mean probability of detection (Equation 1); s: standard deviation of estimates of probability of detection; $v_s(2)$**:** shape parameter of beta distribution based on mean and standard deviation of probability of detection (Equation 2); $w_s(3)$**:** shape parameter of beta distribution based on mean and standard deviation of probability of detection (Equation 3); $v_h(4)$**:** shape parameter of beta distribution based on N and X (Equation 4), $w_h(5)$**:** shape parameter of beta distribution based on N and X (Equation 5).

Draft - Do not cite

**Table 15: Estimates lower (95%) and upper (5%) limits for the probability of detection in a laboratory using fictional method B**

| Concentration (mg/kg) | $L_s(6)$ | $U_s(7)$ | $L_h(8)$ | $U_h(9)$ | *Lowerlimit (10)* | *Upperlimit (11)* |
|---|---|---|---|---|---|---|
| 0 | NC | NC | NC | NC | 0.0000[c] | 0.0540[c] |
| 1 | 0.8222 | 1.0000 | 0.9108 | 0.9904 | 0.8222 | 1.0000 |

***$L_s(6)$:*** $5^{th}$ percentile of beta distribution with $v_s$ and $w_s$ shape parameters (Equation 6); ***$U_s(7)$:*** $95^{th}$ percentile of beta distribution with $v_s$ and $w_s$ shape parameters (Equation 7); ***$L_h(8)$:*** $5^{th}$ percentile of beta distribution with $v_h$ and $w_h$ shape parameters (Equation 8); ***$U_h(9)$:*** $95^{th}$ percentile of beta distribution with $v_h$ and $w_h$ shape parameters (Equation 9); ***Lowerlimit(10):*** Lower limit of prediction interval for probability of detection when the method is applied in a laboratory (Equation 10); ***Upperlimit(10):*** Upper limit of prediction interval for probability of detection when the method is applied in a laboratory (Equation 11); **c:** these values were calculated using Equation 10c and 11c

Draft - Do not cite

**Table 16: Scenarios used to assess the performance of the draft protcol**

| Average probability of positive across laboratories | Expected probability of positive at 95$^{th}$ percentile of laboratories | Beta distribution parameter 'v' | Beta distribution parameter 'w' |
|---|---|---|---|
| 0.1 | 0.2 | 3.087 | 27.79 |
| 0.05 | 0.1 | 3.326 | 63.2 |
| 0.01 | 0.02 | 3.518 | 348.0 |

Draft - Do not cite