



Meat & Fish (QMAS)

Round: 266

Issue Number 1

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Science
for a safer world

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Scheme Information

Aims of Scheme

The primary aim of the Quality in Meat Analysis Scheme (QMAS) is to enable laboratories performing the analysis of meat and fish products to monitor their performance and compare it with that of their peers. QMAS also aims to provide information to participants on technical issues and methodologies relating to the chemical and microbiological examination of meat.

Further information on the scheme organisation, the test materials, and the statistical analysis of data are available in the QMAS Scheme Description and the LGC PT General Protocol.

Performance Assessment

Once a PT round has closed, the results will be analysed and the assigned value determined for each analyte, according to the criteria provided in the Scheme Description. Information regarding the traceability of each calculated assigned value is also provided in the Scheme Description.

For quantitative data, the participant's result, x , (or $\log_{10} x$ for microbiological data) is converted into a z score using the following formula;

$$z = \frac{(x - X)}{SDPA}$$

X = Assigned value

$SDPA$ = Standard deviation for proficiency assessment

For quantitative data, the uncertainty of the assigned value is calculated to ensure that it would have a negligible effect on participants' performance scores. If the uncertainty of the assigned value is greater than $0.3 \times SDPA$, then this is not considered negligible. In this situation, a z' (z prime) performance score is automatically calculated rather than a z score, in order to take account of the measurement uncertainty of the assigned value. The z' score is calculated using the following formula;

$$z' = \frac{(x - X)}{\sqrt{(SDPA^2 + UxAV^2)}}$$

X = Assigned value

$SDPA$ = Standard deviation for proficiency assessment

$UxAV$ = Uncertainty of the assigned value

$$\text{Expanded } SDPA = \sqrt{(SDPA^2 + UxAV^2)}$$

Trend graphs will use a mixture of z and z' scores, i.e. the 'performance score' for the round.

For quantitative data, gross errors or blunders are removed from the data by removal of any results that are greater than the assigned value $\pm 5 \times SDPA$. These results are not used in the final calculation of the assigned value and other summary statistics and will be included in the number of 'Excluded Results'. All results, including excluded results, will be given a performance score.

For the purposes of performance assessment for a single round, z and z' scores are interpreted as follows:

z/z' score	Interpretation	Colour coding
$ z \leq 2.00$	Satisfactory result	Green
$2.00 < z \text{ and } < 3.00$	Questionable result	Amber
$ z \geq 3.00$	Unsatisfactory result	Red
No score given	See below	No colour coding

Performance scores will not be given for the following:

- For qualitative results, where satisfactory performance is based on the participants reporting the same result as the assigned result. E.g. detected, not detected. For these results, colour coding of green (satisfactory) or red (unsatisfactory) will apply.
- For results of zero; such a result is not normally appropriate and should not be reported, the result should be reported as less than the detection limit rather than zero.
Note: for a very small number of analytes it may be appropriate to report a result of zero, depending on the type of measurement scale being used.
- For quantitative results where the analyte under test is present in the test material but participants report zero results or greater than results. In these cases, it is not possible to allocate a performance score and participants should assess their performance based on the assigned value and satisfactory range given.
- For quantitative results where the analyte under test is present in the test material but participants report a 'less than' value. In these cases, it is not possible to allocate a numeric performance score, however, where the 'less than' value reported is $< (AV - 3 \times SDPA)$ the 'less than' value will be assessed as unsatisfactory (red colour coding), where the less than value reported is between $< (AV - 3 \times SDPA)$ and $< (AV + 2 \times SDPA)$, or $> (AV + 2 \times SDPA)$ the assessment will be questionable (orange colour coding) and it is recommended that you assess whether the method used is fit for purpose, and where the less than value reported is between $(AV - 2 \times SDPA)$ and $(AV + 2 \times SDPA)$ a satisfactory assessment (green colour coding) will be given as such results are deemed to be consistent with the assigned value.
- For quantitative results, for microbiological test materials, where the analyte under test is not present in the test material, the assigned value will be classified as 'Absent'. Results reported as 'less than' at or below the detection level for our method of confirmation will be assessed as satisfactory (green colour code). Results reported at a higher detection level will not be assessed and participants will need to use their own judgement to determine whether their result is fit for its intended use. Results reporting a positive count will be assessed as unsatisfactory (red colour code).
- For quantitative results, for chemistry or clinical test materials, where the analyte under test has not been spiked into the test material, the assigned value will be classified as 'Zero Spike'. A 'less than' value reported at or below the detection level, set as the assigned

value, will be assessed as satisfactory (green colour code). A 'less than' value reported above the detection level will not be assessed and participants will need to use their own judgement to determine whether their result is fit for its intended use. Positive, numeric, results which are below the detection level, set as the assigned value, will not be assessed, whilst those that are greater than the assigned value will be assessed as unsatisfactory (red colour code).

In some cases, performance scores may not be provided or may be provided but with colour coding suspended (indicating that scores need to be interpreted with caution). For example:

- For small data sets where less than 8 results have been submitted and the assigned value is derived using a consensus value from the participants' results. In these circumstances, there may be increased uncertainty of the assigned value, given the low number of participants, and performance scores will be given for information only.
- In cases where the distribution of the results gives cause for concern e.g. bi-modal data sets. These circumstances will be dependent on the statistical design that is in place.
- If the assigned value falls below a concentration threshold (only applies to some schemes).

In these or similar circumstances, further explanation as to the reasons for suspension of performance scoring or colour coding, and on the interpretation of results, will be given in the report.

Note: Data displayed in the report will have been rounded to the required number of decimal places. However statistical calculations will have been performed on unrounded data. For this reason, there may appear to be differences between displayed data and calculated data, but this does not affect results in any way.

Confidentiality

A unique laboratory reference code is used to report results in order to ensure confidentiality.

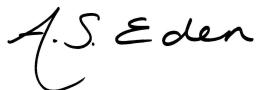
Contact details

The technical scheme coordinator is (Micro) Andrew Cheetham.
The technical scheme coordinator is (Chem) Wayne Gaunt.

Please contact qmas@lqcgroupp.com if you have any questions or comments regarding the scheme.

Authorisation

This report was authorised by Alexandra Eden, Technical Manager on the 26 July 2018



Sample Details

Samples were despatched on 25 June 2018

The reporting deadline was 20 July 2018

The following samples were distributed in QMAS Round 266:

Sample	Matrix	Contents
735	10g Lyophilised meat	<i>Escherichia coli</i> <i>Klebsiella oxytoca</i>
736	25g Lyophilised meat	<i>Salmonella</i> Senftenberg
737	25g Lyophilised meat	<i>Listeria monocytogenes</i>
738	10g Lyophilised meat	<i>Staphylococcus epidermidis</i> <i>Clostridium perfringens</i>
746	Lyophilised vial with 10g lyophilised meat	<i>Pseudomonas aeruginosa</i> <i>Lactobacillus casei</i> <i>Candida albicans</i>
756A	Lyophilised vial with 10g meat powder	<i>Enterobacter aerogenes</i> <i>Bacillus cereus</i> <i>Staphylococcus aureus</i> <i>Penicillium chrysogenum</i> <i>Saccharomyces cerevisiae</i>
756B	Lyophilised vial with 10g meat powder	<i>Enterobacter aerogenes</i> <i>Escherichia coli</i> <i>Staphylococcus aureus</i> <i>Penicillium chrysogenum</i>
757A	Lyophilised vial with 100g meat powder	<i>Escherichia coli</i> O157 (non toxigenic strain) <i>Listeria welshimeri</i> <i>Salmonella</i> Indiana
757B	Lyophilised vial with 100g meat powder	<i>Escherichia coli</i> O157 (non toxigenic strain) <i>Listeria monocytogenes</i> <i>Listeria welshimeri</i>

Further information regarding assigned values, performance assessment and technical comments can be found under the individual sample and analyte results.

Quality Control

All homogeneity assessments have been conducted in accordance with the principles stipulated in ISO 13528 [1] and the IUPAC [2] Harmonized PT Protocol. Further details regarding the assessment of homogeneity can be found in the LGC Standards Proficiency Testing General Protocol.

Sample	Analyte/Test	Method	Result
735	Total viable count	PCA PP 30	Pass
736	<i>Salmonella</i> species detection	MKTT/RV + XLD + BGA 37	Pass
737	<i>Listeria</i> species detection	FRASER + ALOA 37	Pass
	<i>Listeria monocytogenes</i> detection	FRASER + ALOA 37	Pass
738	<i>Clostridium perfringens</i> enumeration	TSC PP 37	Pass
	Total viable count	PCA PP 30	Pass
746	Total viable count	NA PP 30	Pass
756A	Total viable count	PC PP 30	Pass
	Coliforms enumeration	VRBA PP 37	Pass
	Enterobacteriaceae enumeration	VRBGA PP 37	Pass
	<i>Bacillus cereus</i> enumeration	MYP SP 30	Pass
	<i>Staphylococcus</i> species enumeration	BP SP 37	Pass
	Yeast enumeration	RB SP 25	Pass
	Mould enumeration	RB SP 25	Pass
756B	Total viable count	PCA PP 30	Pass
	Coliforms enumeration	VRBA PP 37	Pass
	Enterobacteriaceae enumeration	VRBGA PP 37	Pass
	<i>Escherichia coli</i> enumeration	TBX PP 37-44	Pass
	<i>Staphylococcus aureus</i> enumeration	BP SP 37	Pass
	Mould enumeration	RB SP 25	Pass

757A	<i>Salmonella</i> species detection <i>Listeria</i> species detection <i>Escherichia coli</i> O157 detection	MKTT/RV + XLD + BGA FRASER + ALOA 37 BROTH + CT-SMAC	Pass Pass Pass
757B	<i>Salmonella</i> species detection <i>Listeria</i> species detection <i>Escherichia coli</i> O157 detection	MKTT/RV + XLD + BGA FRASER + ALOA 37 BROTH + CT-SMAC	Pass Pass Pass

For quantitative testing, one-way ANOVA is used to estimate the analytical and sampling variance. For the sample to be considered sufficiently homogeneous for use in the PT scheme, the calculated sampling variance must be less than a critical value calculated according to the procedure described in the ISO 13528 (2015).

For qualitative testing, the target analyte must be detected in 100% of test materials analysed.

Often a particular test material does not require homogeneity assessment prior to distribution. Such sample types include standard solutions and aqueous solutions.

Test materials provided under the LGC scope of accreditation are assessed to ensure that they are sufficiently stable for the duration of the PT round. If test materials are subsequently shown to have changed significantly through the time of the PT round either, the effect of the instability will be quantified and taken into account in the performance evaluation or participant performance will not be evaluated.

[1] ISO 13528 (2015), 'Statistical methods for use in proficiency testing by inter-laboratory comparisons'.

Lab ID	Method	Result (cfu/g)	z score
MT0142	PCA PP 30	35,000	-0.57
MT1033	Petrifilm	45,000	-0.26
MT4081	Petrifilm	52,000	-0.08
MT4085	Petrifilm	33,000	-0.65
MT4101	Other	66,000	0.22
MT4194	Petrifilm	87,000	0.56
MT4231	Petrifilm	47,000	-0.21
MT4309	PCA PP 30	71,000	0.31
MT4317	PCA SP 30	53,636	-0.04
MT4333	PCA SP 30	56,000	0.01
MT4333	TEMPO	73,000	0.34
MT4398	PCA PP 30	65,454	0.20
MT4475	Petrifilm	67,000	0.23
MT4494	Petrifilm	68,000	0.25
MT4498	Petrifilm	420,000	2.51
MT4540	PCA PP 30	60,000	0.10
MT4540	PCA SP 30	64,000	0.18
MT4578	PCA PP 30	39,000	-0.44
MT4624	PCA SP 30	40,300	-0.40
MT4733	PCA PP 30	66,000	0.22
MT4804	PCA PP 30	56,000	0.01
MT4836	Other	54,000	-0.03
MT4836	PCA PP 37	55,000	-0.01
MT4836	Petrifilm	60,000	0.10
MT4871	Petrifilm	79,000	0.44
MT4919	PCA PP 30	52,000	-0.08
MT5068	PCA PP 30	62,000	0.14
MT5078	PCA PP 30	32,000	-0.68
MT5109	Other	26,000	-0.94
MT5109	Petrifilm	27,000	-0.89
MT5165	PCA PP 37	242,000	1.83
MT5175	PCA PP 37	74,000	0.36
MT5384	PCA PP 30	31,000	-0.72
MT5384	Petrifilm	44,000	-0.29
MT5399	PCA PP 30	38,000	-0.47
MT5431	Other	68,000	0.25
MT5431	Petrifilm	82,000	0.48
MT5624	Other	49,000	-0.15
MT5639	PCA PP 37	46,000	-0.23
MT5731	Other	61,000	0.12
MT5852	Other	34,000	-0.61
MT5900	Other	68,000	0.25
MT5900	PCA PP 30	37,000	-0.50
MT5900	Petrifilm	45,000	-0.26
MT5983	PCA PP 30	72,300	0.33
MT6092	PCA PP 30	62,000	0.14
MT6135	Petrifilm	40,000	-0.41
MT6177	PCA PP 30	110,000	0.85
MT6196	PCA PP 30	71,000	0.31
MT6266	PCA PP 30	57,000	0.03
MT6304	PCA PP 37	86,000	0.54
MT6407	PCA PP 37	51,000	-0.10
MT6484	Petrifilm	70,500	0.30
MT6523	TEMPO	42,000	-0.35
MT6601	Other	60,000	0.10
MT6602	Petrifilm	5,400	-2.89
MT6603	Petrifilm	65,000	0.20
MT6641	PCA PP 30	66,000	0.22
MT6698	TEMPO	57,000	0.03
MT6745	Petrifilm	13,450	-1.76
MT6763	Other	46,000	-0.23

Sample: 735 - Meat Indicator Combination**Analyte: Total aerobic mesophilic count**

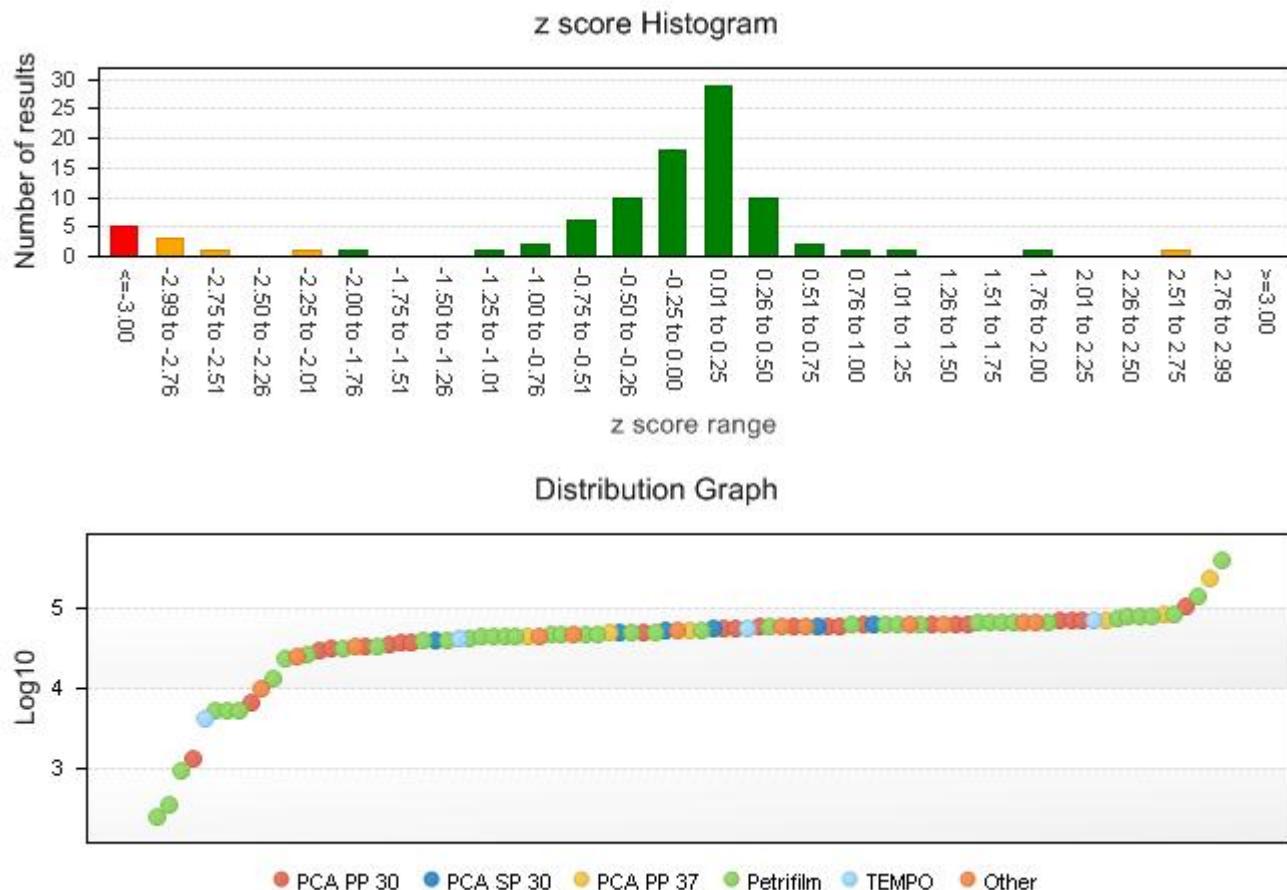
Lab ID	Method	Result (cfu/g)	z score
MT6776	Other	64,600	0.19
MT6776	PCA PP 30	63,150	0.16
MT6776	PCA SP 30	51,050	-0.10
MT6782	Petrifilm	35,000	-0.57
MT6794	Petrifilm	5,400	-2.89
MT6807	TEMPO	4,300	-3.17
MT6815	Petrifilm	52,000	-0.08
MT6816	Petrifilm	150,000	1.23
MT6823	Petrifilm	340	-6.32
MT6827	Petrifilm	67,000	0.23
MT6834	Petrifilm	63,000	0.16
MT6835	Petrifilm	55,000	-0.01
MT6843	Petrifilm	83,000	0.50
MT6844	Petrifilm	45,250	-0.25
MT6849	Petrifilm	24,000	-1.04
MT6850	Petrifilm	49,000	-0.15
MT6851	Petrifilm	64,000	0.18
MT6853	Petrifilm	81,000	0.47
MT6855	Petrifilm	41,000	-0.38
MT6878	Petrifilm	900	-5.11
MT6888	Petrifilm	67,533	0.24
MT6910	PCA SP 30	61,700	0.13
MT6929	Petrifilm	45,467	-0.25
MT6936	Petrifilm	47,000	-0.21
MT6937	Petrifilm	240	-6.75
MT6947	Petrifilm	5,300	-2.91
MT6956	Petrifilm	64,000	0.18
MT6965	Other	10,000	-2.13
MT6973	PCA PP 30	6,500	-2.66
MT6976	PCA PP 30	60,000	0.10
MT6979	Petrifilm	49,000	-0.15
MT7001	PCA PP 30	1,280	-4.68
MT7034	Petrifilm	>300	

Data Statistics

	Value
Number of Results	94
Number of Excluded Results	4
Mean	4.67 log10
Median	4.74 log10
Standard Deviation	0.35 log10
Robust Standard Deviation	0.13 log10
Result Range	1280 to 420000 cfu/g

Performance Statistics

	Value
Assigned Value	55,498 cfu/g
Uncertainty of Assigned Value	0.02 log10
SDPA	0.35 log10
Satisfactory Range	11,073 to 278,149 cfu/g
Satisfactory z scores	88.2%
Questionable z scores	6.5%
Unsatisfactory z scores	5.4%



Methodology Summary

Method	Number of Results	Excluded Results	% of Total	Median	Robust SD	Range	Sat.
				Log10			%
PCA PP 30	23	0	24.47	4.78	0.11	1280 to 110000	91.3
PCA SP 30	6	0	6.38	4.74	0.06	40300 to 64000	100.0
PCA PP 37	6	0	6.38	4.80	0.17	46000 to 242000	100.0
PETrifilm	43	4	45.74	4.72	0.16	5300 to 420000	83.3
TEMPO	4	0	4.26	4.69	0.18	4300 to 73000	75.0
Other	12	0	12.77	4.76	0.11	10000 to 68000	91.7
All	94	4	100	4.74	0.13	1280 to 420000	88.2

Comments

The sample contained *Escherichia coli* and *Klebsiella oxytoca*. The assigned value for total aerobic mesophilic count is 55,498 cfu/g.

Total aerobic mesophilic counts are used to determine the general microbial population of a sample. Bacterial swabs performed on meat typically contain 10^2 to 10^4 bacteria per cm 2 , counts greater than 10^5 per cm 2 may indicate poor hygiene.

Lab ID	Method	Result (cfu/g)	z score
MT0142	VRBGA PP 37	61,000	0.36
MT4081	Petrifilm	45,500	-0.01
MT4085	Petrifilm	30,000	-0.52
MT4101	Other	62,000	0.38
MT4194	Petrifilm	59,000	0.32
MT4231	Petrifilm	35,000	-0.33
MT4309	VRBGA PP 37	58,000	0.29
MT4317	VRBGA PP 30	34,864	-0.34
MT4333	VRBGA PP 30	62,000	0.38
MT4333	TEMPO	74,000	0.60
MT4398	VRBGA PP 37	50,000	0.11
MT4540	VRBGA PP 37	50,000	0.11
MT4540	Other	52,000	0.16
MT4578	VRBGA PP 30	22,700	-0.87
MT4624	MPN	33,000	-0.41
MT4733	VRBGA PP 37	40,000	-0.17
MT4804	VRBGA PP 37	38,000	-0.23
MT4836	Petrifilm	35,000	-0.33
MT4836	VRBGA PP 37	37,000	-0.26
MT4871	Petrifilm	71,800	0.56
MT4919	VRBGA PP 37	41,000	-0.14
MT5068	VRBGA PP 37	47,000	0.03
MT5078	VRBGA PP 37	37,000	-0.26
MT5165	VRBGA PP 37	200,000	1.83
MT5384	VRBGA PP 37	30,000	-0.52
MT5399	VRBGA PP 37	32,000	-0.44
MT5431	Petrifilm	61,000	0.36
MT5431	VRBGA PP 37	60,000	0.34
MT5639	Petrifilm	60,000	0.34
MT5852	Other	36,000	-0.30
MT5900	Petrifilm	26,000	-0.70
MT5900	VRBGA PP 37	32,000	-0.44
MT5983	VRBGA PP 37	59,545	0.33
MT6177	VRBGA PP 37	170,000	1.63
MT6196	VRBGA PP 37	58,000	0.29
MT6266	VRBGA PP 37	55,000	0.23
MT6304	VRBGA PP 37	71,500	0.55
MT6407	Petrifilm	48,000	0.06
MT6484	Petrifilm	60,500	0.35
MT6523	TEMPO	24,333	-0.78
MT6641	VRBGA PP 37	57,000	0.27
MT6698	TEMPO	33,000	-0.41
MT6776	MPN	46,000	0.01
MT6776	VRBGA PP 30	63,200	0.40
MT6776	VRBGA PP 37	65,000	0.44
MT6794	Petrifilm	5,100	-2.72
MT6807	TEMPO	4,400	-2.91
MT6815	Petrifilm	38,000	-0.23
MT6827	Petrifilm	48,000	0.06
MT6834	Petrifilm	59,000	0.32
MT6835	Petrifilm	46,000	0.01
MT6843	Petrifilm	52,000	0.16
MT6844	Petrifilm	31,750	-0.45
MT6849	Petrifilm	31,000	-0.48
MT6850	Petrifilm	46,000	0.01
MT6851	Petrifilm	32,000	-0.44
MT6878	Petrifilm	700	-5.19
MT6888	Petrifilm	35,733	-0.31
MT6910	VRBGA PP 37	30,300	-0.51
MT6936	Petrifilm	34,000	-0.37
MT6937	Petrifilm	999	-4.75

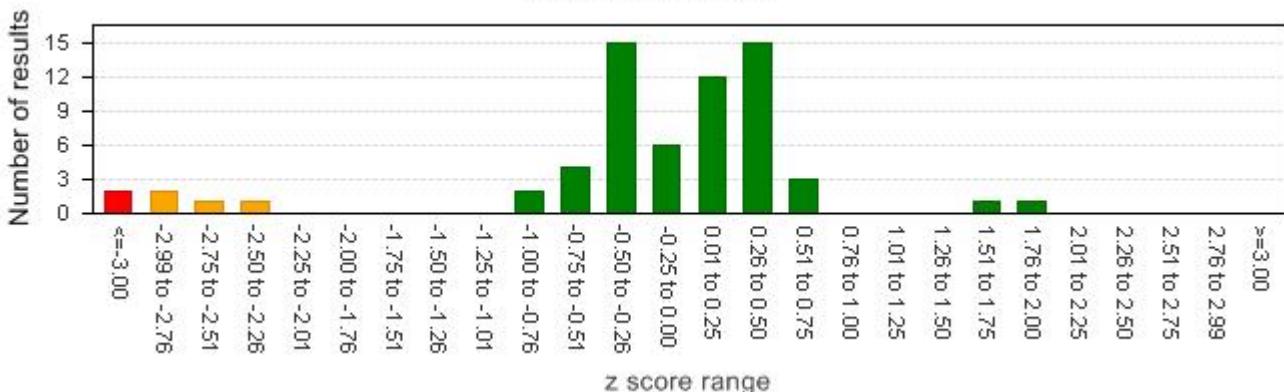
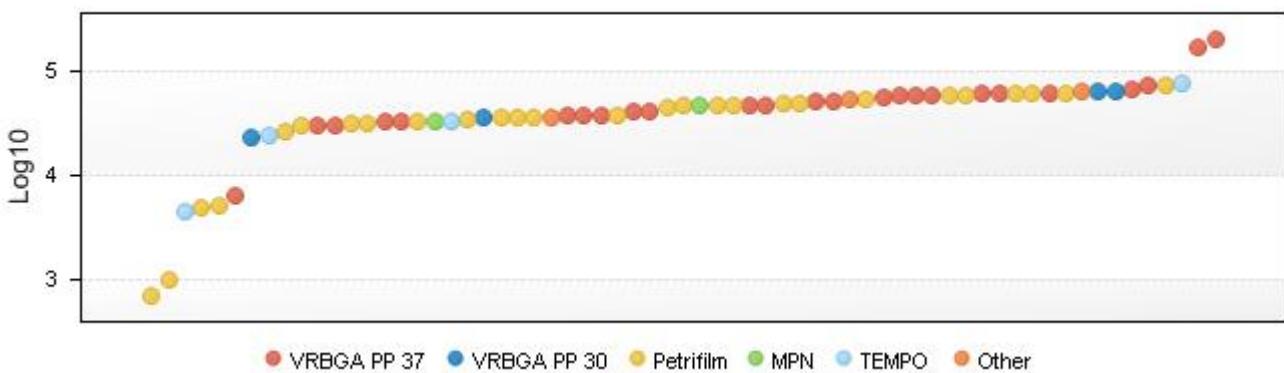
Lab ID	Method	Result (cfu/g)	z score
MT6947	Petrifilm	4,800	-2.80
MT6973	VRBGA PP 37	6,500	-2.42
MT6976	VRBGA PP 37	47,000	0.03
MT6979	Petrifilm	45,000	-0.02
MT7034	Petrifilm	>300	

Data Statistics

	Value
Number of Results	66
Number of Excluded Results	2
Mean	4.58 log10
Median	4.66 log10
Standard Deviation	0.35 log10
Robust Standard Deviation	0.17 log10
Result Range	999 to 200000 cfu/g

Performance Statistics

	Value
Assigned Value	45,749 cfu/g
Uncertainty of Assigned Value	0.03 log10
SDPA	0.35 log10
Satisfactory Range	9,128 to 229,288 cfu/g
Satisfactory z scores	90.8%
Questionable z scores	6.2%
Unsatisfactory z scores	3.1%

z score Histogram**Distribution Graph**

Methodology Summary

Method	Number of Results	Excluded Results	% of Total	Median	Robust SD	Range	Sat.
				Log10			%
VRBGA PP 37	25	0	37.88	4.70	0.14	6500 to 200000	96.0
VRBGA PP 30	4	0	6.06	4.67	0.19	22700 to 63200	100.0
Petrifilm	28	2	42.42	4.62	0.17	999 to 71800	85.2
MPN	2	0	3.03	4.59	0.11	33000 to 46000	100.0
TEMPO	4	0	6.06	4.45	0.36	4400 to 74000	75.0
Other	3	0	4.55	4.72	0.11	36000 to 62000	100.0
All	66	2	100	4.66	0.17	999 to 200000	90.8

Comments

The sample contained the Enterobacteriaceae *Escherichia coli* and *Klebsiella oxytoca* at an assigned value of 45,749 cfu/g.

Members of the Enterobacteriaceae family are widely found in soil, water, fruits, vegetables, grains, flowering plants and a wide range of animals, from insects to humans.

Lab ID	Method	Result (cfu/g)	z score
MT1033	Petrifilm	17,200	-1.14
MT4081	Petrifilm	42,000	-0.03
MT4085	Petrifilm	35,000	-0.26
MT4101	Other	62,000	0.45
MT4194	Petrifilm	59,000	0.39
MT4231	Petrifilm	33,000	-0.33
MT4317	VRBA PP 37	34,909	-0.26
MT4398	VRBA PP 37	53,636	0.27
MT4475	Petrifilm	46,000	0.08
MT4494	Petrifilm	17,900	-1.09
MT4498	Petrifilm	340,000	2.57
MT4540	Chromogenic agar	51,000	0.21
MT4540	Other	61,000	0.43
MT4578	COLI ID PP 37	30,300	-0.43
MT4624	MPN	57,600	0.36
MT4733	VRBA PP 30	65,000	0.51
MT4804	VRBA PP 30	42,000	-0.03
MT4836	Other	43,000	0.00
MT4836	Petrifilm	46,000	0.08
MT4836	VRBA PP 37	46,000	0.08
MT4871	Petrifilm	50,500	0.20
MT4919	VRBA PP 37	40,000	-0.09
MT5078	VRBA PP 37	37,000	-0.19
MT5109	Other	20,000	-0.95
MT5109	Petrifilm	15,000	-1.31
MT5165	VRBA PP 37	210,000	1.97
MT5175	Petrifilm	45,000	0.06
MT5384	Chromogenic agar	28,000	-0.53
MT5399	MPN	24,000	-0.72
MT5431	Other	46,000	0.08
MT5639	Chromogenic agar	46,000	0.08
MT5639	Petrifilm	41,000	-0.06
MT5731	Petrifilm	52,000	0.24
MT5852	MPN	43,000	0.00
MT5900	Petrifilm	26,000	-0.62
MT5900	VRBA PP 37	21,000	-0.89
MT5983	VRBA PP 37	48,636	0.15
MT6092	MPN	>11,000	
MT6135	Petrifilm	9,700	-1.85
MT6177	Other	87,000	0.87
MT6266	Chromogenic agar	54,000	0.28
MT6304	MPN	82,500	0.81
MT6407	Petrifilm	44,000	0.03
MT6484	VRBA PP 37	31,000	-0.41
MT6523	Petrifilm	23,000	-0.78
MT6601	Petrifilm	22,200	-0.82
MT6602	Petrifilm	4,650	-2.76
MT6603	Petrifilm	48,000	0.14
MT6641	VRBA PP 37	34,000	-0.29
MT6698	VRBA PP 30	30,000	-0.45
MT6776	Chromogenic agar	71,000	0.62
MT6776	MPN	46,000	0.08
MT6776	VRBA PP 30	56,400	0.34
MT6782	Petrifilm	36,000	-0.22
MT6794	Petrifilm	4,600	-2.77
MT6807	TEMPO	3,400	-3.15
MT6815	Petrifilm	61,000	0.43
MT6816	Petrifilm	<10	
MT6827	Petrifilm	46,000	0.08
MT6834	Petrifilm	50,000	0.19
MT6835	Petrifilm	19,500	-0.98

Sample: 735 - Meat Indicator Combination**Analyte: Coliforms**

Lab ID	Method	Result (cfu/g)	z score
MT6843	Petrifilm	46,000	0.08
MT6844	Petrifilm	34,000	-0.29
MT6849	Petrifilm	27,000	-0.58
MT6850	Petrifilm	44,000	0.03
MT6855	Petrifilm	50,500	0.20
MT6878	Petrifilm	300	-6.16
MT6888	Petrifilm	27,633	-0.55
MT6910	Chromogenic agar	43,150	0.00
MT6929	Petrifilm	43,500	0.01
MT6947	Petrifilm	4,100	-2.92
MT6973	VRBA PP 37	4,100	-2.92
MT6976	VRBA PP 37	52,000	0.24
MT6979	Petrifilm	42,000	-0.03
MT7001	Petrifilm	1,000	-4.67
MT7034	Petrifilm	>300	

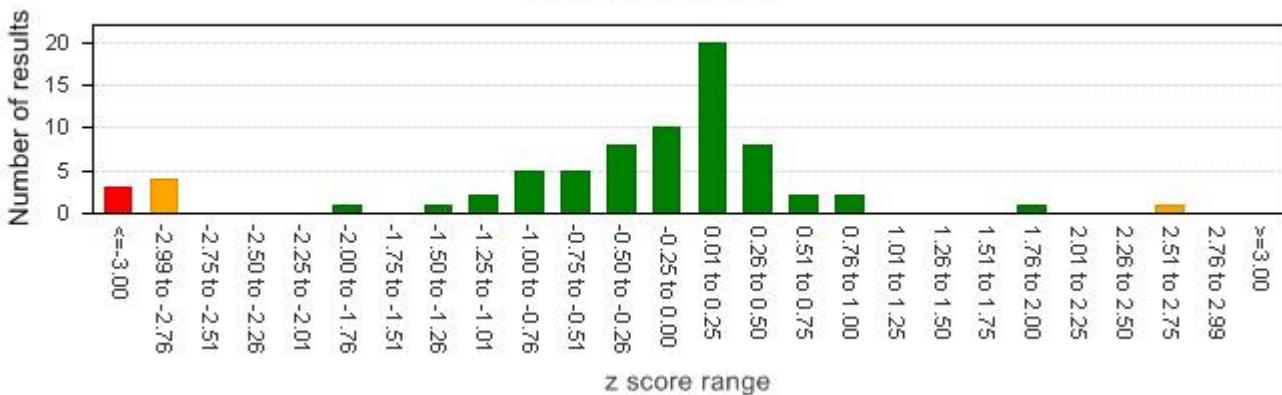
Data Statistics

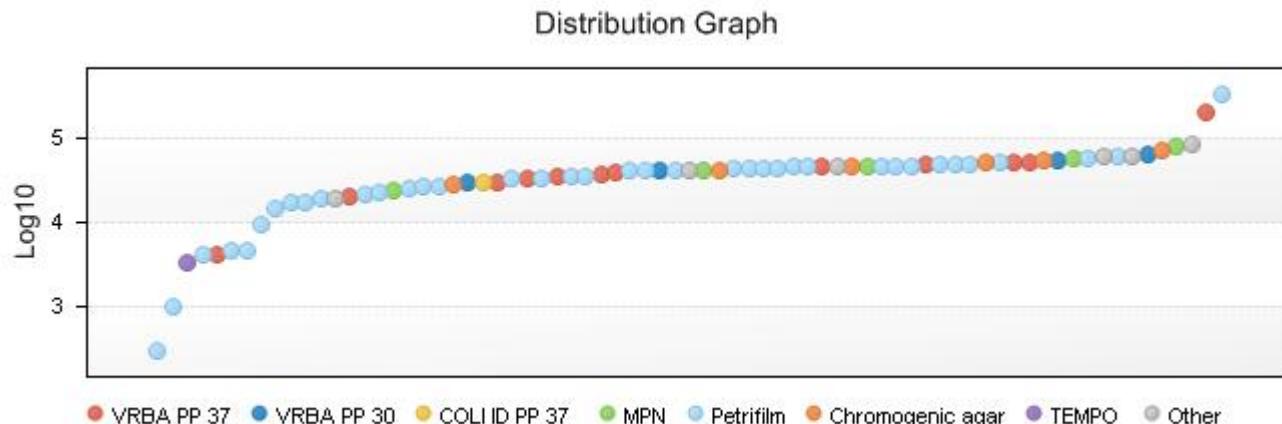
	Value
Number of Results	76
Number of Excluded Results	4
Mean	4.52 log10
Median	4.63 log10
Standard Deviation	0.38 log10
Robust Standard Deviation	0.16 log10
Result Range	1000 to 340000 cfu/g

Performance Statistics

	Value
Assigned Value	43,000 cfu/g
Uncertainty of Assigned Value	0.02 log10
SDPA	0.35 log10
Satisfactory Range	8,580 to 215,511 cfu/g
Satisfactory z scores	89.0%
Questionable z scores	6.8%
Unsatisfactory z scores	4.1%

z score Histogram





Methodology Summary

Method	Number of Results	Excluded Results	% of Total	Median	Robust SD	Range	Sat.
				Log10			%
VRBA PP 37	12	0	15.79	4.59	0.15	4100 to 210000	91.7
VRBA PP 30	4	0	5.26	4.69	0.14	30000 to 65000	100.0
COLI ID PP 37	1	0	1.32	4.48	0.00	30300 to 30300	100.0
MPN	6	1	7.89	4.66	0.14	24000 to 82500	100.0
Petrifilm	40	3	52.63	4.61	0.14	1000 to 340000	84.2
Chromogenic agar	6	0	7.89	4.69	0.07	28000 to 71000	100.0
TEMPO	1	0	1.32	3.53	0.00	3400 to 3400	0.0
Other	6	0	7.89	4.72	0.12	20000 to 87000	100.0
All	76	4	100	4.63	0.16	1000 to 340000	89.0

Comments

The sample contained the coliform *Escherichia coli* and *Klebsiella oxytoca* at an assigned value of 43,000 cfu/g.

Coliforms are found in animal intestines, and their presence in foods is used as an indicator of faecal contamination. However, many coliforms are also found throughout the environment, in air, soil, water, plants and animals. The presence of coliform indicator organisms in meat may, therefore, be indicative of faecal contamination, but may also be environmental in origin.

Lab ID	Method	Result (cfu/g)	z score
MT0142	TBX PP 37-44	9,700	-0.33
MT1033	Petrifilm	5,000	-1.16
MT4081	Petrifilm	11,750	-0.10
MT4085	Petrifilm	14,000	0.12
MT4101	Other	14,000	0.12
MT4194	Petrifilm	17,400	0.39
MT4231	Petrifilm	11,200	-0.16
MT4309	TBX PP 37-44	13,000	0.03
MT4317	TBX PP 37-44	10,455	-0.24
MT4333	TBX PP 37-44	20,000	0.56
MT4333	TEMPO	20,000	0.56
MT4398	TBX PP 37-44	12,909	0.02
MT4475	Petrifilm	10,000	-0.30
MT4494	Petrifilm	10,900	-0.19
MT4498	Petrifilm	120,000	2.79
MT4540	Chromogenic agar	14,000	0.12
MT4540	Other	16,000	0.29
MT4578	COLI ID PP 37-44	16,000	0.29
MT4624	MPN	22,900	0.73
MT4733	TBX PP 37-44	12,500	-0.02
MT4804	TBX PP 37-44	13,000	0.03
MT4836	Other	8,600	-0.48
MT4836	Petrifilm	9,000	-0.43
MT4836	TBX PP 37-44	9,500	-0.36
MT4871	Petrifilm	13,000	0.03
MT4919	TBX PP 37-44	15,000	0.21
MT5068	TBX PP 37-44	11,000	-0.18
MT5078	Chromogenic agar	4,400	-1.32
MT5109	Petrifilm	2,000	-2.29
MT5165	MPN	140,000	2.98
MT5175	Petrifilm	16,000	0.29
MT5384	Chromogenic agar	16,000	0.29
MT5384	Petrifilm	14,000	0.12
MT5399	MPN	24,000	0.79
MT5431	Other	11,000	-0.18
MT5624	MPN	24,000	0.79
MT5639	Chromogenic agar	14,000	0.12
MT5639	Petrifilm	11,000	-0.18
MT5731	Petrifilm	21,000	0.62
MT5852	MPN	<3	
MT5900	Petrifilm	9,900	-0.31
MT5900	TBX PP 37-44	11,000	-0.18
MT5983	Other	9,954	-0.30
MT6092	TBX PP 37-44	19,000	0.50
MT6104	MPN	430	-4.20
MT6135	Petrifilm	10,000	-0.30
MT6177	TBX PP 37-44	21,000	0.62
MT6196	Other	15,000	0.21
MT6266	Chromogenic agar	15,000	0.21
MT6304	MPN	110,000	2.68
MT6407	Petrifilm	12,000	-0.07
MT6484	Petrifilm	10,000	-0.30
MT6523	Petrifilm	3,600	-1.56
MT6601	Petrifilm	6,750	-0.78
MT6602	Petrifilm	900	-3.28
MT6603	Petrifilm	18,000	0.43
MT6641	TBX PP 37-44	12,000	-0.07
MT6698	TEMPO	15,000	0.21
MT6776	Chromogenic agar	21,000	0.62
MT6776	MPN	9,300	-0.39
MT6776	TBX PP 37-44	14,200	0.14

Lab ID	Method	Result (cfu/g)	z score
MT6782	Petrifilm	8,000	-0.57
MT6794	Petrifilm	1,300	-2.83
MT6807	TEMPO	1,200	-2.93
MT6815	Petrifilm	17,000	0.36
MT6816	Petrifilm	30,000	1.07
MT6823	Petrifilm	80	-6.29
MT6827	Petrifilm	16,000	0.29
MT6834	Petrifilm	23,000	0.74
MT6835	Petrifilm	9,500	-0.36
MT6843	Petrifilm	17,000	0.36
MT6844	Petrifilm	14,000	0.12
MT6849	Petrifilm	9,000	-0.43
MT6850	Petrifilm	18,000	0.43
MT6878	Petrifilm	4,400	-1.32
MT6888	Petrifilm	12,300	-0.04
MT6910	TBX PP 37-44	11,000	-0.18
MT6929	Petrifilm	12,333	-0.04
MT6936	Other	<10	
MT6937	Petrifilm	350	-4.46
MT6947	Petrifilm	1,330	-2.80
MT6973	Other	<10	
MT6976	TBX PP 37-44	17,000	0.36
MT6979	TBX PP 37-44	10,000	-0.30
MT7001	Petrifilm	<10	
MT7034	Petrifilm	<10	

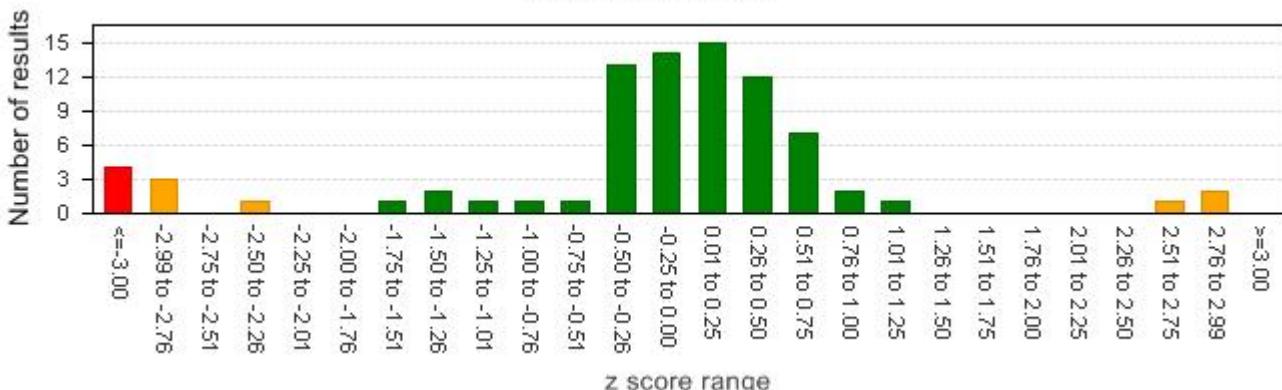
Data Statistics

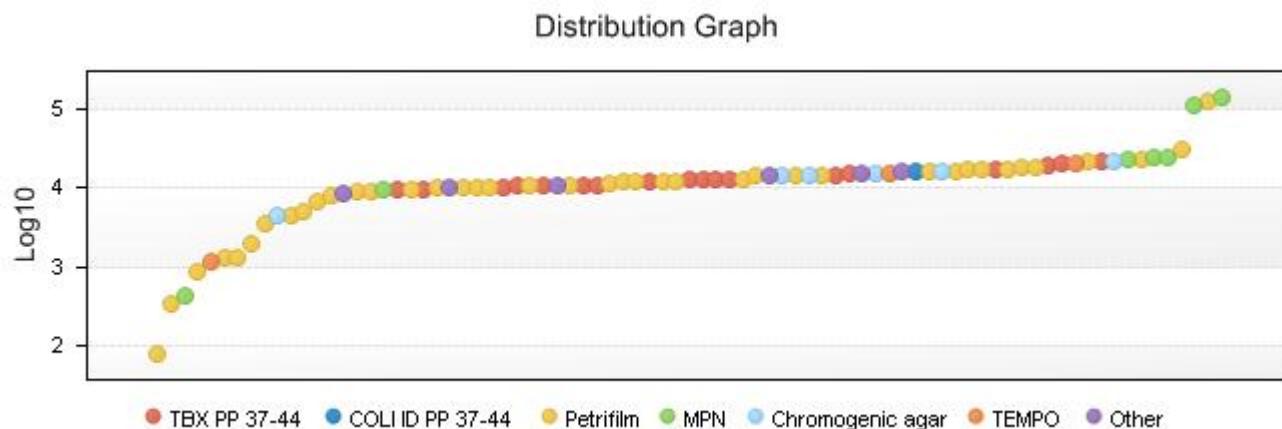
	Value
Number of Results	86
Number of Excluded Results	6
Mean	4.04 log10
Median	4.10 log10
Standard Deviation	0.43 log10
Robust Standard Deviation	0.17 log10
Result Range	350 to 140000 cfu/g

Performance Statistics

	Value
Assigned Value	12,703 cfu/g
Uncertainty of Assigned Value	0.02 log10
SDPA	0.35 log10
Satisfactory Range	2,535 to 63,666 cfu/g
Satisfactory z scores	86.4%
Questionable z scores	8.6%
Unsatisfactory z scores	4.9%

z score Histogram





Methodology Summary

Method	Number of Results	Excluded Results	% of Total	Median	Robust SD	Range	Sat.
				Log10			%
TBX PP 37-44	18	0	20.93	4.10	0.10	9500 to 21000	100.0
COLI ID PP 37-44	1	0	1.16	4.20	0.00	16000 to 16000	100.0
Petricfilm	42	3	48.84	4.05	0.23	350 to 120000	82.5
MPN	8	1	9.3	4.38	0.61	430 to 140000	57.1
Chromogenic agar	6	0	6.98	4.16	0.04	4400 to 21000	100.0
TEMPO	3	0	3.49	4.18	0.19	1200 to 20000	66.7
Other	8	2	9.3	4.09	0.13	8600 to 16000	100.0
All	86	6	100	4.10	0.17	350 to 140000	86.4

Comments

The sample contained *Escherichia coli* at an assigned value of 12,703 cfu/g.

Escherichia coli is found in animal intestines, therefore the presence of the organism in meat indicates poor hygiene practice as the meat may have become contaminated during the slaughtering process. It is also historically used as an 'indicator' organism, to indicate whether more serious pathogens, such as *Salmonella* are also likely to be present. However, this organism is also widespread throughout the environment, being isolated from air, soils, water, plants and animals. Therefore the presence of *Escherichia coli* in meat may be faecal or environmental in origin.

Lab ID	Method	Result
MT0025	Chromogenic agar	Detected
MT0029	MKTT/RV + XLD + BGA 37	Detected
MT0099	PCR	Detected
MT0142	Other	Detected
MT1038	ELISA	Detected
MT4251	MKTT/RV + XLD + BGA 37	Detected
MT4251	PCR	Detected
MT4317	MKTT/RV + XLD + BGA 37	Detected
MT4333	MKTT/RV + XLD + BGA 37	Detected
MT4333	VIDAS	Detected
MT4398	MKTT/RV + XLD + BGA 37	Detected
MT4447	Other	Detected
MT4497	Chromogenic agar	Detected
MT4534	VIDAS	Detected
MT4624	MKTT/RV + XLD + BGA 37	Detected
MT4836	MKTT/RV + XLD + BGA 37	Detected
MT4836	Other	Detected
MT4836	PCR	Detected
MT4848	MKTT/RV + XLD + BGA 37	Detected
MT4871	Other	Detected
MT4964	MKTT/RV + XLD + BGA 37	Detected
MT5068	Other	Detected
MT5069	MKTT/RV + XLD + BGA 37	Detected
MT5104	Other	Detected
MT5175	VIDAS	Detected
MT5180	Other	Detected
MT5180	MKTT/RV + XLD + BGA 37	Detected
MT5282	MKTT/RV + XLD + BGA 37	Detected
MT5299	MKTT/RV + XLD + BGA 37	Detected
MT5351	Broth 37/agar 37 (Various)	Detected
MT5429	MKTT/RV + XLD + BGA 37	Detected
MT5624	MKTT/RV + XLD + BGA 37	Detected
MT5716	ELISA	Detected
MT5731	VIDAS	Detected
MT5852	Other	Detected
MT5853	Other	Detected
MT5952	PCR	Detected
MT6092	PCR	Detected
MT6104	Other	Detected
MT6156	Broth 37/agar 37 (Various)	Detected
MT6266	VIDAS	Detected
MT6304	Chromogenic agar	Detected
MT6335	Other	Detected
MT6492	Other	Detected
MT6641	MKTT/RV + XLD + BGA 37	Detected
MT6685	PCR	Detected
MT6686	PCR	Detected
MT6694	PCR	Detected
MT6698	VIDAS	Detected
MT6716	PCR	Detected
MT6789	VIDAS	Detected
MT6807	PCR	Detected
MT6810	PCR	Not Detected
MT6816	PCR	Detected
MT6827	Rapid test (Various)	Detected
MT6835	Rapid test (Various)	Detected
MT6846	PCR	Detected
MT6862	PCR	Detected
MT6878	PCR	Not Detected
MT6888	VIDAS	Detected
MT6898	MKTT/RV + XLD + BGA 37	Detected
MT6936	Other	Detected

Lab ID	Method	Result
MT6937	PCR	Detected
MT6979	Other	Detected
MT6988	Other	Detected

Data Statistics

	Result
Assigned Value	Detected
Number of Results	65
Satisfactory	97%

Methodology Summary

Method	% Satisfactory
MKTT/RV + XLD + BGA 37	100%
Broth 37/agar 37 (Various)	100%
VIDAS	100%
Rapid test (Various)	100%
Chromogenic agar	100%
PCR	88%
ELISA	100%
Other	100%

Comments

The sample contained *Salmonella* Seftenberg at an approximate inoculum level of 6 cfu/g. The assigned value is therefore *Salmonella* species 'Detected'.

Salmonella Seftenberg is characteristic of the genus on selective media and in confirmatory tests, being H₂S positive, motile, lactose negative, citrate positive and urease negative. It is a group E₄ *Salmonella* according to the Kauffmann-White Scheme, with a full serological profile of 'O' antigen: 1, 3, 19; 'H' phase 1 antigen: g, [s], t and 'H' phase 2 antigen: -. This organism is a wild strain originally isolated from food.

Salmonellae are Gram-negative, non-spore forming rods that are oxidase negative and catalase positive, and are members of the Enterobacteriaceae family. Almost all *Salmonella* serotypes cause acute gastro-enteritis and account for a large proportion of all food poisoning outbreaks. The primary source of Salmonellae is the gastrointestinal tract of animals, the organism can be transmitted into the meat during slaughtering and processing.

Lab ID	Method	Result
MT0059	Fraser + ALOA 37	Detected
MT0142	Rapid L.mono	Detected
MT4251	Fraser + PL 37	Detected
MT4251	PCR	Detected
MT4317	Fraser + ALOA 37	Detected
MT4398	Fraser + ALOA 37	Detected
MT4624	Fraser + ALOA 37	Detected
MT4836	Fraser + ALOA 37	Detected
MT4836	Other	Detected
MT4836	VIDAS	Detected
MT4848	Fraser + ALOA 37	Detected
MT4894	ELISA	Detected
MT4919	Fraser + PL 37	Detected
MT4996	Other	Detected
MT5175	Other	Detected
MT5310	Other	Detected
MT5415	Fraser + ALOA 37	Detected
MT5415	Other	Detected
MT5415	VIDAS	Detected
MT5437	VIDAS	Detected
MT5618	Rapid L.mono	Detected
MT5716	ELISA	Detected
MT5731	Other	Detected
MT5950	Fraser + ALOA 37	Detected
MT5950	Fraser + PL 37	Detected
MT5950	PCR	Detected
MT6008	Other	Detected
MT6008	Rapid L.mono	Detected
MT6156	Broth 37/agar 37 (Various)	Detected
MT6193	VIDAS	Detected
MT6240	VIDAS	Detected
MT6266	Rapid L.mono	Detected
MT6304	Broth 37/agar 37 (Various)	Detected
MT6492	Other	Detected
MT6525	Other	Detected
MT6536	Broth 37/agar 37 (Various)	Not Detected
MT6641	Fraser + ALOA 37	Detected
MT6745	VIDAS	Detected
MT6751	VIDAS	Detected
MT6769	Fraser + ALOA 37	Detected
MT6789	VIDAS	Detected
MT6816	PCR	Detected
MT6909	Other	Detected
MT6929	Other	Detected
MT6936	Other	Detected

Data Statistics

	Result
Assigned Value	Detected
Number of Results	45
Satisfactory	98%

Methodology Summary

Method	% Satisfactory
Fraser + ALOA 37	100%
Fraser + PL 37	100%
Broth 37/agar 37 (Various)	67%
Rapid L.mono	100%
VIDAS	100%
PCR	100%
ELISA	100%
Other	100%

Comments

The sample contained *Listeria monocytogenes* at an approximate inoculum level of 8 cfu/g. The assigned value is therefore *Listeria* species 'Detected'.

There are ten species of *Listeria*, the most clinically significant being *Listeria monocytogenes*, which is pathogenic for humans and animals. While other members of the *Listeria* genus are not usually implicated in disease, their presence indicates an increased risk of contamination by *Listeria monocytogenes*.

Lab ID	Method	Result
MT0025	Fraser + PL 37	Detected
MT0059	PCR	Detected
MT0142	Rapid L.mono	Detected
MT4251	Fraser + PL 37	Detected
MT4251	PCR	Detected
MT4317	Fraser + ALOA 37	Detected
MT4398	Fraser + ALOA 37	Detected
MT4624	Fraser + ALOA 37	Detected
MT4836	Fraser + ALOA 37	Detected
MT4836	Other	Detected
MT4836	VIDAS	Detected
MT4848	Fraser + ALOA 37	Detected
MT4894	ELISA	Detected
MT4919	Fraser + ALOA 37	Detected
MT4996	Other	Detected
MT5175	Other	Detected
MT5180	Other	Detected
MT5180	Fraser + ALOA 37	Detected
MT5310	Other	Detected
MT5415	Fraser + ALOA 37	Detected
MT5415	Other	Detected
MT5415	VIDAS	Detected
MT5437	VIDAS	Detected
MT5618	Rapid L.mono	Detected
MT5716	Fraser + ALOA 37	Detected
MT5731	VIDAS	Detected
MT5950	Fraser + ALOA 37	Detected
MT5950	Fraser + PL 37	Detected
MT5950	PCR	Detected
MT6008	Other	Detected
MT6008	Rapid L.mono	Detected
MT6092	Other	Detected
MT6156	Broth 37/agar 37 (Various)	Detected
MT6193	VIDAS	Detected
MT6240	VIDAS	Detected
MT6266	Rapid L.mono	Detected
MT6492	Other	Not Detected
MT6525	Other	Detected
MT6536	Broth 37/agar 37 (Various)	Not Detected
MT6564	Fraser + ALOA 37	Detected
MT6641	Fraser + ALOA 37	Detected
MT6751	VIDAS	Detected
MT6769	Fraser + ALOA 37	Detected
MT6888	VIDAS	Detected
MT6909	Other	Detected
MT6936	Other	Detected
MT6956	Other	Detected

Data Statistics

	Result
Assigned Value	Detected
Number of Results	47
Satisfactory	96%

Methodology Summary

Method	% Satisfactory
Fraser + ALOA 37	100%
Fraser + PL 37	100%
Broth 37/agar 37 (Various)	50%
Rapid L.mono	100%
VIDAS	100%
PCR	100%
ELISA	100%
Other	92%

Comments

The sample contained *Listeria monocytogenes* at an approximate inoculum level of 8 cfu/g. The assigned value is therefore *Listeria monocytogenes* 'Detected'.

There are ten species of *Listeria*, the most clinically significant being *Listeria monocytogenes*, which is pathogenic for humans and animals. While other members of the *Listeria* genus are not usually implicated in disease, their presence indicates an increased risk of contamination by *Listeria monocytogenes*.

Lab ID	Method	Result (cfu/g)	z score
MT0087	PCA PP 30	9,545	-1.17
MT4163	PCA PP 30	<10	
MT4175	PCA PP 30	38,000	0.54
MT4284	PCA PP 30	50,000	0.88
MT4733	PCA PP 30	17,200	-0.44
MT4919	PCA PP 30	33,000	0.36
MT5019	PCA PP 30	18,000	-0.39
MT5393	Other	41,000	0.63
MT5723	Other	17,350	-0.43
MT5723	PCA PP 30	18,650	-0.34
MT5731	PCA PP 30	31,000	0.29
MT5864	PCA PP 30	30,744	0.28
MT5912	Other	14,000	-0.70
MT6092	PCA PP 30	50,000	0.88
MT6450	PCA PP 30	37,000	0.51
MT6512	PCA PP 30	4,400	-2.14
MT6525	PCA PP 30	4,300	-2.16
MT6740	Other	42,000	0.66
MT6769	PCA PP 30	20,000	-0.26
MT6808	Other	24,600	0.00
MT6874	Other	27,000	0.12
MT7021	Other	15,000	-0.61

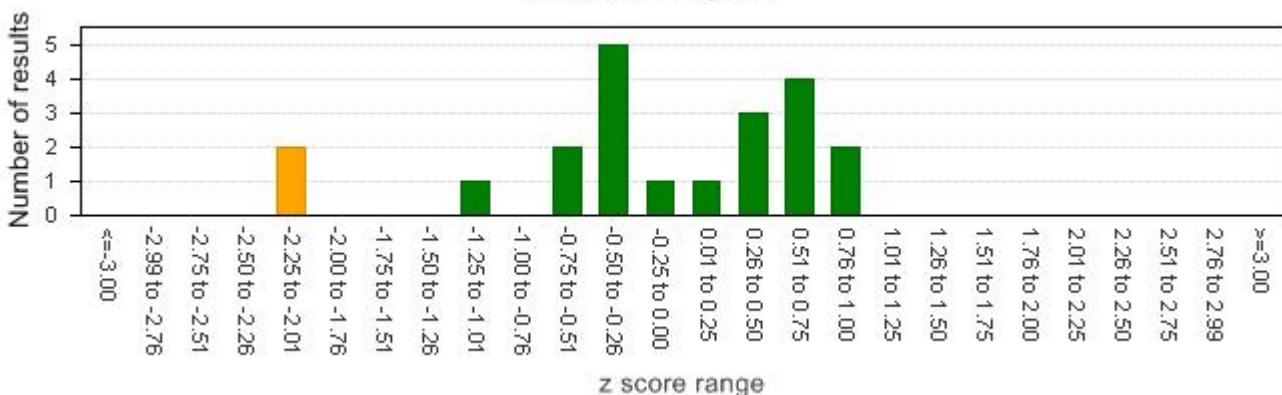
Data Statistics

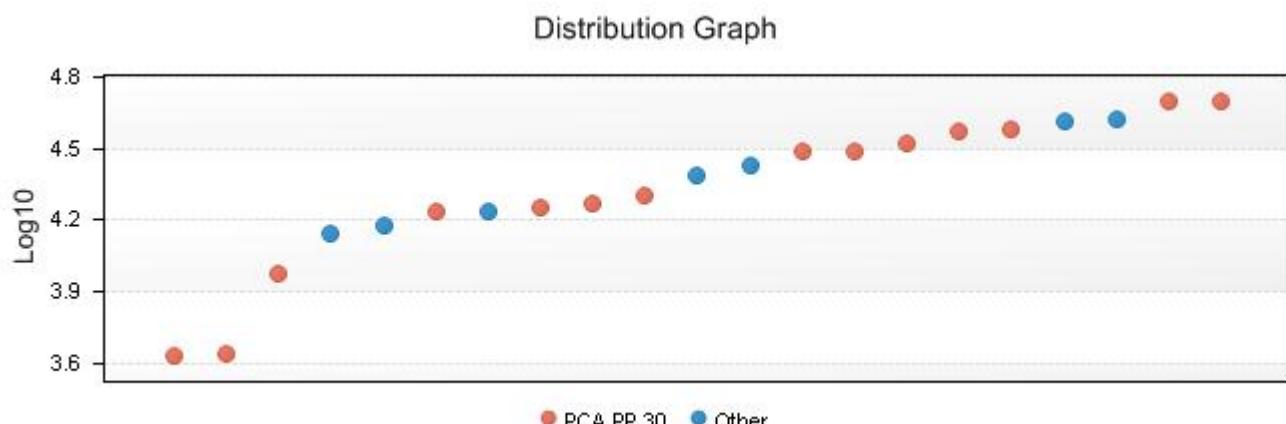
	Value
Number of Results	22
Number of Excluded Results	1
Mean	4.33 log10
Median	4.39 log10
Standard Deviation	0.30 log10
Robust Standard Deviation	0.26 log10
Result Range	4300 to 50000 cfu/g

Performance Statistics

	Value
Assigned Value	24,600 cfu/g
Uncertainty of Assigned Value	0.07 log10
SDPA	0.35 log10
Satisfactory Range	4,908 to 123,292 cfu/g
Satisfactory z scores	90.5%
Questionable z scores	9.5%
Unsatisfactory z scores	0.0%

z score Histogram





Methodology Summary

Method	Number of Results	Excluded Results	% of Total	Median	Robust SD	Range	Sat.
				Log10			%
PCA PP 30	15	1	68.18	4.39	0.25	4300 to 50000	85.7
Other	7	0	31.82	4.39	0.32	14000 to 42000	100.0
All	22	1	100	4.39	0.26	4300 to 50000	90.5

Comments

The sample contained *Clostridium perfringens* and *Staphylococcus epidermidis*. The assigned value for total anaerobic mesophilic count is 24,600 cfu/g.

Total anaerobic counts are performed in order to determine the general anaerobic microbial population of a sample. Anaerobic organisms are likely to be present in canned or vacuum packaged foods, but they can also survive in many other foods, such as meats, by finding an anaerobic niche within the food. The organisms cause food spoilage, resulting in characteristic foul odours, usually caused by production of hydrogen sulphide.

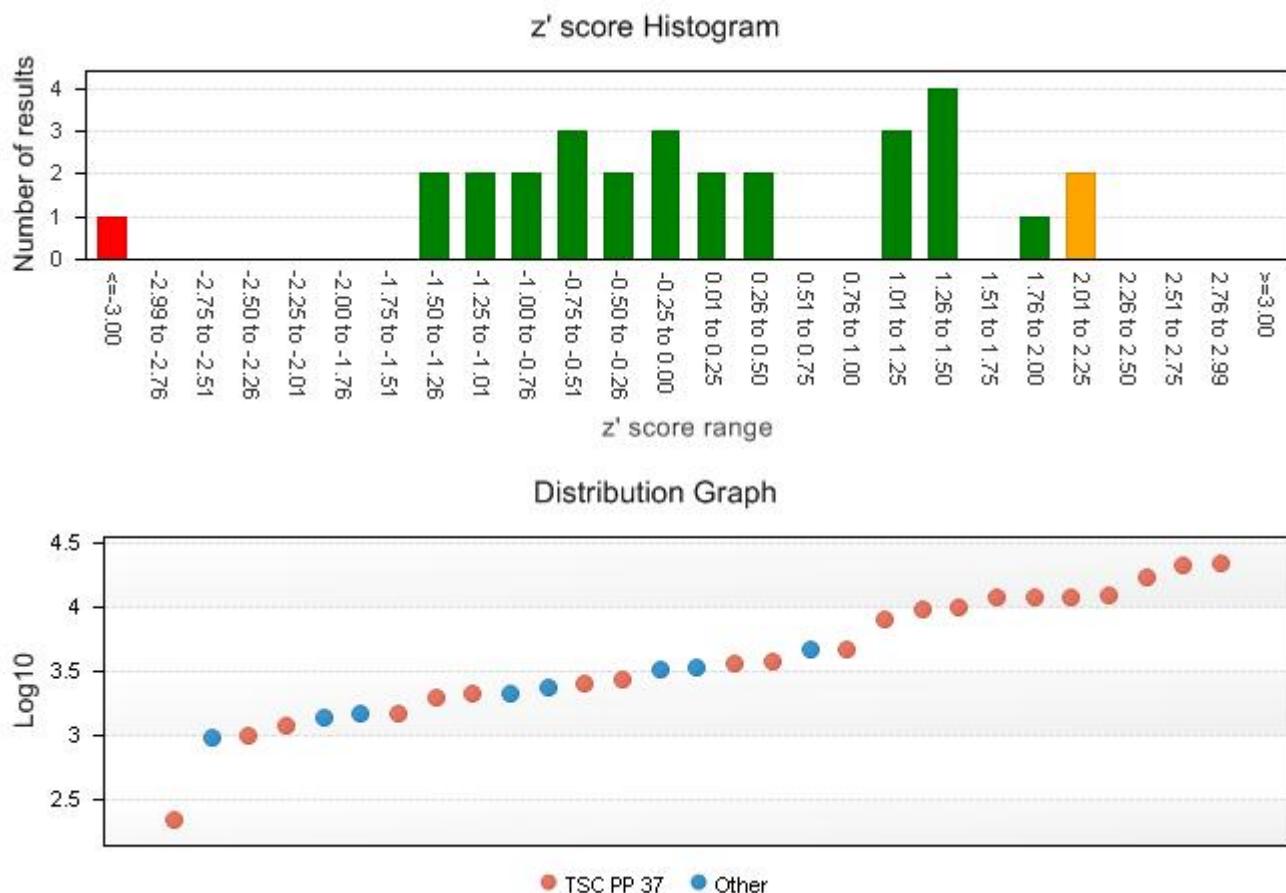
Lab ID	Method	Result (cfu/g)	z' score*
MT0025	TSC PP 37	20,900	2.11
MT0087	TSC PP 37	2,500	-0.36
MT1001	Other	1,400	-1.03
MT4163	Other	3,400	0.00
MT4175	TSC PP 37	12,000	1.47
MT4284	TSC PP 37	17,000	1.87
MT4317	TSC PP 37	8,136	1.01
MT4333	TSC PP 37	4,650	0.36
MT4733	TSC PP 37	3,600	0.07
MT4759	TSC PP 37	<10	
MT4919	TSC PP 37	1,200	-1.21
MT5017	Other	4,600	0.35
MT5019	TSC PP 37	3,800	0.13
MT5393	TSC PP 37	12,000	1.47
MT5723	Other	>10	
MT5731	TSC PP 37	22,000	2.17
MT5864	TSC PP 37	12,222	1.49
MT5912	TSC PP 37	12,000	1.47
MT6450	TSC PP 37	2,000	-0.62
MT6512	TSC PP 37	2,100	-0.56
MT6525	TSC PP 37	990	-1.44
MT6712	TSC PP 37	10,000	1.25
MT6723	TSC PP 37	220	-3.18
MT6740	Other	1,500	-0.95
MT6769	TSC PP 37	9,500	1.20
MT6788	TSC PP 37	1,500	-0.95
MT6808	Other	960	-1.47
MT6812	Other	3,300	-0.03
MT6874	Other	2,100	-0.56
MT6888	TSC PP 37	2,753	-0.25
MT6909	Other	2,400	-0.41

Data Statistics

	Value
Number of Results	31
Number of Excluded Results	2
Mean	3.58 log10
Median	3.53 log10
Standard Deviation	0.48 log10
Robust Standard Deviation	0.56 log10
Result Range	220 to 22000 cfu/g

Performance Statistics

	Value
Assigned Value	3,400 cfu/g
Uncertainty of Assigned Value	0.13 log10
SDPA	0.35 log10
Expanded SDPA	0.37 log10
Satisfactory Range	609 to 18,976 cfu/g
Satisfactory z' scores	89.7%
Questionable z' scores	6.9%
Unsatisfactory z' scores	3.4%



Methodology Summary

Method	Number of Results	Excluded Results	% of Total	Median	Robust SD	Range	Sat.
				Log10		%	
TSC PP 37	22	1	70.97	3.67	0.61	220 to 22000	85.7
Other	9	1	29.03	3.35	0.26	960 to 4600	100.0
All	31	2	100	3.53	0.56	220 to 22000	89.7

Comments

The sample contained *Clostridium perfringens* at an assigned value of 3,400 cfu/g.

Clostridium perfringens causes an intoxication form of food poisoning characterised by diarrhoea, stomach cramps, nausea, headache, and fever. Foods most commonly associated with *Clostridium perfringens* contamination are usually high protein foods such as meat and poultry stews, sauces, gravies, pies, and casseroles.

*Please note, participant performance for this analyte has been assessed using a z' score, rather than a z score, in order to account for the measurement uncertainty of the assigned value which is not negligible when compared to the SDPA.

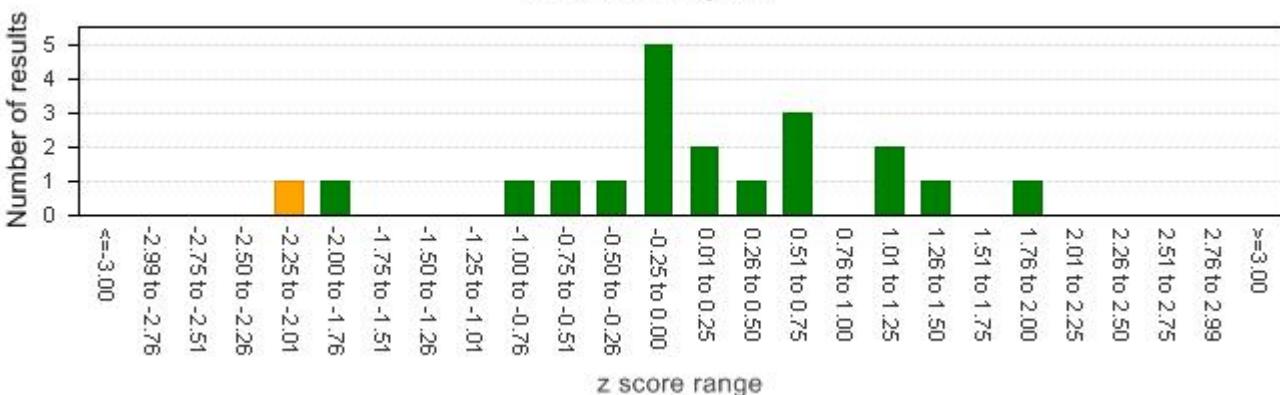
Lab ID	Method	Result (cfu/g)	z score
MT0025	TSC PP 37	23,600	1.83
MT0087	IS PP 37	6,614	0.25
MT4175	TSC PP 37	13,000	1.09
MT4284	TSC PP 37	17,000	1.42
MT4317	TSC PP 37	8,136	0.51
MT4333	TSC PP 37	4,650	-0.19
MT4759	IS PP 37	7,100	0.34
MT4932	IS PP 37	6,200	0.17
MT5017	Other	4,600	-0.20
MT5019	Other	4,500	-0.23
MT5365	TSC PP 37	4,318	-0.28
MT5393	IS PP 37	4,600	-0.20
MT5864	Other	1,100	-1.97
MT5912	Other	14,000	1.18
MT6092	OPSP PP 37	4,700	-0.17
MT6450	TSC PP 37	2,500	-0.96
MT6512	IS PP 37	3,000	-0.73
MT6525	TSC PP 37	990	-2.10
MT6712	Other	9,800	0.74
MT6769	TSC PP 37	9,500	0.70

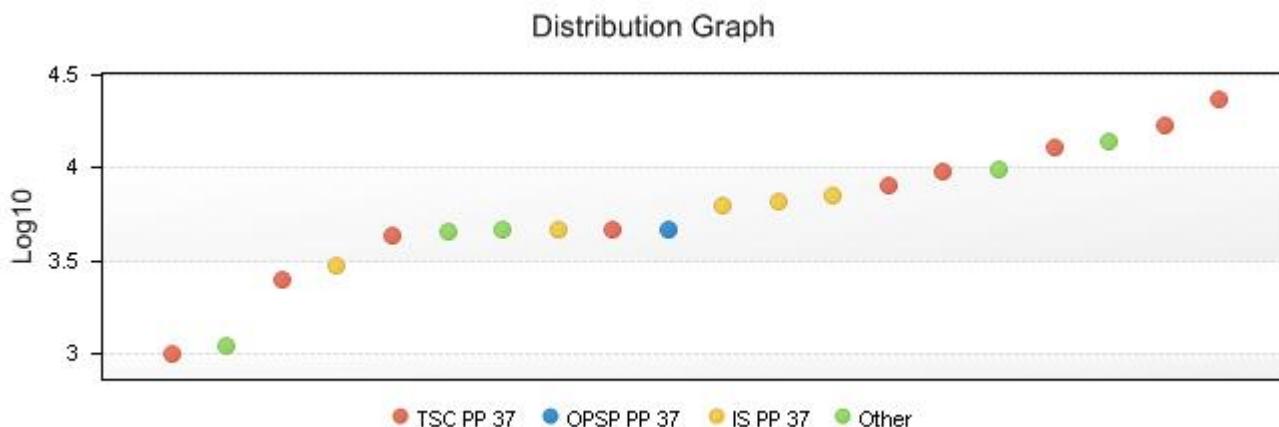
Data Statistics

	Value
Number of Results	20
Number of Excluded Results	0
Mean	3.75 log10
Median	3.73 log10
Standard Deviation	0.35 log10
Robust Standard Deviation	0.31 log10
Result Range	990 to 23600 cfu/g

Performance Statistics

	Value
Assigned Value	5,398 cfu/g
Uncertainty of Assigned Value	0.09 log10
SDPA	0.35 log10
Satisfactory Range	1,077 to 27,054 cfu/g
Satisfactory z scores	95.0%
Questionable z scores	5.0%
Unsatisfactory z scores	0.0%

z score Histogram



Methodology Summary

Method	Number of Results	Excluded Results	% of Total	Median	Robust SD	Range	Sat.
				Log10			%
TSC PP 37	9	0	45	3.91	0.41	990 to 23600	88.9
OPSP PP 37	1	0	5	3.67	0.00	4700 to 4700	100.0
IS PP 37	5	0	25	3.79	0.09	3000 to 7100	100.0
Other	5	0	25	3.66	0.49	1100 to 14000	100.0
All	20	0	100	3.73	0.31	990 to 23600	95.0

Comments

The sample contained the sulphite-reducing bacteria *Clostridium perfringens* at an assigned value of 5,398 cfu/g.

Sulphite-reducing bacteria cause food spoilage by the production of hydrogen sulphide, which produces foul odours. The majority of sulphite-reducing bacteria belong to the genus *Clostridium*.

Clostridium is a large genus consisting of Gram-positive spore-forming anaerobes. Clostridia are often found in soil. Some are responsible for human and animal disease, and others are associated with food spoilage. Clostridia are classified according to the shape and position of their spores, and by their physiological characteristics.

Sample: 738 - Meat Clost/Staph

Analyte: Coagulase positive staphylococci

Lab ID	Method	Result (cfu/g)
MT0025	BP + RPF SP 37	<10
MT0087	BP SP 37	22,000
MT4163	BP SP 37	<10
MT4175	BP + RPF SP 37	<10
MT4175	Other	<10
MT4175	TEMPO	<10
MT4284	BP + RPF SP 37	<10
MT4317	BP + RPF PP 37	<10
MT4324	Rapid Staph	<10
MT4333	BP SP 37	<100
MT4733	BP + RPF PP 37	<10
MT4759	BP SP 37	230
MT4871	BP SP 37	<10
MT4919	BP + RPF SP 37	<10
MT4932	BP + RPF PP 37	<10
MT5017	Other	<100
MT5019	TEMPO	<10
MT5063	BP SP 37	<100
MT5175	Petrifilm	<10
MT5365	Rapid Staph	<100
MT5393	TEMPO	<10
MT5723	BP SP 37	<10
MT5723	Other	<10
MT5723	TEMPO	<10
MT5731	BP + RPF SP 37	<10
MT5864	BP SP 37	<10
MT5912	BP + RPF PP 37	<10
MT6092	BP SP 37	<100
MT6240	BP + RPF SP 37	<10
MT6240	TEMPO	<10
MT6301	BP + RPF SP 37	<50
MT6450	BP + RPF PP 37	35,000
MT6512	Petrifilm	<10
MT6525	Rapid Staph	9,500
MT6740	Petrifilm	<10
MT6769	BP SP 37	<10
MT6788	BP SP 37	<10
MT6788	Petrifilm	<10
MT6808	Other	<10
MT6874	Petrifilm	<10
MT6888	Petrifilm	3,430
MT6936	Petrifilm	<10

Data Statistics

	Value
Number of Results	42
Number of Excluded Results	N/A
Mean	N/A
Median	N/A
Standard Deviation	N/A
Robust Standard Deviation	N/A
Result Range	230 to 35,000 cfu/g

Performance Statistics

	Value
Assigned Value	Absent
Uncertainty of Assigned Value	N/A
SDPA	N/A
Satisfactory Range	N/A
Satisfactory z scores	N/A
Questionable z scores	N/A
Unsatisfactory z scores	N/A

Comments

The sample contained *Staphylococcus epidermidis* at an approximate level of 41,500 cfu/g. This strain is coagulase negative and the assigned value is therefore 'absent' using a detection level of <10 cfu/g.

The most significant food borne coagulase positive staphylococcus is *Staphylococcus aureus*. *Staphylococcus aureus* can be present on the skin, and in the nose and throat of healthy individuals with no ill effect. It is important to test for it in foods as it can be an indicator of general hygiene and be a causative agent of food poisoning.

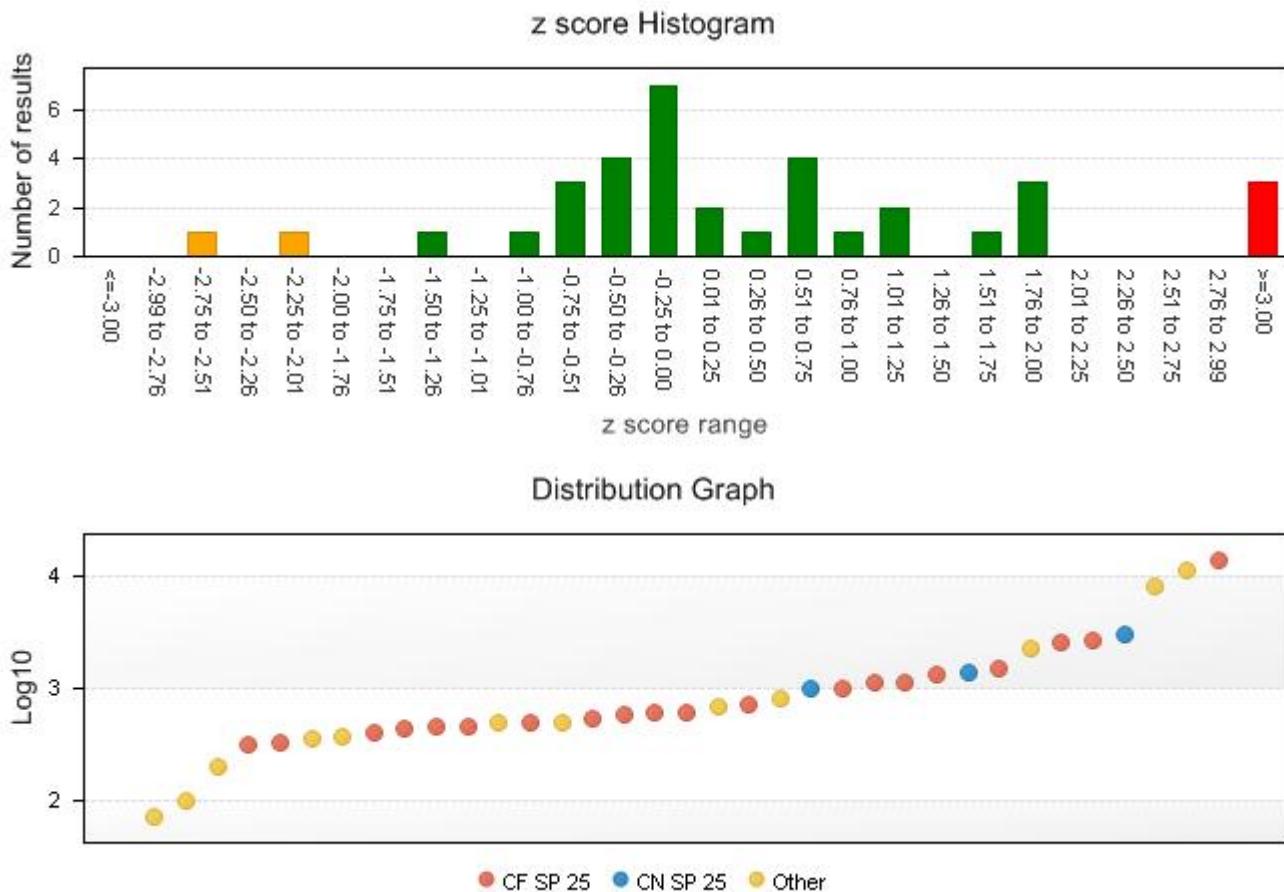
Lab ID	Method	Result (cfu/g)	z score
MT0057	CF SP 25	310	-0.82
MT0114	CF SP 25	1,500	1.14
MT4025	Other	500	-0.23
MT4163	CF SP 25	450	-0.36
MT4263	CF SP 25	2,700	1.87
MT4284	CF SP 25	600	0.00
MT4291	CF SP 25	440	-0.38
MT4306	CF SP 25	400	-0.50
MT4317	CF SP 25	725	0.23
MT4624	Other	2,280	1.66
MT4964	CN SP 25	1,000	0.63
MT5141	CF SP 25	600	0.00
MT5351	CF SP 25	500	-0.23
MT5356	CF SP 25	14,000	3.91
MT5356	Other	8,000	3.21
MT5366	CF SP 25	580	-0.04
MT5382	CF SP 25	460	-0.33
MT5384	CN SP 25	3,000	2.00
MT5400	Other	370	-0.60
MT5661	CF SP 25	1,100	0.75
MT5718	CF SP 25	1,100	0.75
MT5729	CN SP 25	1,370	1.02
MT5889	CF SP 25	2,600	1.82
MT6173	CF SP 25	1,000	0.63
MT6190	Other	11,100	3.62
MT6320	CF SP 25	1,300	0.96
MT6367	Other	670	0.14
MT6459	CF SP 25	530	-0.15
MT6484	Other	800	0.36
MT6679	Other	70	-2.67
MT6793	Other	350	-0.67
MT6943	CF SP 25	330	-0.74
MT6977	Other	200	-1.36
MT6978	Other	100	-2.22
MT7021	Other	500	-0.23

Data Statistics

	Value
Number of Results	35
Number of Excluded Results	0
Mean	2.91 log10
Median	2.78 log10
Standard Deviation	0.50 log10
Robust Standard Deviation	0.35 log10
Result Range	70 to 14000 cfu/g

Performance Statistics

	Value
Assigned Value	600 cfu/g
Uncertainty of Assigned Value	0.07 log10
SDPA	0.35 log10
Satisfactory Range	120 to 3,007 cfu/g
Satisfactory z scores	85.7%
Questionable z scores	5.7%
Unsatisfactory z scores	8.6%



Methodology Summary

Method	Number of Results	Excluded Results	% of Total	Median	Robust SD	Range	Sat.
				Log10			%
CF SP 25	20	0	57.14	2.78	0.30	310 to 14000	95.0
CN SP 25	3	0	8.57	3.14	0.20	1000 to 3000	100.0
Other	12	0	34.29	2.70	0.45	70 to 11100	66.7
All	35	0	100	2.78	0.35	70 to 14000	85.7

Comments

The sample contained *Pseudomonas aeruginosa* at an assigned value of 600 cfu/g.

Pseudomonads are Gram-negative, motile, non-sporing rods. They are catalase and oxidase positive and utilise glucose oxidatively. *Pseudomonas* species are widespread in the soil, and their ability to reduce nitrate makes them an important part of the nitrogen cycle. They are also ubiquitous in water, sewage and on plants and animals, and in food. They are also a predominant organism in biofilms. Their widespread occurrence is due to their metabolic diversity. *Pseudomonas* species can be psychrotrophic and are commonly found in milk stored at or below 7°C. They are common spoilage organisms in a variety of foods, especially bacon, fish and meats.

Lab ID	Method	Result (cfu/g)	z score
MT0057	MRS PP 25	43,000	-0.19
MT0114	MRS PP 30	21,000	-1.08
MT1001	MRS PP 30	60,000	0.23
MT4025	Other	78,000	0.55
MT4163	MRS SP 30	68,000	0.38
MT4263	MRS SP 30	89,000	0.72
MT4284	MRS SP 30	56,000	0.14
MT4291	MRS SP 30	38,000	-0.34
MT4306	MRS SP 30	61,000	0.25
MT4317	MRS SP 30	33,773	-0.49
MT4580	MRS PP 30	44,000	-0.16
MT4871	MRS SP 30	72,300	0.46
MT5141	MRS SP 30	58,000	0.18
MT5351	MRS PP 30	4,300	-3.04
MT5356	MRS PP 30	68,000	0.38
MT5356	Other	78,000	0.55
MT5366	MRS SP 30	70,000	0.42
MT5382	MRS SP 30	120,000	1.09
MT5382	Other	23,000	-0.96
MT5382	MRS PP 30	67,000	0.36
MT5384	MRS SP 30	81,000	0.60
MT5400	MRS SP 30	110,000	0.98
MT5661	Petrifilm	38,000	-0.34
MT5718	MRS SP 30	56,000	0.14
MT5729	MRS SP 30	52,100	0.05
MT5889	Petrifilm	23,600	-0.93
MT6113	MRS PP 30	63,182	0.29
MT6135	Petrifilm	31,000	-0.59
MT6173	MRS PP 30	55,000	0.12
MT6190	Petrifilm	47,000	-0.08
MT6320	MRS SP 30	71,000	0.44
MT6367	Petrifilm	61,000	0.25
MT6459	MRS SP 30	71,000	0.44
MT6484	Petrifilm	52,000	0.05
MT6679	Petrifilm	2,300	-3.82
MT6694	Petrifilm	27,200	-0.76
MT6739	Petrifilm	64,000	0.31
MT6740	Petrifilm	62,000	0.27
MT6792	Petrifilm	46,000	-0.10
MT6793	MRS SP 30	56,000	0.14
MT6816	Petrifilm	100,000	0.86
MT6852	Other	28,000	-0.72
MT6874	Petrifilm	34,000	-0.48
MT6901	Other	68,000	0.38
MT6943	MRS SP 30	70,000	0.42
MT6956	Petrifilm	67,000	0.36
MT6965	MRS SP 30	15,000	-1.49
MT6977	Other	14,000	-1.58
MT6978	MRS PP 30	36,000	-0.41
MT7003	MRS PP 30	35,000	-0.44
MT7006	Other	55,000	0.12
MT7008	Other	39,000	-0.31
MT7009	MRS PP 30	33,000	-0.52
MT7011	MRS SP 30	37,000	-0.37
MT7012	MRS SP 30	3,000	-3.49
MT7013	Other	53,000	0.07
MT7014	MRS PP 30	33,000	-0.52
MT7015	Other	52,000	0.05
MT7021	Other	50,000	0.00
MT7022	Other	37,000	-0.37
MT7023	Other	43,000	-0.19

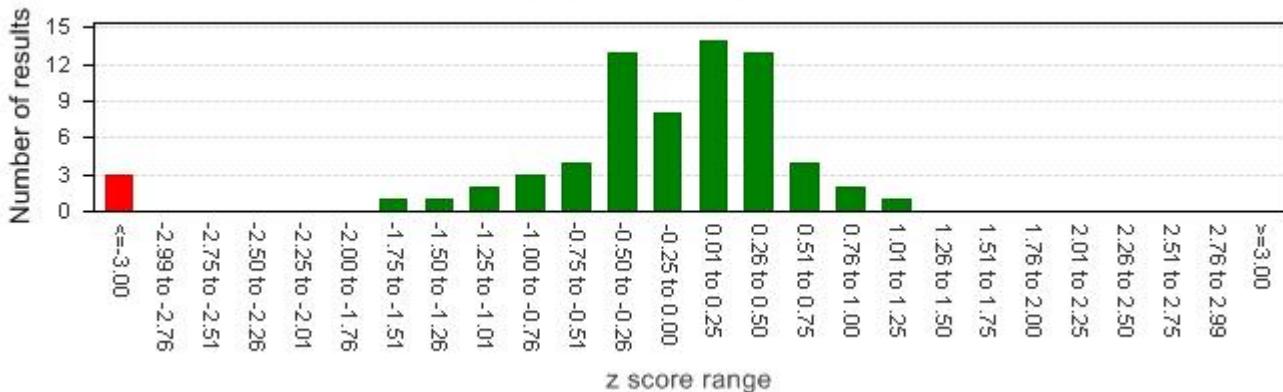
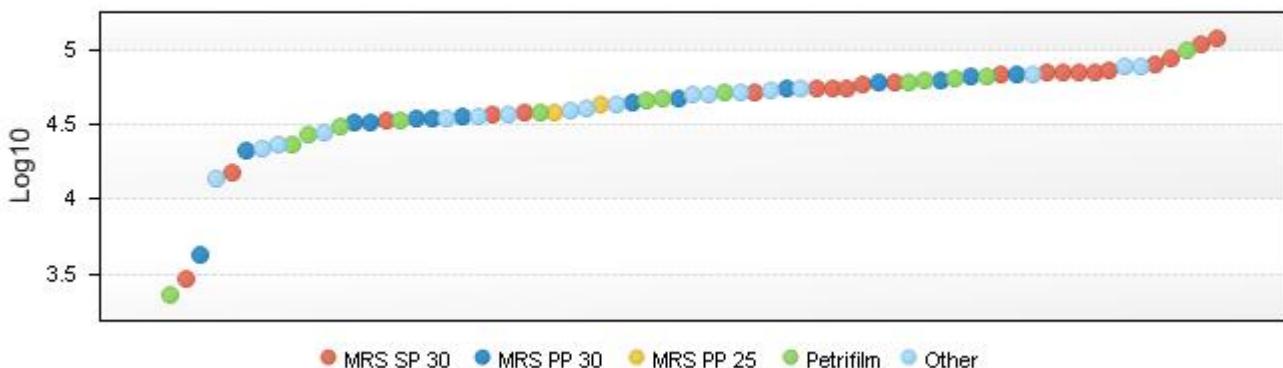
Lab ID	Method	Result (cfu/g)	z score
MT7024	Other	41,000	-0.25
MT7025	Other	36,000	-0.41
MT7026	Other	22,000	-1.02
MT7028	MRS PP 30	47,000	-0.08
MT7029	Other	51,000	0.02
MT7033	MRS PP 30	35,000	-0.44
MT7043	Other	35,000	-0.44
MT7044	MRS PP 25	38,000	-0.34

Data Statistics

	Value
Number of Results	69
Number of Excluded Results	0
Mean	4.62 log10
Median	4.70 log10
Standard Deviation	0.31 log10
Robust Standard Deviation	0.20 log10
Result Range	2300 to 120000 cfu/g

Performance Statistics

	Value
Assigned Value	50,000 cfu/g
Uncertainty of Assigned Value	0.03 log10
SDPA	0.35 log10
Satisfactory Range	9,976 to 250,594 cfu/g
Satisfactory z scores	95.7%
Questionable z scores	0.0%
Unsatisfactory z scores	4.3%

z score Histogram**Distribution Graph**

Methodology Summary

Method	Number of Results	Excluded Results	% of Total	Median	Robust SD	Range	Sat.
				Log10			%
MRS SP 30	21	0	30.43	4.79	0.10	3000 to 120000	95.2
MRS PP 30	14	0	20.29	4.60	0.16	4300 to 68000	92.9
MRS PP 25	2	0	2.9	4.61	0.04	38000 to 43000	100.0
Petrifilm	14	0	20.29	4.67	0.20	2300 to 100000	92.9
Other	18	0	26.09	4.62	0.14	14000 to 78000	100.0
All	69	0	100	4.70	0.20	2300 to 120000	95.7

Comments

The sample contained the lactic acid bacteria *Lactobacillus casei* at an assigned value of 50,000 cfu/g.

Lactic acid bacteria share a number of common features, they are Gram-positive, non-spore forming rods or cocci, most are aerotolerant anaerobes which lack cytochromes and porphyrins, and are therefore also usually catalase and oxidase-negative. The principal genera are *Lactococcus*, *Leuconostoc*, *Pediococcus*, *Lactobacillus* and *Streptococcus*. Lactic acid bacteria are important in the food, brewing and dairy industries, where they are used in fermentations due to the production of lactic and acetic acids. They are beneficial to health and are included in a number of probiotic foods. However, lactic acid bacteria can also cause food spoilage, as high levels cause off flavours and odours and lead to a reduced shelf life. Lactic acid bacteria are often inhibitory to other micro-organisms.

Lab ID	Method	Result (cfu/g)	z score
MT0057	Other	15,000	0.00
MT0114	DG18 SP 22-25	25,000	0.63
MT4025	Petrifilm	12,000	-0.28
MT4163	DRBC SP 22-25	16,000	0.08
MT4284	YGC SP 22-25	17,000	0.16
MT4291	DRBC SP 22-25	14,000	-0.09
MT4306	YGC SP 22-25	12,000	-0.28
MT4317	YGC SP 22-25	14,545	-0.04
MT4384	Other	20,000	0.36
MT4624	OGYE SP 22-25	19,500	0.33
MT4871	Petrifilm	24,000	0.58
MT4964	DRBC SP 22-25	25,000	0.63
MT5141	DRBC SP 22-25	24,000	0.58
MT5351	RB SP 22-25	9,400	-0.58
MT5356	YGC SP 22-25	25,000	0.63
MT5356	Other	24,000	0.58
MT5366	YGC SP 22-25	15,000	0.00
MT5382	DG18 PP 22-25	25,000	0.63
MT5384	YGC SP 22-25	26,000	0.68
MT5384	DG18 SP 22-25	30,000	0.86
MT5384	Petrifilm	28,000	0.77
MT5400	YGC SP 22-25	24,000	0.58
MT5661	Petrifilm	6,400	-1.06
MT5718	YGC SP 22-25	15,000	0.00
MT5729	YGC SP 22-25	1,850	-2.60
MT5889	Other	12,600	-0.22
MT6135	Petrifilm	9,800	-0.53
MT6173	DRBC SP 22-25	5,900	-1.16
MT6190	DRBC SP 22-25	10,200	-0.48
MT6320	Other	8,200	-0.75
MT6459	YGC SP 22-25	17,000	0.16
MT6484	Petrifilm	22,000	0.48
MT6523	Petrifilm	2,600	-2.17
MT6739	Petrifilm	23,000	0.53
MT6740	Petrifilm	15,000	0.00
MT6782	Petrifilm	7,500	-0.86
MT6792	Petrifilm	10,700	-0.42
MT6793	Other	7,900	-0.80
MT6816	Petrifilm	10,000	-0.50
MT6852	Petrifilm	7,400	-0.88
MT6874	Other	14,000	-0.09
MT6901	Other	15,000	0.00
MT6929	Petrifilm	16,533	0.12
MT6943	DG18 PP 22-25	14,000	-0.09
MT7009	Other	15,000	0.00
MT7026	Petrifilm	13,000	-0.18
MT7028	Other	12,000	-0.28
MT7029	Other	21,000	0.42

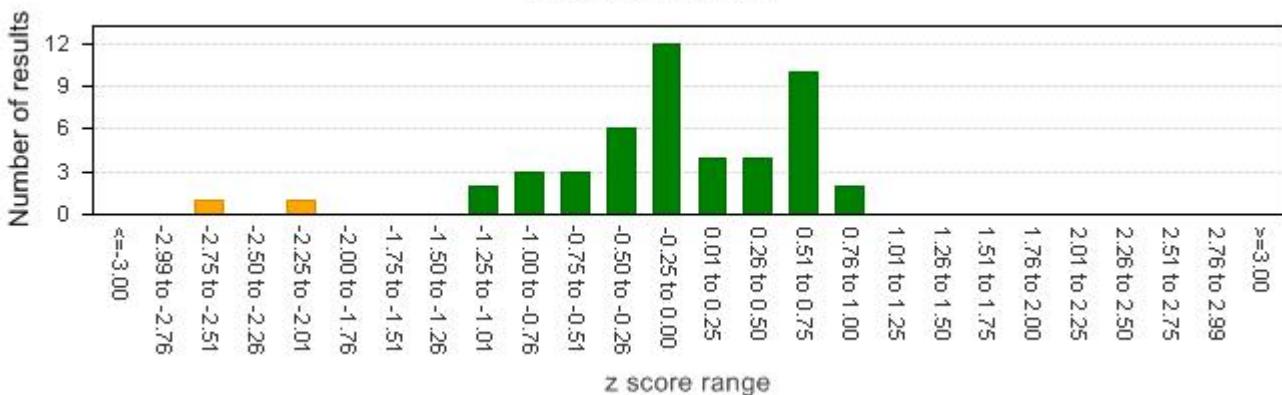
Data Statistics

	Value
Number of Results	48
Number of Excluded Results	0
Mean	4.14 log10
Median	4.18 log10
Standard Deviation	0.25 log10
Robust Standard Deviation	0.25 log10
Result Range	1850 to 30000 cfu/g

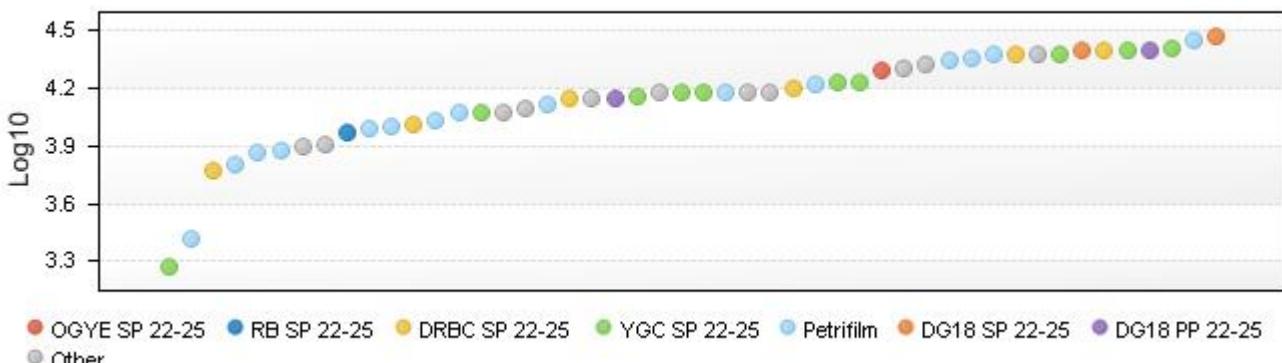
Performance Statistics

	Value
Assigned Value	15,000 cfu/g
Uncertainty of Assigned Value	0.04 log10
SDPA	0.35 log10
Satisfactory Range	2,993 to 75,178 cfu/g
Satisfactory z scores	95.8%
Questionable z scores	4.2%
Unsatisfactory z scores	0.0%

z score Histogram



Distribution Graph



Methodology Summary

Method	Number of Results	Excluded Results	% of Total	Median	Robust SD	Range	Sat. %
				Log10			
OGYE SP 22-25	1	0	2.08	4.29	0.00	19500 to 19500	100.0
RB SP 22-25	1	0	2.08	3.97	0.00	9400 to 9400	100.0
DRBC SP 22-25	6	0	12.5	4.18	0.28	5900 to 25000	100.0
YGC SP 22-25	10	0	20.83	4.20	0.12	1850 to 26000	90.0
Petrifilm	15	0	31.25	4.08	0.30	2600 to 28000	93.3
DG18 SP 22-25	2	0	4.17	4.44	0.06	25000 to 30000	100.0
DG18 PP 22-25	2	0	4.17	4.27	0.19	14000 to 25000	100.0
Other	11	0	22.92	4.18	0.14	7900 to 24000	100.0
All	48	0	100	4.18	0.25	1850 to 30000	95.8

Comments

The sample contained the yeast *Candida albicans* at an assigned value of 15,000 cfu/g.

Fungi are ubiquitous throughout the environment, being found in air, water, soils, animals and foods. They can survive adverse conditions by the production of spores. Visible mould growth can often be seen on foods, such as bread and vegetables, and in the environment, such as in bathrooms, air conditioning units, etc. Yeasts are simply fungi whose main growth form is unicellular and which usually replicate by budding. Many yeasts can also grow in the hyphal form, and some moulds can be yeast-like. The distinction between a yeast and a mould can, therefore, be difficult. Many fungi are saprophytes, causing spoilage of foods and other commodities. Some are plant pathogens, and others are recognised causes of human disease.

Lab ID	Method	Result (cfu/g)
MT0057	YGC SP 22-25	<200
MT0114	DG18 SP 22-25	<100
MT4025	Petrifilm	<10
MT4163	DRBC SP 22-25	<10
MT4284	YGC SP 22-25	<10
MT4291	DRBC SP 22-25	<10
MT4306	YGC SP 22-25	<100
MT4317	YGC SP 22-25	<10
MT4384	Other	<100
MT4871	Petrifilm	<10
MT4964	DRBC SP 22-25	<10
MT5141	DRBC SP 22-25	<100
MT5351	RB SP 22-25	<10
MT5356	YGC SP 22-25	<10
MT5356	Other	<10
MT5366	YGC SP 22-25	<10
MT5382	DG18 PP 22-25	<1,000
MT5384	YGC SP 22-25	<10
MT5384	DG18 SP 22-25	<10
MT5384	Petrifilm	<10
MT5400	YGC SP 22-25	<10
MT5661	Petrifilm	<10
MT5718	YGC SP 22-25	<100
MT5729	YGC SP 22-25	<100
MT5889	Other	<10
MT6135	Petrifilm	<10
MT6173	DRBC SP 22-25	<10
MT6190	DRBC SP 22-25	<10
MT6320	Other	<10
MT6459	YGC SP 22-25	<10
MT6484	Petrifilm	<10
MT6523	Petrifilm	<10
MT6739	Petrifilm	<10
MT6740	Petrifilm	<10
MT6782	Petrifilm	<1
MT6792	Petrifilm	<10
MT6793	Other	<10
MT6816	Petrifilm	<10
MT6844	Petrifilm	12,625
MT6852	Petrifilm	<10
MT6874	Other	<100
MT6901	Other	<10
MT6929	Petrifilm	1
MT6943	DG18 PP 22-25	<10
MT7009	Other	<100
MT7012	Petrifilm	3,300
MT7026	Petrifilm	<10
MT7028	Other	<10

Data Statistics

	Value
Number of Results	48
Number of Excluded Results	N/A
Mean	N/A
Median	N/A
Standard Deviation	N/A
Robust Standard Deviation	N/A
Result Range	1 to 12,625 cfu/g

Performance Statistics

	Value
Assigned Value	Absent
Uncertainty of Assigned Value	N/A
SDPA	N/A
Satisfactory Range	N/A
Satisfactory z scores	N/A
Questionable z scores	N/A
Unsatisfactory z scores	N/A

Comments

The sample did not contain mould. The assigned value is therefore 'absent' using a detection level of <10 cfu/g.

Fungi are ubiquitous throughout the environment, being found in air, water, soils, animals and foods. They can survive adverse conditions by the production of spores. Visible mould growth can often be seen on foods, such as bread and vegetables, and in the environment, such as in bathrooms, air conditioning units, etc. Yeasts are simply fungi whose main growth form is unicellular and which usually replicate by budding. Many yeasts can also grow in the hyphal form, and some moulds can be yeast-like. The distinction between a yeast and a mould can, therefore, be difficult. Many fungi are saprophytes, causing spoilage of foods and other commodities. Some are plant pathogens, and others are recognised causes of human disease.

Lab ID	Method	Result (cfu/g)	z score
MT0120	PCA PP 30	66,000	0.12
MT0144	TEMPO	100,000	0.63
MT0172	PCA PP 30	22,500	-1.22
MT0180	TEMPO	112,000	0.77
MT1014	Petrifilm	72,000	0.23
MT1019	TEMPO	78,000	0.33
MT1020	Petrifilm	73,000	0.24
MT1030	TEMPO	48,000	-0.28
MT1031	TEMPO	44,500	-0.37
MT1032	Petrifilm	67,000	0.14
MT1038	Other	107,000	0.72
MT1040	Petrifilm	42,000	-0.44
MT4014	PCA PP 30	53,000	-0.15
MT4075	Other	39,000	-0.53
MT4168	PCA PP 30	55,000	-0.11
MT4206	PCA PP 30	51,500	-0.19
MT4241	Petrifilm	92,000	0.53
MT4278	Petrifilm	70,000	0.19
MT4285	Petrifilm	81,000	0.37
MT4295	Other	52,000	-0.18
MT4329	PCA PP 30	56,500	-0.07
MT4490	Petrifilm	61,000	0.02
MT4761	PCA SP 30	85,800	0.44
MT5334	Petrifilm	67,000	0.14
MT5416	PCA SP 30	66,364	0.13
MT5574	Other	67,000	0.14
MT5574	Petrifilm	74,000	0.26
MT5700	PCA PP 30	5,400	-2.99
MT5889	PCA PP 37	64,000	0.08
MT6037	PCA PP 30	50,000	-0.23
MT6040	Other	72,000	0.23
MT6042	Other	37,000	-0.60
MT6043	Petrifilm	58,000	-0.04
MT6045	Petrifilm	60,000	0.00
MT6046	Petrifilm	44,000	-0.38
MT6047	PCA PP 37	39,000	-0.53
MT6063	Other	54,000	-0.13
MT6092	PCA PP 30	66,000	0.12
MT6095	Other	50,000	-0.23
MT6130	PCA PP 30	60,000	0.00
MT6131	Petrifilm	53,000	-0.15
MT6158	Petrifilm	61,000	0.02
MT6253	Petrifilm	42,000	-0.44
MT6254	Other	35,900	-0.64
MT6255	Petrifilm	68,000	0.16
MT6257	Petrifilm	48,000	-0.28
MT6260	Petrifilm	52,000	-0.18
MT6367	Petrifilm	80,000	0.36
MT6449	PCA PP 37	64,000	0.08
MT6492	PCA PP 30	46,000	-0.33
MT6523	Petrifilm	69,000	0.17
MT6536	PCA SP 30	6,455	-2.77
MT6632	Petrifilm	60,000	0.00
MT6632	TEMPO	49,000	-0.25
MT6640	PCA PP 30	14,500	-1.76
MT6657	Petrifilm	71,000	0.21
MT6658	Other	60,000	0.00
MT6665	Petrifilm	72,000	0.23
MT6674	Other	42,000	-0.44
MT6674	Petrifilm	75,000	0.28
MT6675	Other	46,000	-0.33

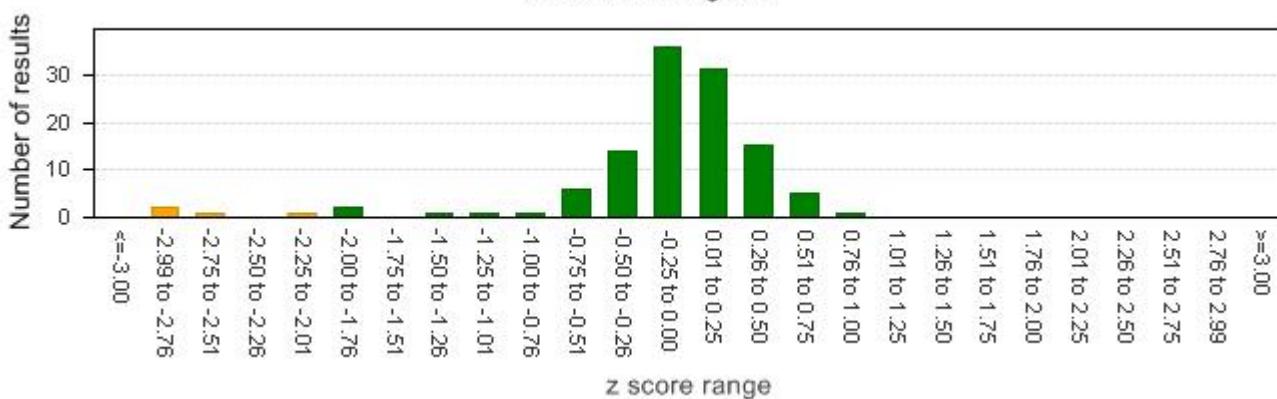
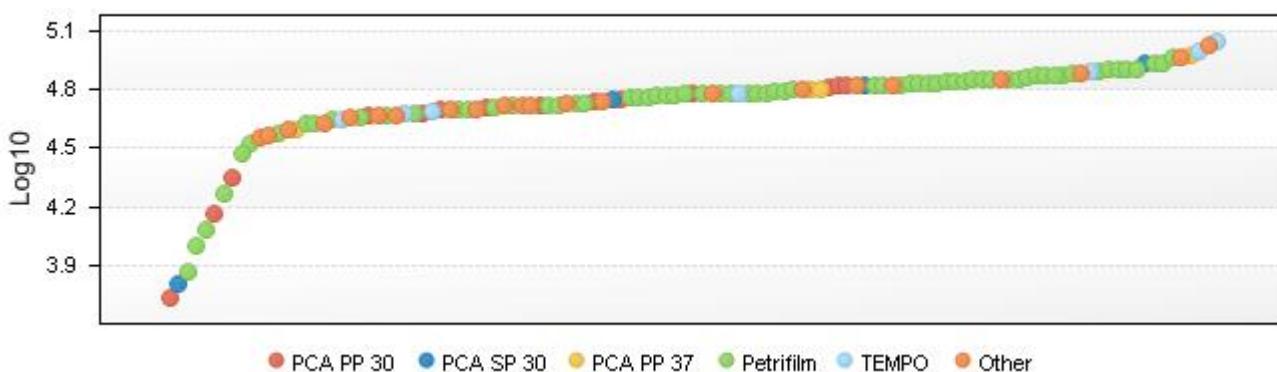
Lab ID	Method	Result (cfu/g)	z score
MT6679	Petrifilm	10,000	-2.22
MT6685	Petrifilm	47,000	-0.30
MT6686	Petrifilm	76,000	0.29
MT6689	Petrifilm	62,000	0.04
MT6691	Petrifilm	58,000	-0.04
MT6692	Petrifilm	78,000	0.33
MT6694	Petrifilm	59,000	-0.02
MT6699	Petrifilm	87,000	0.46
MT6713	Other	92,000	0.53
MT6718	Petrifilm	67,000	0.14
MT6721	Petrifilm	54,000	-0.13
MT6723	PCA PP 37	94,000	0.56
MT6724	Other	55,000	-0.11
MT6735	Other	76,000	0.29
MT6736	Petrifilm	51,700	-0.18
MT6737	Other	47,000	-0.30
MT6738	Petrifilm	54,000	-0.13
MT6740	Petrifilm	72,000	0.23
MT6749	PCA PP 30	48,000	-0.28
MT6780	Petrifilm	53,000	-0.15
MT6792	Petrifilm	58,000	-0.04
MT6795	Petrifilm	37,700	-0.58
MT6806	PCA PP 30	65,000	0.10
MT6810	Petrifilm	68,000	0.16
MT6811	Petrifilm	60,000	0.00
MT6812	Petrifilm	80,000	0.36
MT6813	Other	66,000	0.12
MT6817	Petrifilm	60,000	0.00
MT6821	Petrifilm	7,400	-2.60
MT6833	Petrifilm	50,000	-0.23
MT6837	Petrifilm	50,000	-0.23
MT6840	Petrifilm	70,000	0.19
MT6846	Other	45,000	-0.36
MT6847	Other	52,000	-0.18
MT6856	TEMPO	60,000	0.00
MT6859	Petrifilm	75,000	0.28
MT6860	Petrifilm	30,000	-0.86
MT6861	Petrifilm	62,000	0.04
MT6862	Petrifilm	33,667	-0.72
MT6870	Petrifilm	63,000	0.06
MT6874	Petrifilm	59,000	-0.02
MT6877	Petrifilm	45,000	-0.36
MT6889	Petrifilm	87,000	0.46
MT6896	Other	52,000	-0.18
MT6902	Petrifilm	12,000	-2.00
MT6909	Other	50,000	-0.23
MT6911	Petrifilm	74,000	0.26
MT6912	Petrifilm	71,000	0.21
MT6916	Petrifilm	68,000	0.16
MT6918	Petrifilm	68,000	0.16
MT6949	Other	63,000	0.06
MT6966	Petrifilm	60,000	0.00
MT6972	Petrifilm	18,400	-1.47
MT6975	Petrifilm	59,000	-0.02
MT6996	Petrifilm	80,000	0.36
MT7038	PCA SP 30	56,000	-0.09

Data Statistics

	Value
Number of Results	117
Number of Excluded Results	0
Mean	4.73 log10
Median	4.78 log10
Standard Deviation	0.22 log10
Robust Standard Deviation	0.12 log10
Result Range	5400 to 112000 cfu/g

Performance Statistics

	Value
Assigned Value	60,000 cfu/g
Uncertainty of Assigned Value	0.01 log10
SDPA	0.35 log10
Satisfactory Range	11,972 to 300,712 cfu/g
Satisfactory z scores	96.6%
Questionable z scores	3.4%
Unsatisfactory z scores	0.0%

z score Histogram**Distribution Graph**

Methodology Summary

Method	Number of Results	Excluded Results	% of Total	Median	Robust SD	Range	Sat.
				Log10			%
PCA PP 30	14	0	11.97	4.72	0.09	5400 to 66000	92.9
PCA SP 30	4	0	3.42	4.79	0.14	6455 to 85800	75.0
PCA PP 37	4	0	3.42	4.81	0.12	39000 to 94000	100.0
Petrifilm	66	0	56.41	4.79	0.10	7400 to 92000	97.0
TEMPO	7	0	5.98	4.78	0.17	44500 to 112000	100.0
Other	22	0	18.8	4.72	0.11	35900 to 107000	100.0
All	117	0	100	4.78	0.12	5400 to 112000	96.6

Comments

The sample contained *Enterobacter aerogenes*, *Bacillus cereus*, *Staphylococcus aureus*, *Penicillium chrysogenum* and *Saccharomyces cerevisiae*. The assigned value is 60,000 cfu/g.

Total aerobic mesophilic counts are used to determine the general microbial population of a sample.

Lab ID	Method	Result (cfu/g)	z score
MT0120	VRBA PP 37	3,000	0.23
MT0144	TEMPO	2,300	-0.10
MT0172	VRBA PP 37	2,700	0.10
MT0180	TEMPO	6,425	1.17
MT1014	Petrifilm	2,400	-0.05
MT1019	TEMPO	1,400	-0.72
MT1020	Petrifilm	2,600	0.05
MT1030	TEMPO	2,800	0.14
MT1031	TEMPO	3,300	0.34
MT1032	Petrifilm	2,500	0.00
MT1038	Petrifilm	2,900	0.18
MT1040	MPN	4,600	0.76
MT1040	Petrifilm	2,700	0.10
MT4014	COLI ID PP 37	2,800	0.14
MT4075	Other	<10	
MT4168	Petrifilm	1,600	-0.55
MT4206	VRBA PP 37	2,410	-0.05
MT4241	Petrifilm	2,700	0.10
MT4278	Petrifilm	2,500	0.00
MT4285	Petrifilm	1,400	-0.72
MT4295	MPN	>1,100	
MT4329	VRBA PP 37	3,050	0.25
MT4490	Petrifilm	2,600	0.05
MT4761	Chromogenic agar	4,170	0.63
MT5334	MPN	4,900	0.84
MT5334	Petrifilm	2,400	-0.05
MT5574	Petrifilm	2,700	0.10
MT5700	VRBA PP 37	310	-2.59
MT5889	VRBA PP 37	3,200	0.31
MT6037	Petrifilm	2,200	-0.16
MT6040	Petrifilm	2,200	-0.16
MT6042	Petrifilm	2,100	-0.22
MT6043	Petrifilm	4,200	0.64
MT6045	Petrifilm	1,600	-0.55
MT6046	Petrifilm	2,900	0.18
MT6047	Petrifilm	2,100	-0.22
MT6063	Petrifilm	3,700	0.49
MT6092	MPN	4,600	0.76
MT6130	Petrifilm	1,700	-0.48
MT6131	Petrifilm	2,300	-0.10
MT6158	Petrifilm	2,800	0.14
MT6253	Petrifilm	2,200	-0.16
MT6254	Other	2,900	0.18
MT6255	Petrifilm	3,000	0.23
MT6257	Petrifilm	2,800	0.14
MT6260	Petrifilm	2,100	-0.22
MT6367	Petrifilm	2,700	0.10
MT6449	MPN	2,400	-0.05
MT6492	VRBA PP 37	2,300	-0.10
MT6523	Petrifilm	2,200	-0.16
MT6536	VRBA PP 37	1,164	-0.95
MT6632	Petrifilm	2,400	-0.05
MT6632	TEMPO	2,200	-0.16
MT6657	Petrifilm	2,400	-0.05
MT6658	Other	3,600	0.45
MT6665	Petrifilm	2,100	-0.22
MT6674	Petrifilm	3,000	0.23
MT6679	Petrifilm	3,500	0.42
MT6685	Petrifilm	4,000	0.58
MT6686	Petrifilm	2,700	0.10
MT6689	Petrifilm	2,600	0.05

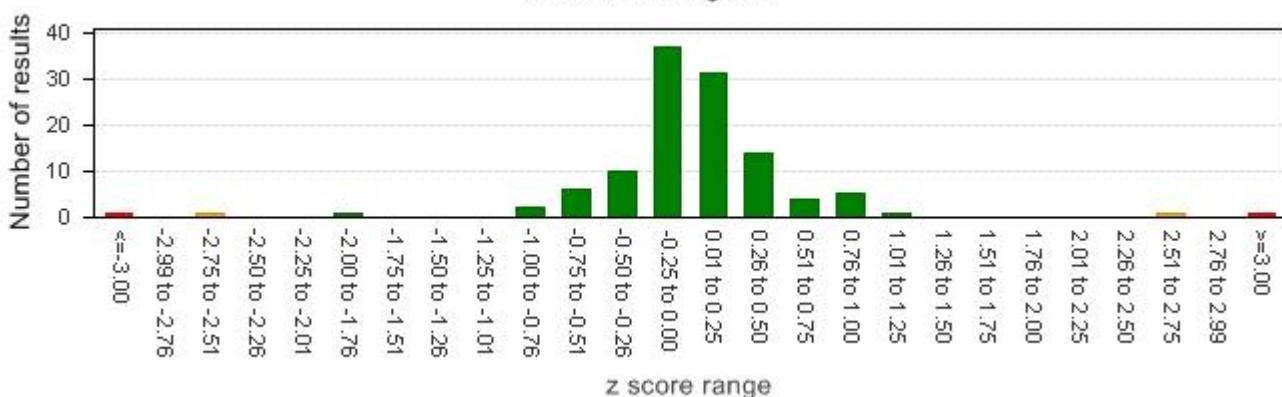
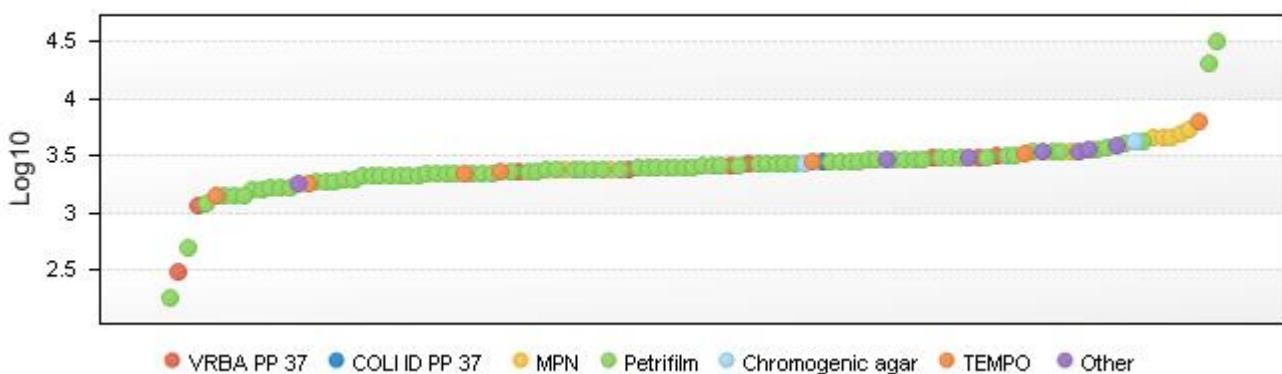
Lab ID	Method	Result (cfu/g)	z score
MT6691	Petrifilm	2,300	-0.10
MT6692	Petrifilm	2,900	0.18
MT6694	Petrifilm	2,000	-0.28
MT6699	Petrifilm	2,800	0.14
MT6713	Petrifilm	32,000	3.16
MT6718	Petrifilm	2,900	0.18
MT6721	Petrifilm	2,100	-0.22
MT6723	MPN	4,600	0.76
MT6724	MPN	5,400	0.96
MT6724	Petrifilm	2,500	0.00
MT6735	Petrifilm	2,200	-0.16
MT6736	Petrifilm	1,900	-0.34
MT6737	Petrifilm	3,100	0.27
MT6740	Petrifilm	2,400	-0.05
MT6749	Petrifilm	2,400	-0.05
MT6780	Petrifilm	3,200	0.31
MT6792	Petrifilm	2,200	-0.16
MT6795	Petrifilm	1,900	-0.34
MT6803	Petrifilm	2,500	0.00
MT6806	VRBA PP 37	2,600	0.05
MT6810	Petrifilm	3,000	0.23
MT6811	Petrifilm	2,800	0.14
MT6812	MPN	2,400	-0.05
MT6812	Petrifilm	1,900	-0.34
MT6813	Petrifilm	2,900	0.18
MT6817	Petrifilm	1,700	-0.48
MT6821	Petrifilm	500	-2.00
MT6833	Petrifilm	1,400	-0.72
MT6837	Petrifilm	1,200	-0.91
MT6838	Petrifilm	<10	
MT6840	Petrifilm	3,400	0.38
MT6846	Other	3,000	0.23
MT6847	Other	1,800	-0.41
MT6856	TEMPO	1,800	-0.41
MT6859	Petrifilm	2,500	0.00
MT6860	Petrifilm	20,000	2.58
MT6861	Petrifilm	2,100	-0.22
MT6862	Petrifilm	2,300	-0.10
MT6870	Petrifilm	2,000	-0.28
MT6874	Petrifilm	1,700	-0.48
MT6877	Other	3,400	0.38
MT6877	Petrifilm	2,200	-0.16
MT6889	Petrifilm	3,600	0.45
MT6896	MPN	3,500	0.42
MT6896	Petrifilm	3,400	0.38
MT6902	Petrifilm	2,400	-0.05
MT6909	Other	3,500	0.42
MT6911	Petrifilm	2,500	0.00
MT6912	Petrifilm	2,600	0.05
MT6916	Petrifilm	2,900	0.18
MT6918	Petrifilm	2,500	0.00
MT6949	Other	3,900	0.55
MT6966	Petrifilm	1,400	-0.72
MT6972	Petrifilm	180	-3.26
MT6975	Petrifilm	2,100	-0.22
MT6996	Petrifilm	3,200	0.31
MT7038	Chromogenic agar	2,700	0.10

Data Statistics

	Value
Number of Results	118
Number of Excluded Results	3
Mean	3.40 log10
Median	3.40 log10
Standard Deviation	0.24 log10
Robust Standard Deviation	0.11 log10
Result Range	180 to 32000 cfu/g

Performance Statistics

	Value
Assigned Value	2,500 cfu/g
Uncertainty of Assigned Value	0.01 log10
SDPA	0.35 log10
Satisfactory Range	499 to 12,530 cfu/g
Satisfactory z scores	96.5%
Questionable z scores	1.7%
Unsatisfactory z scores	1.7%

z score Histogram**Distribution Graph**

Methodology Summary

Method	Number of Results	Excluded Results	% of Total	Median	Robust SD	Range	Sat.
				Log10		%	
VRBA PP 37	9	0	7.63	3.41	0.09	310 to 3200	88.9
COLI ID PP 37	1	0	0.85	3.45	0.00	2800 to 2800	100.0
MPN	9	1	7.63	3.66	0.07	2400 to 5400	100.0
Petrifilm	82	1	69.49	3.40	0.10	180 to 32000	96.3
Chromogenic agar	2	0	1.69	3.53	0.14	2700 to 4170	100.0
TEMPO	7	0	5.93	3.36	0.16	1400 to 6425	100.0
Other	8	1	6.78	3.53	0.08	1800 to 3900	100.0
All	118	3	100	3.40	0.11	180 to 32000	96.5

Comments

The sample contained the coliform *Enterobacter aerogenes* at an assigned value of 2,500 cfu/g.

Coliforms are found in human and animal intestines, and their presence in foods is used as an indicator of faecal contamination. However, many coliforms are also found throughout the environment, being isolated from air, soil, water, plants, and animals. The presence of coliform indicator organisms in foods may therefore be indicative of faecal contamination, but may also be environmental in origin.

Lab ID	Method	Result (cfu/g)	z score
MT0120	VRBGA PP 37	2,500	-0.05
MT1019	TEMPO	1,900	-0.39
MT1020	Petrifilm	3,200	0.26
MT1030	TEMPO	2,700	0.05
MT1031	TEMPO	2,400	-0.10
MT1032	Petrifilm	2,000	-0.33
MT1038	Petrifilm	3,100	0.22
MT1040	Petrifilm	2,100	-0.27
MT4014	VRBGA PP 37	3,300	0.30
MT4075	Other	650	-1.72
MT4168	VRBGA PP 37	2,500	-0.05
MT4206	VRBGA PP 37	2,215	-0.20
MT4241	Petrifilm	2,400	-0.10
MT4329	VRBGA PP 37	3,100	0.22
MT4490	Petrifilm	2,700	0.05
MT4761	VRBGA PP 30	2,150	-0.24
MT5180	Other	3,000	0.18
MT5180	VRBGA PP 37	2,000	-0.33
MT5416	Other	2,545	-0.03
MT5574	Petrifilm	2,800	0.09
MT5700	VRBGA PP 37	310	-2.64
MT5889	Petrifilm	3,200	0.26
MT6037	Petrifilm	1,900	-0.39
MT6040	Petrifilm	2,800	0.09
MT6042	Petrifilm	2,100	-0.27
MT6043	Petrifilm	3,100	0.22
MT6045	Petrifilm	2,600	0.00
MT6046	Petrifilm	2,300	-0.15
MT6047	Petrifilm	2,800	0.09
MT6063	Petrifilm	2,900	0.14
MT6130	Petrifilm	1,600	-0.60
MT6131	Petrifilm	2,500	-0.05
MT6253	Petrifilm	28,000	2.95
MT6254	Other	2,200	-0.21
MT6255	Petrifilm	2,600	0.00
MT6257	Petrifilm	2,700	0.05
MT6260	Petrifilm	2,900	0.14
MT6367	Petrifilm	3,600	0.40
MT6492	VRBGA PP 37	30,000	3.03
MT6536	VRBGA PP 37	1,659	-0.56
MT6632	Petrifilm	2,500	-0.05
MT6632	TEMPO	3,400	0.33
MT6674	Petrifilm	2,800	0.09
MT6679	Petrifilm	270	-2.81
MT6685	Petrifilm	4,000	0.53
MT6686	Petrifilm	2,200	-0.21
MT6689	Petrifilm	2,800	0.09
MT6691	Petrifilm	2,500	-0.05
MT6694	Petrifilm	2,100	-0.27
MT6699	Petrifilm	2,800	0.09
MT6718	Petrifilm	2,700	0.05
MT6723	VRBGA PP 37	2,800	0.09
MT6740	Petrifilm	2,700	0.05
MT6749	Petrifilm	3,100	0.22
MT6780	Petrifilm	2,600	0.00
MT6792	Petrifilm	2,000	-0.33
MT6803	Other	2,000	-0.33
MT6806	VRBGA PP 37	3,300	0.30
MT6810	Petrifilm	1,800	-0.46
MT6811	Petrifilm	2,800	0.09
MT6812	Petrifilm	2,500	-0.05

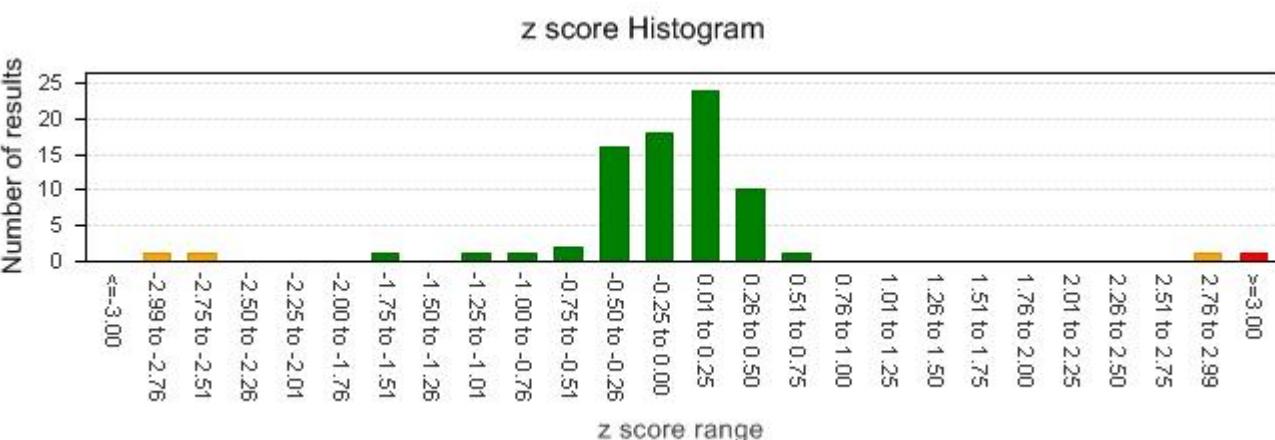
Lab ID	Method	Result (cfu/g)	z score
MT6813	Petrifilm	3,000	0.18
MT6837	Petrifilm	1,300	-0.86
MT6840	Petrifilm	3,300	0.30
MT6846	Petrifilm	2,100	-0.27
MT6847	Other	2,100	-0.27
MT6859	Petrifilm	2,800	0.09
MT6862	Petrifilm	1,150	-1.01
MT6870	Petrifilm	2,100	-0.27
MT6874	Petrifilm	1,900	-0.39
MT6889	Petrifilm	2,100	-0.27
MT6896	Other	3,400	0.33
MT6909	Other	3,200	0.26
MT6911	Petrifilm	2,700	0.05
MT6949	Other	3,500	0.37
MT6966	Petrifilm	2,500	-0.05
MT6975	Petrifilm	1,800	-0.46
MT7038	VRBGA PP 37	3,000	0.18

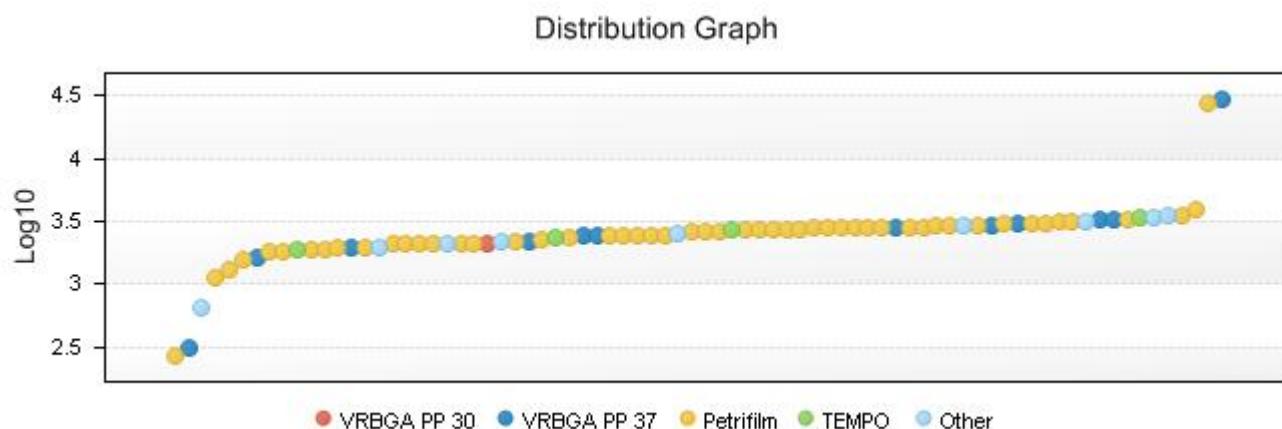
Data Statistics

	Value
Number of Results	78
Number of Excluded Results	0
Mean	3.39 log10
Median	3.41 log10
Standard Deviation	0.26 log10
Robust Standard Deviation	0.11 log10
Result Range	270 to 30000 cfu/g

Performance Statistics

	Value
Assigned Value	2,600 cfu/g
Uncertainty of Assigned Value	0.02 log10
SDPA	0.35 log10
Satisfactory Range	519 to 13,031 cfu/g
Satisfactory z scores	94.9%
Questionable z scores	3.8%
Unsatisfactory z scores	1.3%





Methodology Summary

Method	Number of Results	Excluded Results	% of Total	Median	Robust SD	Range	Sat.
				Log10		% Sat.	
VRBGA PP 30	1	0	1.28	3.33	0.00	2150 to 2150	100.0
VRBGA PP 37	12	0	15.38	3.42	0.13	310 to 30000	83.3
Petrifilm	52	0	66.67	3.41	0.10	270 to 28000	96.2
TEMPO	4	0	5.13	3.41	0.11	1900 to 3400	100.0
Other	9	0	11.54	3.41	0.15	650 to 3500	100.0
All	78	0	100	3.41	0.11	270 to 30000	94.9

Comments

The sample contained the Enterobacteriaceae *Enterobacter aerogenes* at an assigned value of 2,600 cfu/g.

Members of the Enterobacteriaceae family are distributed worldwide and found in soil, water, fruits, vegetables, grains, flowering plants, and a wide range of animals, from insects to humans.

Sample: 756 - Quantitative Package vial A

Analyte: Escherichia coli

Lab ID	Method	Result (cfu/g)
MT0120	TBX PP 37-44	<10
MT0144	TEMPO	<10
MT0172	VRBA PP 37-44	<10
MT0180	TEMPO	<10
MT1014	Petrifilm	<10
MT1019	TEMPO	<10
MT1020	Petrifilm	<10
MT1030	TEMPO	<10
MT1031	TEMPO	<100
MT1032	Petrifilm	<10
MT1038	Petrifilm	<10
MT1040	MPN	<3
MT1040	Petrifilm	<10
MT4014	COLI ID PP 37-44	<10
MT4075	Other	<10
MT4168	Petrifilm	<10
MT4206	Chromogenic agar	<10
MT4241	Petrifilm	<10
MT4278	Petrifilm	<100
MT4285	Petrifilm	<1
MT4295	MPN	<4
MT4329	TBX PP 37-44	<10
MT4490	Petrifilm	<10
MT4761	Chromogenic agar	<10
MT5180	Other	<10
MT5180	TBX PP 37-44	<10
MT5334	MPN	<2
MT5334	Other	<5
MT5334	Petrifilm	<5
MT5416	TBX PP 37-44	<10
MT5574	Petrifilm	<10
MT5700	TBX PP 37-44	<10
MT5889	TBX PP 37-44	<10
MT6037	Petrifilm	<10
MT6040	Petrifilm	<10
MT6042	Petrifilm	<10
MT6043	Petrifilm	<10
MT6045	Petrifilm	<10
MT6046	Petrifilm	<10
MT6047	Petrifilm	<10
MT6063	Petrifilm	<100
MT6092	TBX PP 37-44	<10
MT6130	Petrifilm	<10
MT6131	Petrifilm	<10
MT6158	Petrifilm	<10
MT6253	Petrifilm	<10
MT6254	Other	<10
MT6255	Petrifilm	<1
MT6257	Petrifilm	<10
MT6260	Petrifilm	<10
MT6367	Petrifilm	<10
MT6449	TBX PP 37-44	<10
MT6449	MPN	<3
MT6492	TBX PP 37-44	<10
MT6523	Petrifilm	<10
MT6536	TBX PP 37-44	<10
MT6632	Petrifilm	<10
MT6632	TEMPO	<10
MT6657	Petrifilm	<10
MT6658	Other	<10
MT6665	Petrifilm	<10

Sample: 756 - Quantitative Package vial A

Analyte: Escherichia coli

Lab ID	Method	Result (cfu/g)
MT6674	Petrifilm	<100
MT6679	Petrifilm	<10
MT6685	Petrifilm	999
MT6686	Petrifilm	<10
MT6689	Petrifilm	<10
MT6691	Petrifilm	<10
MT6692	Petrifilm	<10
MT6694	Petrifilm	<10
MT6699	Petrifilm	<10
MT6713	Petrifilm	<10
MT6718	Petrifilm	<10
MT6721	Petrifilm	<10
MT6723	MPN	<3
MT6724	MPN	<2
MT6724	Petrifilm	<5
MT6735	MPN	<2
MT6736	Petrifilm	<10
MT6737	Petrifilm	<10
MT6738	Petrifilm	<10
MT6740	Petrifilm	<10
MT6749	Petrifilm	<10
MT6780	Petrifilm	<10
MT6792	Petrifilm	<10
MT6795	Petrifilm	<10
MT6803	Petrifilm	<10
MT6806	TBX PP 37-44	<10
MT6810	Petrifilm	<10
MT6811	Petrifilm	<10
MT6812	MPN	<3
MT6812	Petrifilm	<10
MT6813	Petrifilm	<10
MT6817	Petrifilm	<10
MT6821	Petrifilm	<10
MT6833	Petrifilm	<10
MT6837	Petrifilm	<10
MT6838	Petrifilm	<10
MT6840	Petrifilm	<10
MT6846	Other	<10
MT6847	Other	<10
MT6856	TEMPO	<10
MT6859	Petrifilm	<10
MT6860	Petrifilm	<10
MT6861	Petrifilm	<10
MT6862	Petrifilm	<9
MT6870	Petrifilm	<10
MT6874	Petrifilm	<10
MT6877	Petrifilm	<10
MT6889	Petrifilm	<10
MT6896	MPN	<2
MT6896	Petrifilm	<10
MT6902	Petrifilm	<10
MT6909	Other	<10
MT6911	Petrifilm	300
MT6912	Petrifilm	<4
MT6916	Petrifilm	<10
MT6918	Petrifilm	<10
MT6949	Other	<10
MT6966	Petrifilm	<10
MT6972	Petrifilm	<10
MT6975	Petrifilm	<100
MT6996	Petrifilm	<10

Sample: 756 - Quantitative Package vial A

Analyte: Escherichia coli

Lab ID	Method	Result (cfu/g)
MT7038	Chromogenic agar	<10

Data Statistics

	Value
Number of Results	123
Number of Excluded Results	N/A
Mean	N/A
Median	N/A
Standard Deviation	N/A
Robust Standard Deviation	N/A
Result Range	300 to 999 cfu/g

Performance Statistics

	Value
Assigned Value	Absent
Uncertainty of Assigned Value	N/A
SDPA	N/A
Satisfactory Range	N/A
Satisfactory z scores	N/A
Questionable z scores	N/A
Unsatisfactory z scores	N/A

Comments

The sample did not contain *Escherichia coli*. The assigned value is therefore 'absent' using a detection level of <10 cfu/g.

Escherichia coli is found in human and animal intestines, and, therefore, the presence of the organism in foods is thought to indicate faecal contamination. It is historically used as an 'indicator' organism, to indicate whether more serious pathogens, such as *Salmonella* are also likely to be present.

Sample: 756 - Quantitative Package vial A**Analyte: Bacillus cereus**

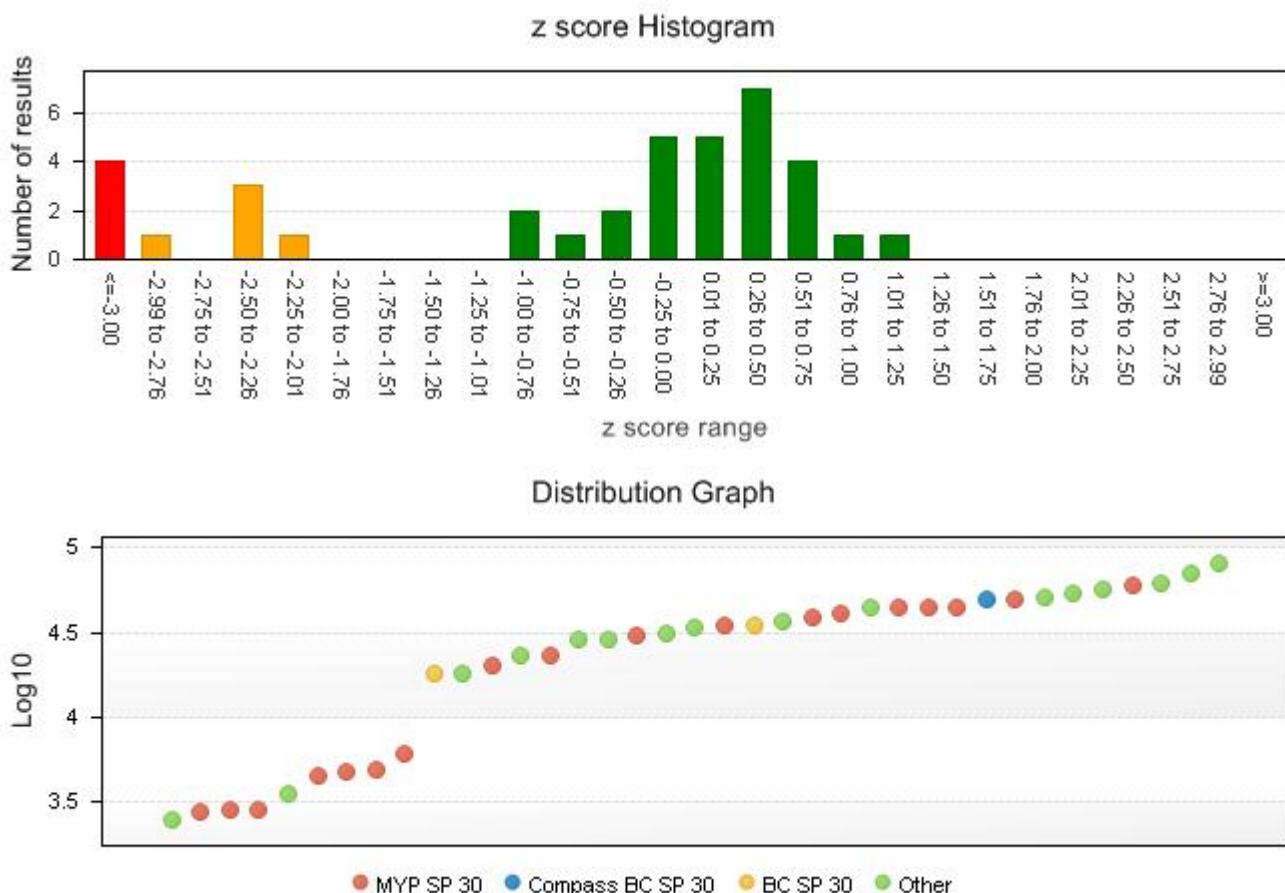
Lab ID	Method	Result (cfu/g)	z score
MT0172	BC SP 30	18,300	-0.77
MT0180	Other	81,000	1.08
MT1019	Other	44,000	0.32
MT1020	Other	70,000	0.90
MT4014	Compass BC SP 30	49,000	0.45
MT4329	MYP SP 30	39,000	0.17
MT4761	MYP SP 30	44,500	0.33
MT5334	Other	23,000	-0.49
MT5416	MYP SP 30	44,545	0.34
MT5700	MYP SP 30	4,600	-2.48
MT6037	MYP SP 30	35,000	0.04
MT6040	Other	34,000	0.00
MT6043	MYP SP 30	60,000	0.70
MT6045	MYP SP 30	5,000	-2.38
MT6046	MYP SP 30	30,000	-0.16
MT6047	MYP SP 30	6,100	-2.13
MT6092	MYP SP 30	20,000	-0.66
MT6095	Other	18,300	-0.77
MT6130	MYP SP 30	2,900	-3.05
MT6131	Other	29,000	-0.20
MT6253	MYP SP 30	2,900	-3.05
MT6254	Other	2,500	-3.24
MT6449	Other	29,000	-0.20
MT6492	MYP SP 30	50,000	0.48
MT6632	Other	3,600	-2.79
MT6658	Other	51,000	0.50
MT6679	MYP SP 30	4,800	-2.43
MT6699	Other	61,000	0.73
MT6723	MYP SP 30	45,000	0.35
MT6740	Other	53,000	0.55
MT6806	MYP SP 30	23,000	-0.49
MT6813	Other	31,000	-0.11
MT6847	MYP SP 30	2,800	-3.10
MT6874	Other	57,000	0.64
MT6909	Other	37,000	0.10
MT6912	BC SP 30	35,000	0.04
MT7038	MYP SP 30	41,000	0.23

Data Statistics

	Value
Number of Results	37
Number of Excluded Results	0
Mean	4.34 log10
Median	4.53 log10
Standard Deviation	0.47 log10
Robust Standard Deviation	0.26 log10
Result Range	2500 to 81000 cfu/g

Performance Statistics

	Value
Assigned Value	34,000 cfu/g
Uncertainty of Assigned Value	0.05 log10
SDPA	0.35 log10
Satisfactory Range	6,784 to 170,404 cfu/g
Satisfactory z scores	75.7%
Questionable z scores	13.5%
Unsatisfactory z scores	10.8%



Methodology Summary

Method	Number of Results	Excluded Results	% of Total	Median	Robust SD	Range	Sat.
				Log10			%
MYP SP 30	18	0	48.65	4.42	0.38	2800 to 60000	61.1
Compass BC SP 30	1	0	2.7	4.69	0.00	49000 to 49000	100.0
BC SP 30	2	0	5.41	4.40	0.21	18300 to 35000	100.0
Other	16	0	43.24	4.55	0.27	2500 to 81000	87.5
All	37	0	100	4.53	0.26	2500 to 81000	75.7

Comments

The sample contained *Bacillus cereus* at an assigned value of 34,000 cfu/g.

Participants are reminded to take into account the initial dilution performed when preparing the sample, as a number of results appear to be a factor of 10 lower than the assigned value.

In foodstuffs, *Bacillus cereus* is both a spoilage organism and a causative agent of food poisoning. The organism is commonly found in a range of foods, including rice, eggs, bread, meat, milk and other dairy products.

Lab ID	Method	Result (cfu/g)	z score
MT0120	BP + RPF SP 37	5,600	-0.12
MT0144	TEMPO	9,100	0.49
MT0172	BP SP 37	7,100	0.18
MT0180	TEMPO	8,267	0.37
MT1019	TEMPO	7,800	0.29
MT1020	Other	9,100	0.49
MT1032	Petrifilm	5,700	-0.09
MT1038	Petrifilm	6,100	-0.01
MT1040	Other	160	-4.53
MT4014	BP SP 37	6,300	0.03
MT4168	BP SP 37	6,275	0.02
MT4206	BP SP 37	9,100	0.49
MT4241	Petrifilm	5,400	-0.16
MT4278	Petrifilm	5,700	-0.09
MT4285	Petrifilm	7,500	0.25
MT4295	Other	6,400	0.05
MT4329	BP SP 37	7,550	0.25
MT4761	BP SP 37	11,000	0.72
MT5180	Other	7,000	0.16
MT5180	BP SP 37	6,000	-0.03
MT5334	Other	5,800	-0.07
MT5416	BP + RPF SP 37	7,909	0.31
MT5574	Petrifilm	7,500	0.25
MT5700	BP + RPF SP 37	790	-2.55
MT5889	BP + RPF SP 37	7,900	0.31
MT6037	Petrifilm	6,500	0.07
MT6040	Petrifilm	4,000	-0.53
MT6042	Petrifilm	3,300	-0.77
MT6043	Petrifilm	6,600	0.09
MT6045	Petrifilm	6,900	0.14
MT6046	Petrifilm	4,600	-0.36
MT6047	Petrifilm	7,000	0.16
MT6063	Petrifilm	6,200	0.01
MT6092	BP SP 37	6,000	-0.03
MT6095	Other	6,400	0.05
MT6130	Petrifilm	4,700	-0.33
MT6131	Petrifilm	6,900	0.14
MT6158	Other	6,500	0.07
MT6253	Petrifilm	3,800	-0.60
MT6254	Other	5,800	-0.07
MT6255	Petrifilm	4,900	-0.28
MT6257	Petrifilm	3,700	-0.63
MT6260	Petrifilm	4,700	-0.33
MT6449	Other	7,900	0.31
MT6492	BP SP 37	12,000	0.83
MT6523	Petrifilm	4,200	-0.47
MT6536	BP SP 37	<100	
MT6632	Rapid Staph	5,900	-0.05
MT6632	TEMPO	4,200	-0.47
MT6640	BP SP 37	300	-3.75
MT6657	BP SP 37	5,600	-0.12
MT6658	Petrifilm	6,300	0.03
MT6679	Petrifilm	2,100	-1.33
MT6685	Petrifilm	7,000	0.16
MT6686	Petrifilm	5,700	-0.09
MT6689	Petrifilm	6,200	0.01
MT6692	Petrifilm	7,400	0.23
MT6694	Petrifilm	3,800	-0.60
MT6699	Petrifilm	7,700	0.28
MT6713	Petrifilm	6,200	0.01
MT6721	Petrifilm	4,500	-0.39

Sample: 756 - Quantitative Package vial A**Analyte: Coagulase positive staphylococci**

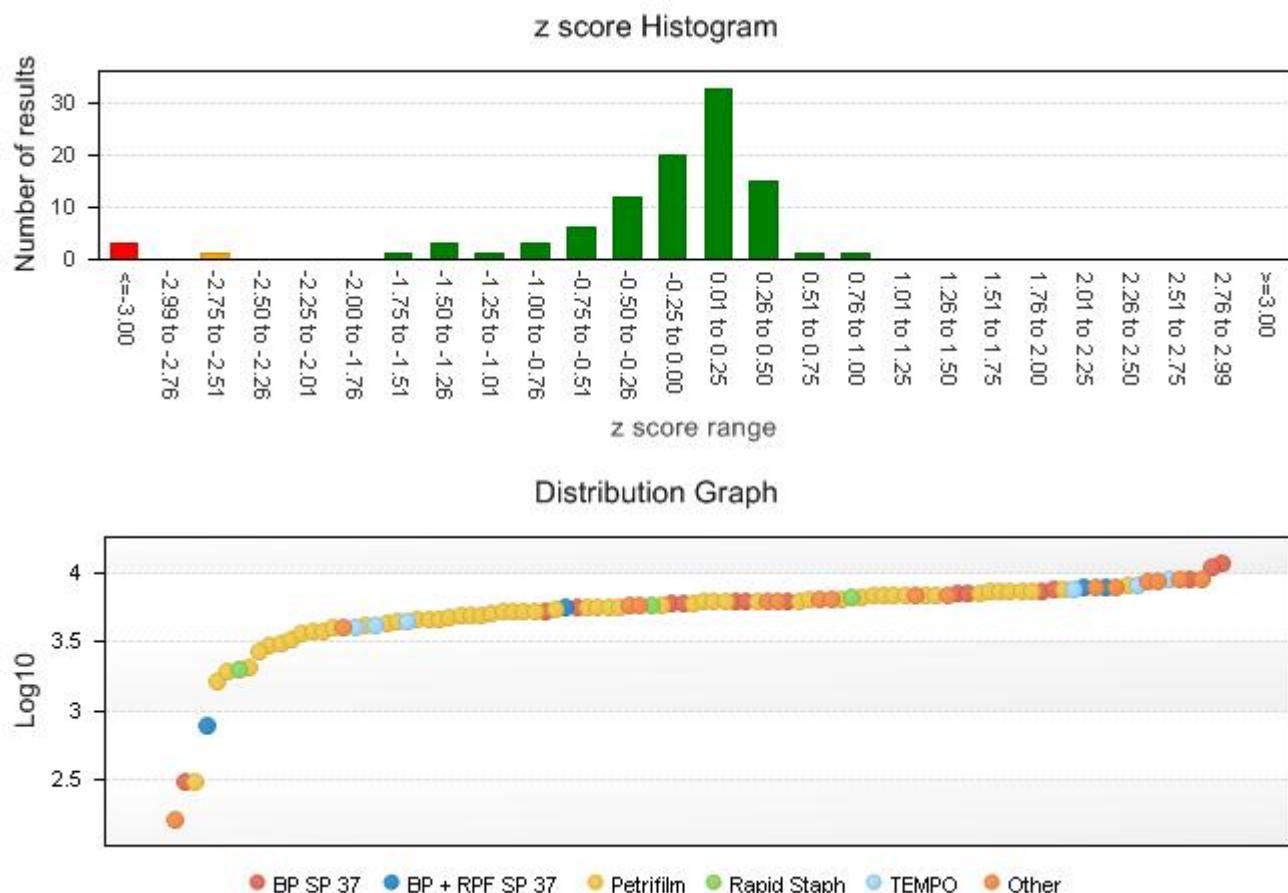
Lab ID	Method	Result (cfu/g)	z score
MT6723	BP SP 37	7,100	0.18
MT6724	Other	8,100	0.34
MT6735	Other	9,200	0.50
MT6736	Petrifilm	2,700	-1.02
MT6737	Petrifilm	7,400	0.23
MT6738	Petrifilm	5,900	-0.05
MT6740	Petrifilm	7,500	0.25
MT6749	Rapid Staph	6,800	0.12
MT6792	Petrifilm	5,000	-0.26
MT6795	Petrifilm	6,900	0.14
MT6803	Petrifilm	5,700	-0.09
MT6806	BP SP 37	6,400	0.05
MT6810	Petrifilm	5,400	-0.16
MT6811	Petrifilm	3,000	-0.89
MT6812	Petrifilm	4,800	-0.31
MT6813	Petrifilm	6,400	0.05
MT6817	Petrifilm	5,500	-0.14
MT6833	Petrifilm	4,900	-0.28
MT6837	Petrifilm	300	-3.75
MT6838	Petrifilm	1,970	-1.41
MT6840	Petrifilm	7,300	0.21
MT6846	Other	4,000	-0.53
MT6847	Other	7,000	0.16
MT6856	TEMPO	4,500	-0.39
MT6859	Petrifilm	4,400	-0.42
MT6860	Rapid Staph	2,000	-1.39
MT6861	Petrifilm	6,800	0.12
MT6874	Petrifilm	5,400	-0.16
MT6889	Petrifilm	5,300	-0.18
MT6890	TEMPO	4,000	-0.53
MT6896	Other	6,500	0.07
MT6902	Petrifilm	6,900	0.14
MT6909	Other	8,800	0.44
MT6912	BP SP 37	5,400	-0.16
MT6949	Other	8,850	0.45
MT6966	Petrifilm	3,100	-0.85
MT6972	Petrifilm	1,640	-1.64
MT6975	Petrifilm	5,100	-0.23
MT6996	Petrifilm	8,200	0.36
MT7038	BP SP 37	7,600	0.26

Data Statistics

	Value
Number of Results	101
Number of Excluded Results	1
Mean	3.71 log10
Median	3.79 log10
Standard Deviation	0.29 log10
Robust Standard Deviation	0.13 log10
Result Range	160 to 12000 cfu/g

Performance Statistics

	Value
Assigned Value	6,150 cfu/g
Uncertainty of Assigned Value	0.02 log10
SDPA	0.35 log10
Satisfactory Range	1,227 to 30,823 cfu/g
Satisfactory z scores	96.0%
Questionable z scores	1.0%
Unsatisfactory z scores	3.0%



Methodology Summary

Method	Number of Results	Excluded Results	% of Total	Median	Robust SD	Range	Sat.
				Log10			%
BP SP 37	16	1	15.84	3.81	0.09	300 to 12000	93.3
BP + RPF SP 37	4	0	3.96	3.82	0.11	790 to 7909	75.0
Petrifilm	56	0	55.45	3.75	0.13	300 to 8200	98.2
Rapid Staph	3	0	2.97	3.77	0.09	2000 to 6800	100.0
TEMPO	6	0	5.94	3.77	0.22	4000 to 9100	100.0
Other	16	0	15.84	3.83	0.10	160 to 9200	93.8
All	101	1	100	3.79	0.13	160 to 12000	96.0

Comments

The sample contained *Staphylococcus aureus* at an assigned value of 6,150 cfu/g.

The most significant food borne coagulase positive staphylococcus is *Staphylococcus aureus*. *Staphylococcus aureus* can be present on the skin, and in the nose and throat of healthy individuals with no ill effect. It is important to test for it in foods as it can be an indicator of general hygiene and, and be a causative agent of food poisoning.

Sample: 756 - Quantitative Package vial A

Analyte: Coagulase positive staphylococci (P/A)

Lab ID	Method	Result
MT4014	Other	Detected
MT4206	BP SP 37	Detected
MT4241	Rapid Staph	Detected
MT4329	BP SP 37	Detected
MT4761	BP SP 37	Detected
MT4761	Other	Detected
MT5180	Other	Detected
MT5180	BP SP 37	Detected
MT5889	BP + RPF SP 37	Detected
MT6045	Petrifilm	Detected
MT6092	BP SP 37	Detected
MT6130	Petrifilm	Detected
MT6492	BP SP 37	Detected
MT6536	BP SP 37	Not Detected
MT6632	Rapid Staph	Detected
MT6632	TEMPO	Detected
MT6806	Other	Detected
MT6846	Other	Detected
MT6859	Petrifilm	Detected
MT6874	Other	Detected
MT6896	Other	Detected
MT6909	Other	Detected
MT6972	Petrifilm	Detected

Data Statistics

	Result
Assigned Value	Detected
Number of Results	23
Satisfactory	96%

Methodology Summary

Method	% Satisfactory
BP SP 37	86%
BP + RPF SP 37	100%
Petrifilm	100%
Rapid Staph	100%
TEMPO	100%
Other	100%

Comments

The sample contained *Staphylococcus aureus* at an assigned value of 6,150 cfu/g. The assigned value is therefore 'detected'.

The most significant food borne coagulase positive staphylococcus is *Staphylococcus aureus*. *Staphylococcus aureus* can be present on the skin, and in the nose and throat of healthy individuals with no ill effect. It is important to test for it in foods as it can be an indicator of general hygiene and, and be a causative agent of food poisoning.

Sample: 756 - Quantitative Package vial A

Analyte: Yeast

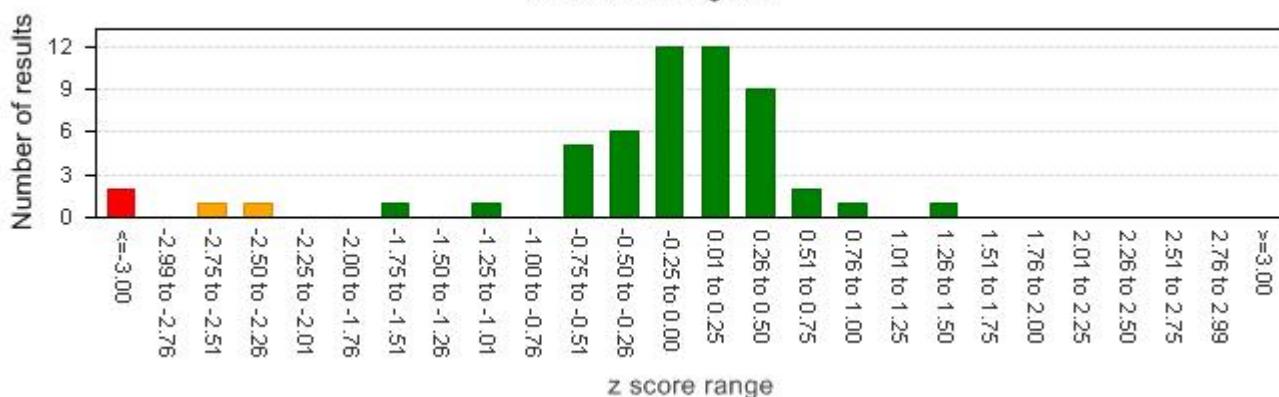
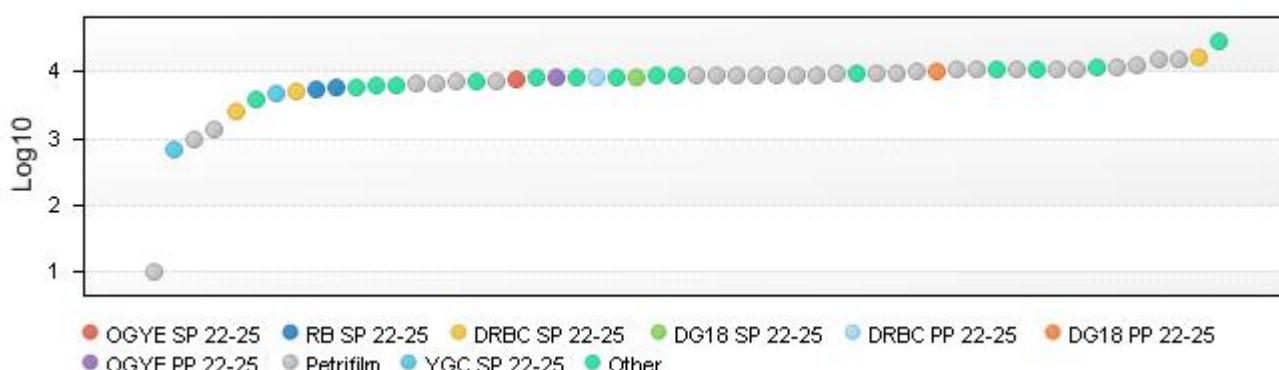
Lab ID	Method	Result (cfu/g)	z score
MT0172	DRBC SP 22-25	16,500	0.79
MT0180	Petrifilm	15,300	0.70
MT1020	Other	8,000	-0.10
MT1038	Petrifilm	9,000	0.04
MT4014	RB SP 22-25	5,400	-0.59
MT4168	OGYE PP 22-25	8,000	-0.10
MT4206	YGC SP 22-25	4,850	-0.73
MT4241	Petrifilm	9,100	0.06
MT4295	Other	3,800	-1.03
MT4329	RB SP 22-25	5,600	-0.55
MT4761	Other	8,700	0.00
MT5416	DRBC SP 22-25	5,167	-0.65
MT5574	Other	9,100	0.06
MT5574	Petrifilm	11,300	0.32
MT5700	YGC SP 22-25	670	-3.18
MT5889	Other	8,650	-0.01
MT6045	Petrifilm	8,900	0.03
MT6063	Petrifilm	11,000	0.29
MT6092	OGYE SP 22-25	7,500	-0.18
MT6492	DRBC PP 22-25	8,100	-0.09
MT6523	Petrifilm	6,900	-0.29
MT6632	Petrifilm	6,700	-0.32
MT6665	Petrifilm	10	-8.40
MT6674	Petrifilm	8,800	0.01
MT6691	Petrifilm	8,700	0.00
MT6694	Petrifilm	8,900	0.03
MT6699	Other	11,000	0.29
MT6713	Petrifilm	9,900	0.16
MT6723	DG18 PP 22-25	10,000	0.17
MT6735	Other	8,000	-0.10
MT6737	Petrifilm	10,400	0.22
MT6740	Petrifilm	12,000	0.40
MT6780	Other	11,250	0.32
MT6792	Petrifilm	15,000	0.68
MT6806	DG18 SP 22-25	8,400	-0.04
MT6810	Petrifilm	9,200	0.07
MT6811	Petrifilm	<10	
MT6812	Petrifilm	9,200	0.07
MT6813	DRBC SP 22-25	2,500	-1.55
MT6833	Petrifilm	6,600	-0.34
MT6837	Petrifilm	9,000	0.04
MT6846	Other	6,900	-0.29
MT6847	Other	5,600	-0.55
MT6859	Petrifilm	8,700	0.00
MT6860	Petrifilm	1,000	-2.68
MT6870	Petrifilm	7,200	-0.23
MT6874	Petrifilm	11,000	0.29
MT6889	Other	6,100	-0.44
MT6890	Other	29,000	1.49
MT6896	Other	6,400	-0.38
MT6909	Other	11,000	0.29
MT6912	Petrifilm	11,000	0.29
MT6949	Other	8,100	-0.09
MT6972	Petrifilm	1,380	-2.28
MT6996	Petrifilm	11,000	0.29

Data Statistics

	Value
Number of Results	55
Number of Excluded Results	2
Mean	3.88 log10
Median	3.94 log10
Standard Deviation	0.27 log10
Robust Standard Deviation	0.15 log10
Result Range	670 to 29000 cfu/g

Performance Statistics

	Value
Assigned Value	8,700 cfu/g
Uncertainty of Assigned Value	0.03 log10
SDPA	0.35 log10
Satisfactory Range	1,736 to 43,603 cfu/g
Satisfactory z scores	92.6%
Questionable z scores	3.7%
Unsatisfactory z scores	3.7%

z score Histogram**Distribution Graph**

Methodology Summary

Method	Number of Results	Excluded Results	% of Total	Median	Robust SD	Range	Sat.
				Log10		%	
OGYE SP 22-25	1	0	1.82	3.88	0.00	7500 to 7500	100.0
RB SP 22-25	2	0	3.64	3.74	0.01	5400 to 5600	100.0
DRBC SP 22-25	3	0	5.45	3.71	0.47	2500 to 16500	100.0
DG18 SP 22-25	1	0	1.82	3.92	0.00	8400 to 8400	100.0
DRBC PP 22-25	1	0	1.82	3.91	0.00	8100 to 8100	100.0
DG18 PP 22-25	1	0	1.82	4.00	0.00	10000 to 10000	100.0
OGYE PP 22-25	1	0	1.82	3.90	0.00	8000 to 8000	100.0
Petrifilm	28	2	50.91	3.96	0.13	1000 to 15300	88.9
YGC SP 22-25	2	0	3.64	3.26	0.64	670 to 4850	50.0
Other	15	0	27.27	3.91	0.15	3800 to 29000	100.0
All	55	2	100	3.94	0.15	670 to 29000	92.6

Comments

The sample contained the yeast *Saccharomyces cerevisiae* at an assigned value of 8,700 cfu/g.

Yeasts are simply fungi whose main growth form is unicellular and which usually replicate by budding.

Sample: 756 - Quantitative Package vial A

Analyte: Mould

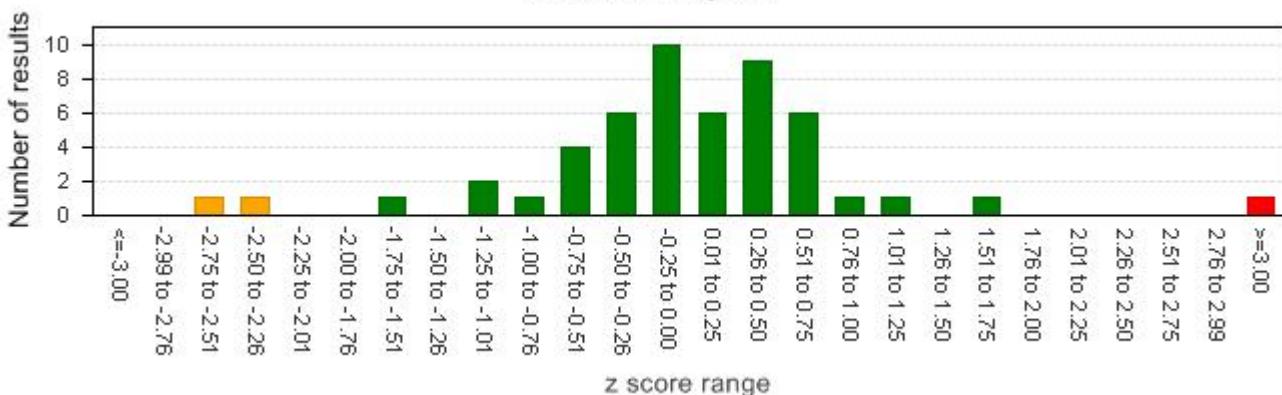
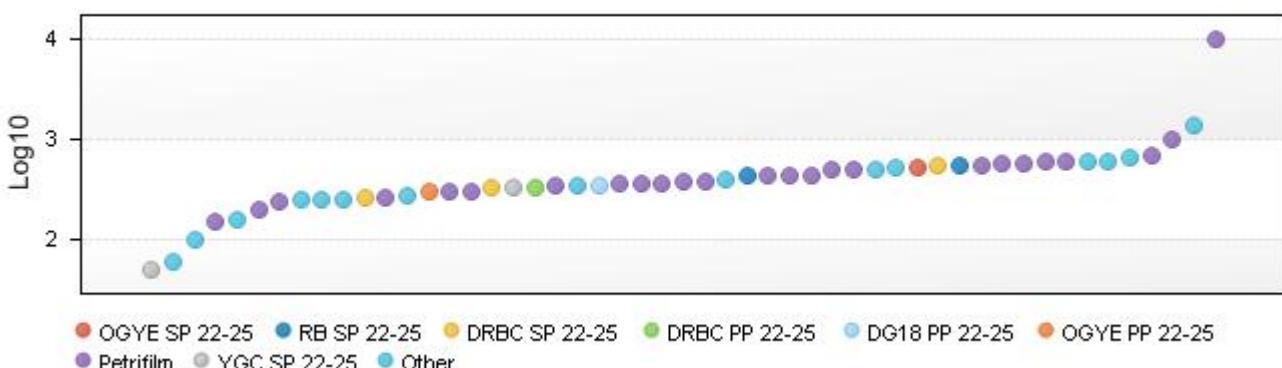
Lab ID	Method	Result (cfu/g)	z score
MT0172	DRBC SP 22-25	330	-0.18
MT0180	Petrifilm	600	0.57
MT1020	Other	660	0.69
MT1038	Petrifilm	500	0.34
MT4014	RB SP 22-25	550	0.46
MT4168	OGYE PP 22-25	300	-0.29
MT4206	YGC SP 22-25	330	-0.18
MT4241	Petrifilm	350	-0.10
MT4295	Other	250	-0.52
MT4329	RB SP 22-25	430	0.15
MT4761	Other	350	-0.10
MT5416	DRBC SP 22-25	545	0.45
MT5574	Other	250	-0.52
MT5574	Petrifilm	550	0.46
MT5700	YGC SP 22-25	50	-2.52
MT5889	Other	160	-1.07
MT6045	Petrifilm	150	-1.15
MT6063	Petrifilm	500	0.34
MT6092	OGYE SP 22-25	530	0.41
MT6492	DRBC PP 22-25	340	-0.14
MT6523	Petrifilm	360	-0.07
MT6632	Petrifilm	700	0.76
MT6665	Petrifilm	240	-0.57
MT6674	Petrifilm	200	-0.80
MT6691	Petrifilm	580	0.52
MT6694	Petrifilm	390	0.03
MT6699	Other	280	-0.38
MT6713	Petrifilm	600	0.57
MT6723	DG18 PP 22-25	350	-0.10
MT6735	Other	600	0.57
MT6737	Petrifilm	430	0.15
MT6740	Petrifilm	300	-0.29
MT6780	Other	510	0.37
MT6792	Petrifilm	1,000	1.20
MT6806	DG18 SP 22-25	<10	
MT6810	Petrifilm	360	-0.07
MT6811	Petrifilm	10,000	4.06
MT6812	Petrifilm	430	0.15
MT6813	DRBC SP 22-25	270	-0.42
MT6833	Petrifilm	<10	
MT6837	Petrifilm	360	-0.07
MT6846	Other	250	-0.52
MT6847	Other	60	-2.29
MT6859	Petrifilm	440	0.18
MT6860	Petrifilm	<10	
MT6870	Petrifilm	380	0.00
MT6874	Petrifilm	270	-0.42
MT6889	Other	400	0.06
MT6890	Other	1,400	1.62
MT6896	Other	100	-1.66
MT6909	Other	600	0.57
MT6912	Petrifilm	300	-0.29
MT6949	Other	525	0.40
MT6972	Petrifilm	<10	
MT6996	Petrifilm	570	0.50

Data Statistics

	Value
Number of Results	55
Number of Excluded Results	4
Mean	2.59 log10
Median	2.58 log10
Standard Deviation	0.33 log10
Robust Standard Deviation	0.22 log10
Result Range	50 to 10000 cfu/g

Performance Statistics

	Value
Assigned Value	380 cfu/g
Uncertainty of Assigned Value	0.04 log10
SDPA	0.35 log10
Satisfactory Range	76 to 1,905 cfu/g
Satisfactory z scores	94.1%
Questionable z scores	3.9%
Unsatisfactory z scores	2.0%

z score Histogram**Distribution Graph**

Methodology Summary

Method	Number of Results	Excluded Results	% of Total	Median	Robust SD	Range	Sat.
				Log10		%	
OGYE SP 22-25	1	0	1.82	2.72	0.00	530 to 530	100.0
RB SP 22-25	2	0	3.64	2.69	0.08	430 to 550	100.0
DRBC SP 22-25	3	0	5.45	2.52	0.13	270 to 545	100.0
DG18 SP 22-25	1	1	1.82	N/A	N/A	to	0.0
DRBC PP 22-25	1	0	1.82	2.53	0.00	340 to 340	100.0
DG18 PP 22-25	1	0	1.82	2.54	0.00	350 to 350	100.0
OGYE PP 22-25	1	0	1.82	2.48	0.00	300 to 300	100.0
Petrifilm	28	3	50.91	2.63	0.18	150 to 10000	96.0
YGC SP 22-25	2	0	3.64	2.11	0.61	50 to 330	50.0
Other	15	0	27.27	2.54	0.26	60 to 1400	93.3
All	55	4	100	2.58	0.22	50 to 10000	94.1

Comments

The sample contained the mould *Penicillium chrysogenum* at an assigned value of 380 cfu/g.

Visible mould growth can often be seen on foods, such as bread and vegetables, and in the environment, such as in bathrooms and air conditioning units. Many fungi are saprophytes, causing spoilage of foods and other commodities.

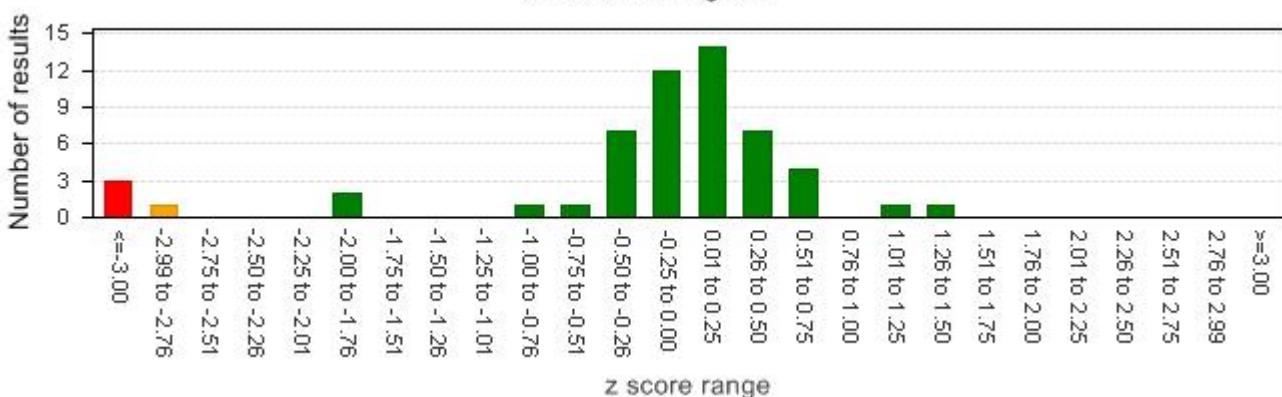
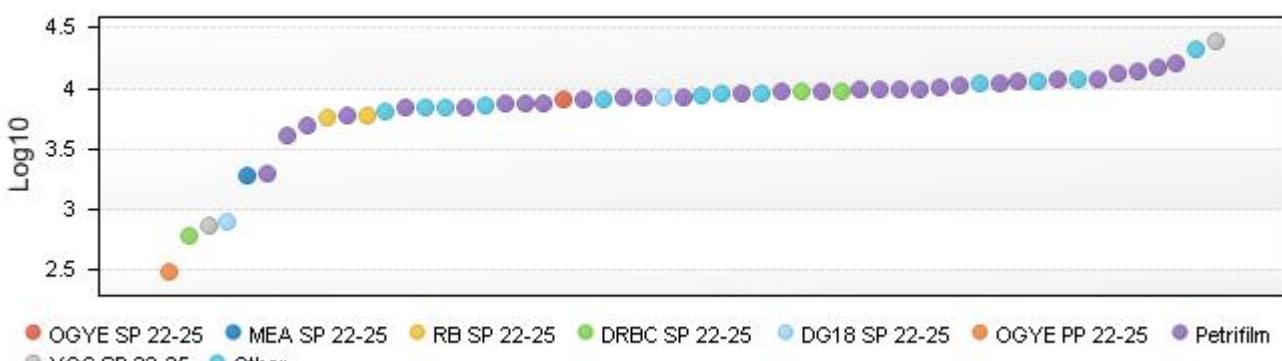
Lab ID	Method	Result (cfu/g)	z score
MT0120	DRBC SP 22-25	9,500	0.11
MT0180	Petrifilm	15,900	0.75
MT1019	Other	21,000	1.09
MT1032	Petrifilm	9,500	0.11
MT1040	Petrifilm	10,600	0.25
MT4014	RB SP 22-25	5,800	-0.50
MT4278	Petrifilm	10,400	0.22
MT4329	RB SP 22-25	6,030	-0.45
MT4490	Petrifilm	9,300	0.08
MT4761	Other	9,050	0.05
MT5180	DG18 SP 22-25	800	-2.96
MT5180	DRBC SP 22-25	600	-3.32
MT5700	YGC SP 22-25	720	-3.09
MT5889	Other	8,800	0.01
MT6037	Petrifilm	10,000	0.17
MT6040	Petrifilm	8,300	-0.06
MT6042	Petrifilm	8,600	-0.01
MT6043	Petrifilm	4,100	-0.93
MT6045	Petrifilm	9,100	0.06
MT6046	Petrifilm	7,600	-0.17
MT6047	Petrifilm	8,100	-0.09
MT6063	Petrifilm	12,000	0.40
MT6092	OGYE SP 22-25	8,000	-0.10
MT6130	Petrifilm	5,900	-0.48
MT6131	Petrifilm	7,100	-0.25
MT6253	Petrifilm	5,000	-0.69
MT6254	Other	8,100	-0.09
MT6255	Petrifilm	10,000	0.17
MT6260	Petrifilm	6,900	-0.29
MT6367	Petrifilm	14,000	0.59
MT6449	Other	6,900	-0.29
MT6536	MEA SP 22-25	1,909	-1.88
MT6632	Petrifilm	7,400	-0.20
MT6632	Other	<1,000	
MT6640	OGYE PP 22-25	300	-4.18
MT6657	YGC SP 22-25	25,000	1.31
MT6658	Other	12,000	0.40
MT6679	Petrifilm	2,000	-1.82
MT6689	Petrifilm	13,200	0.52
MT6699	Other	11,000	0.29
MT6718	Petrifilm	12,000	0.40
MT6749	Other	7,000	-0.27
MT6792	Petrifilm	15,000	0.68
MT6795	Petrifilm	8,300	-0.06
MT6803	Petrifilm	7,500	-0.18
MT6806	DG18 SP 22-25	8,400	-0.04
MT6840	Petrifilm	11,000	0.29
MT6846	Other	7,150	-0.24
MT6856	Other	9,100	0.06
MT6861	Petrifilm	10,000	0.17
MT6896	Other	6,500	-0.36
MT6909	Other	11,600	0.36
MT6918	Petrifilm	11,300	0.32
MT6975	Petrifilm	9,700	0.14
MT7038	DRBC SP 22-25	9,500	0.11

Data Statistics

	Value
Number of Results	55
Number of Excluded Results	1
Mean	3.85 log10
Median	3.94 log10
Standard Deviation	0.37 log10
Robust Standard Deviation	0.14 log10
Result Range	300 to 25000 cfu/g

Performance Statistics

	Value
Assigned Value	8,699 cfu/g
Uncertainty of Assigned Value	0.02 log10
SDPA	0.35 log10
Satisfactory Range	1,736 to 43,598 cfu/g
Satisfactory z scores	92.6%
Questionable z scores	1.9%
Unsatisfactory z scores	5.6%

z score Histogram**Distribution Graph**

● OGYE SP 22-25 ● MEA SP 22-25 ● RB SP 22-25 ● DRBC SP 22-25 ● DG18 SP 22-25 ● OGYE PP 22-25 ● Petrifilm
 ● YGC SP 22-25 ● Other

Methodology Summary

Method	Number of Results	Excluded Results	% of Total	Median	Robust SD	Range	Sat.
				Log10		%	
OGYE SP 22-25	1	0	1.82	3.90	0.00	8000 to 8000	100.0
MEA SP 22-25	1	0	1.82	3.28	0.00	1909 to 1909	100.0
RB SP 22-25	2	0	3.64	3.77	0.01	5800 to 6030	100.0
DRBC SP 22-25	3	0	5.45	3.98	0.50	600 to 9500	66.7
DG18 SP 22-25	2	0	3.64	3.41	0.76	800 to 8400	50.0
OGYE PP 22-25	1	0	1.82	2.48	0.00	300 to 300	0.0
Petrifilm	30	0	54.55	3.97	0.13	2000 to 15900	100.0
YGC SP 22-25	2	0	3.64	3.63	1.14	720 to 25000	50.0
Other	13	1	23.64	3.95	0.15	6500 to 21000	100.0
All	55	1	100	3.94	0.14	300 to 25000	92.6

Comments

The sample contained the yeast *Saccharomyces cerevisiae* and the mould *Penicillium chrysogenum* at an assigned value of 8,699 cfu/g.

Fungi, including yeast and moulds, are ubiquitous throughout the environment, being found in air, water, soils, animals and foods. They can survive adverse conditions by the production of spores. Many fungi are saprophytes, causing spoilage of foods and other commodities.

Lab ID	Method	Result (cfu/g)	z score
MT0144	TEMPO	110,000	1.24
MT0172	PCA PP 30	58,000	0.45
MT0180	TEMPO	91,750	1.01
MT1014	Petrifilm	39,000	-0.05
MT1019	TEMPO	49,000	0.24
MT1020	Petrifilm	50,000	0.26
MT1030	TEMPO	47,000	0.18
MT1031	TEMPO	37,000	-0.11
MT1032	Petrifilm	47,000	0.18
MT1038	Other	44,000	0.10
MT1040	Petrifilm	40,000	-0.02
MT4014	PCA PP 30	60,000	0.49
MT4075	Other	23,000	-0.70
MT4168	PCA PP 30	32,750	-0.26
MT4206	PCA PP 30	34,000	-0.22
MT4241	Petrifilm	48,000	0.21
MT4278	Petrifilm	39,000	-0.05
MT4285	Petrifilm	63,000	0.55
MT4295	Other	24,000	-0.65
MT4490	Petrifilm	44,000	0.10
MT4761	PCA SP 30	60,000	0.49
MT4761	Other	24,000	-0.65
MT5334	Other	52,000	0.31
MT5416	PCA SP 30	52,727	0.33
MT5574	Other	45,000	0.13
MT5574	Petrifilm	35,000	-0.18
MT5700	PCA PP 30	3,200	-3.15
MT5889	PCA PP 37	40,000	-0.02
MT6037	PCA PP 30	27,000	-0.50
MT6040	Other	42,000	0.05
MT6042	Other	30,000	-0.37
MT6043	Petrifilm	37,000	-0.11
MT6045	Petrifilm	44,000	0.10
MT6046	Petrifilm	44,000	0.10
MT6047	PCA PP 37	44,000	0.10
MT6063	Other	28,000	-0.46
MT6092	PCA PP 30	46,000	0.16
MT6095	Other	33,000	-0.25
MT6130	PCA PP 30	33,000	-0.25
MT6131	Petrifilm	38,000	-0.08
MT6158	Petrifilm	36,000	-0.15
MT6253	Petrifilm	27,000	-0.50
MT6254	Other	41,000	0.02
MT6255	Petrifilm	42,000	0.05
MT6257	Petrifilm	37,000	-0.11
MT6260	Petrifilm	46,000	0.16
MT6367	Petrifilm	36,000	-0.15
MT6449	PCA PP 37	63,000	0.55
MT6492	PCA PP 30	43,000	0.07
MT6523	Petrifilm	31,000	-0.33
MT6536	PCA PP 30	28,727	-0.43
MT6632	Petrifilm	47,000	0.18
MT6632	TEMPO	49,000	0.24
MT6640	PCA PP 30	18,900	-0.95
MT6657	Petrifilm	29,000	-0.41
MT6658	Petrifilm	30,000	-0.37
MT6665	Petrifilm	31,000	-0.33
MT6674	Petrifilm	22,000	-0.76
MT6674	Other	47,000	0.18
MT6675	Other	50,000	0.26
MT6679	Petrifilm	6,000	-2.37

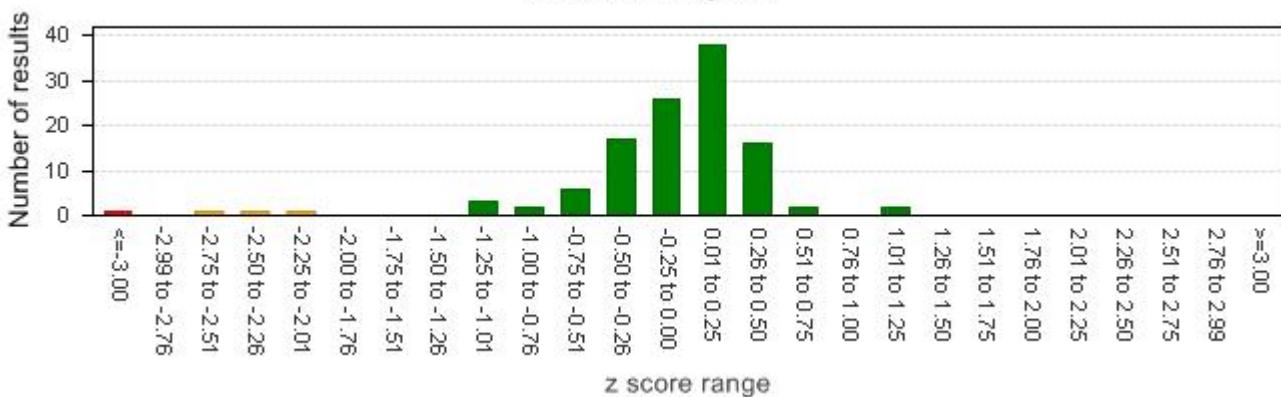
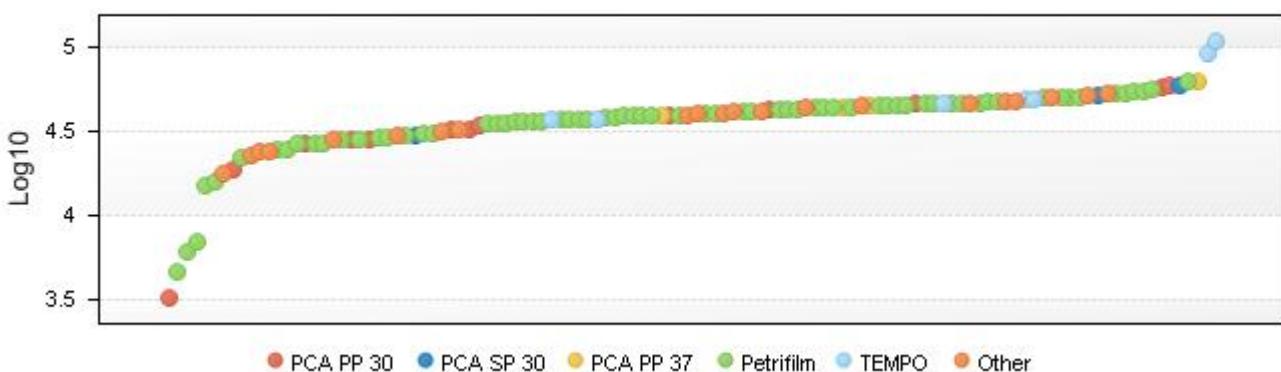
Lab ID	Method	Result (cfu/g)	z score
MT6685	Petrifilm	37,000	-0.11
MT6686	Petrifilm	42,000	0.05
MT6689	Petrifilm	26,700	-0.52
MT6691	Petrifilm	28,000	-0.46
MT6692	Petrifilm	44,000	0.10
MT6694	Petrifilm	41,000	0.02
MT6699	Petrifilm	51,000	0.29
MT6713	Petrifilm	54,000	0.36
MT6718	Petrifilm	48,000	0.21
MT6721	Petrifilm	39,000	-0.05
MT6723	PCA PP 37	45,000	0.13
MT6724	Other	48,000	0.21
MT6735	Petrifilm	47,000	0.18
MT6736	Petrifilm	28,100	-0.45
MT6737	Other	53,000	0.33
MT6738	Petrifilm	37,000	-0.11
MT6740	Petrifilm	41,000	0.02
MT6749	PCA PP 30	28,000	-0.46
MT6780	Petrifilm	45,000	0.13
MT6792	Petrifilm	36,000	-0.15
MT6795	Petrifilm	24,700	-0.61
MT6806	PCA PP 30	40,000	-0.02
MT6810	Petrifilm	55,000	0.38
MT6811	Petrifilm	45,000	0.13
MT6812	Petrifilm	43,000	0.07
MT6813	Other	41,000	0.02
MT6817	Petrifilm	35,000	-0.18
MT6821	Petrifilm	7,000	-2.18
MT6833	Petrifilm	36,000	-0.15
MT6837	Petrifilm	45,000	0.13
MT6840	Petrifilm	38,000	-0.08
MT6846	Other	17,600	-1.03
MT6847	Other	32,000	-0.29
MT6856	TEMPO	37,000	-0.11
MT6859	Petrifilm	43,000	0.07
MT6860	Petrifilm	46,000	0.16
MT6861	Petrifilm	43,000	0.07
MT6862	Petrifilm	24,500	-0.62
MT6870	Petrifilm	40,000	-0.02
MT6874	Petrifilm	35,000	-0.18
MT6877	Petrifilm	53,000	0.33
MT6889	Petrifilm	51,000	0.29
MT6896	Other	42,000	0.05
MT6902	Petrifilm	4,600	-2.70
MT6909	Other	40,000	-0.02
MT6911	Petrifilm	55,000	0.38
MT6912	Petrifilm	45,000	0.13
MT6916	Petrifilm	56,000	0.40
MT6918	Petrifilm	29,500	-0.39
MT6949	Other	48,500	0.22
MT6966	Petrifilm	16,000	-1.15
MT6972	Petrifilm	15,200	-1.22
MT6975	Petrifilm	27,000	-0.50
MT6996	Petrifilm	50,000	0.26
MT7038	PCA SP 30	30,000	-0.37

Data Statistics

	Value
Number of Results	116
Number of Excluded Results	0
Mean	4.56 log10
Median	4.61 log10
Standard Deviation	0.21 log10
Robust Standard Deviation	0.11 log10
Result Range	3200 to 110000 cfu/g

Performance Statistics

	Value
Assigned Value	40,497 cfu/g
Uncertainty of Assigned Value	0.01 log10
SDPA	0.35 log10
Satisfactory Range	8,080 to 202,966 cfu/g
Satisfactory z scores	96.6%
Questionable z scores	2.6%
Unsatisfactory z scores	0.9%

z score Histogram**Distribution Graph**

Methodology Summary

Method	Number of Results	Excluded Results	% of Total	Median	Robust SD	Range	Sat.
				Log10			%
PCA PP 30	13	0	11.21	4.52	0.13	3200 to 60000	92.3
PCA SP 30	3	0	2.59	4.72	0.08	30000 to 60000	100.0
PCA PP 37	4	0	3.45	4.65	0.04	40000 to 63000	100.0
Petrifilm	68	0	58.62	4.60	0.10	4600 to 63000	95.6
TEMPO	7	0	6.03	4.69	0.18	37000 to 110000	100.0
Other	21	0	18.1	4.61	0.13	17600 to 53000	100.0
All	116	0	100	4.61	0.11	3200 to 110000	96.6

Comments

The sample contained *Enterobacter aerogenes*, *Escherichia coli*, *Staphylococcus aureus* and *Penicillium chrysogenum*. The assigned value is 40,497 cfu/g.

Total aerobic mesophilic counts are used to determine the general microbial population of a sample.

Lab ID	Method	Result (cfu/g)	z score
MT0120	VRBA PP 37	33,000	0.62
MT0144	TEMPO	17,000	-0.20
MT0172	VRBA PP 37	10,000	-0.86
MT0180	TEMPO	34,000	0.66
MT1014	Petrifilm	28,000	0.41
MT1019	TEMPO	9,000	-0.99
MT1020	Petrifilm	24,000	0.22
MT1030	TEMPO	27,000	0.37
MT1031	TEMPO	17,000	-0.20
MT1032	Petrifilm	23,000	0.17
MT1038	Petrifilm	43,000	0.95
MT1040	MPN	11,000	-0.74
MT1040	Petrifilm	39,000	0.83
MT4014	COLI ID PP 37	34,000	0.66
MT4075	Other	<10	
MT4168	Petrifilm	23,000	0.17
MT4206	VRBA PP 37	23,100	0.18
MT4241	Petrifilm	38,000	0.79
MT4278	Petrifilm	2,030	-2.84
MT4285	Petrifilm	5,900	-1.52
MT4295	MPN	>1,100	
MT4490	Petrifilm	28,000	0.41
MT4761	Chromogenic agar	31,400	0.56
MT5334	MPN	92,000	1.89
MT5334	Petrifilm	30,000	0.50
MT5574	Petrifilm	21,000	0.06
MT5700	VRBA PP 37	2,100	-2.80
MT5889	VRBA PP 37	23,000	0.17
MT6037	Petrifilm	19,000	-0.07
MT6040	Petrifilm	20,000	0.00
MT6042	Petrifilm	24,000	0.22
MT6043	Petrifilm	18,000	-0.13
MT6045	Petrifilm	15,000	-0.36
MT6046	Petrifilm	15,000	-0.36
MT6047	Petrifilm	23,000	0.17
MT6063	Petrifilm	23,000	0.17
MT6092	MPN	>11,000	
MT6130	Petrifilm	23,000	0.17
MT6131	Petrifilm	16,000	-0.28
MT6158	Petrifilm	33,000	0.62
MT6253	Petrifilm	23,000	0.17
MT6254	Other	6,600	-1.38
MT6255	Petrifilm	16,000	-0.28
MT6257	Petrifilm	164,000	2.61
MT6260	Petrifilm	5,800	-1.54
MT6367	Petrifilm	26,000	0.32
MT6449	MPN	11,000	-0.74
MT6492	VRBA PP 37	17,000	-0.20
MT6523	Petrifilm	30,000	0.50
MT6536	VRBA PP 37	15,000	-0.36
MT6632	Petrifilm	23,500	0.20
MT6632	TEMPO	22,000	0.12
MT6657	Petrifilm	15,000	-0.36
MT6658	Petrifilm	14,000	-0.45
MT6665	Petrifilm	5,300	-1.65
MT6674	Petrifilm	30,000	0.50
MT6679	Petrifilm	3,200	-2.28
MT6685	Petrifilm	26,000	0.32
MT6686	Petrifilm	25,000	0.27
MT6689	Petrifilm	17,900	-0.14
MT6691	Petrifilm	17,000	-0.20

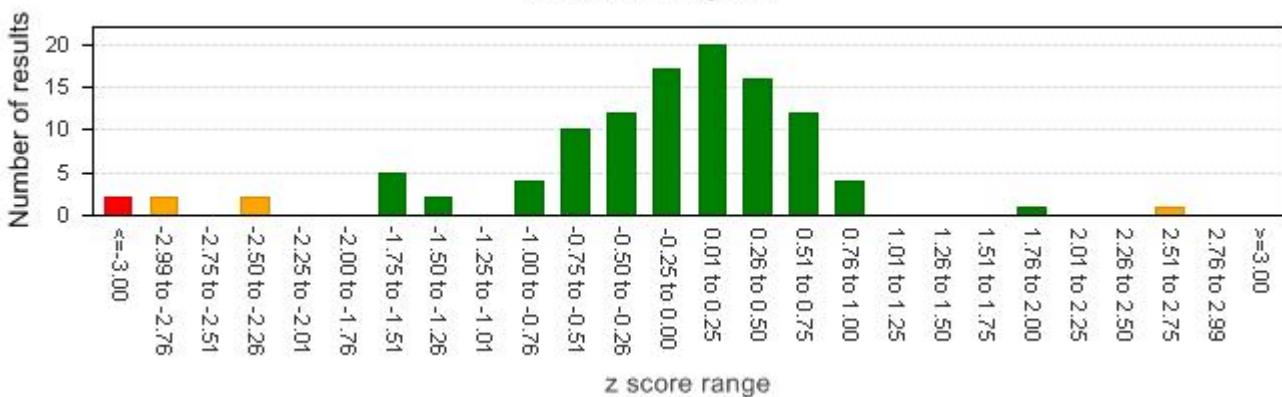
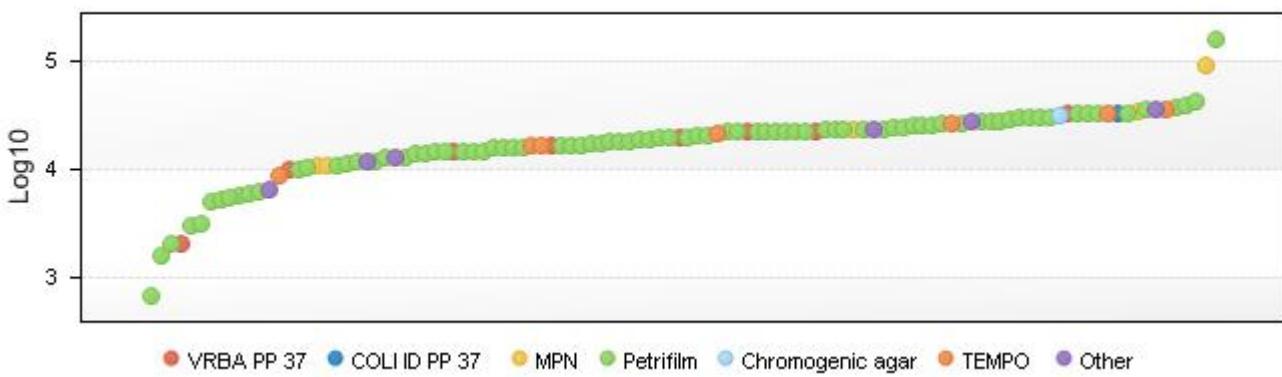
Lab ID	Method	Result (cfu/g)	z score
MT6692	Petrifilm	20,100	0.00
MT6694	Petrifilm	18,200	-0.12
MT6699	Petrifilm	29,000	0.46
MT6713	Petrifilm	33,000	0.62
MT6718	Petrifilm	28,000	0.41
MT6721	Petrifilm	12,000	-0.64
MT6723	MPN	>11,000	
MT6724	MPN	24,000	0.22
MT6724	Petrifilm	26,000	0.32
MT6735	MPN	>16,000	
MT6736	Petrifilm	14,000	-0.45
MT6737	Petrifilm	31,000	0.54
MT6740	Petrifilm	5,600	-1.58
MT6749	Petrifilm	15,800	-0.30
MT6780	Petrifilm	23,000	0.17
MT6792	Petrifilm	17,000	-0.20
MT6795	Petrifilm	18,000	-0.13
MT6803	Petrifilm	20,000	0.00
MT6806	VRBA PP 37	20,000	0.00
MT6810	Petrifilm	34,000	0.66
MT6811	Petrifilm	16,000	-0.28
MT6812	MPN	>11,000	
MT6812	Petrifilm	13,000	-0.54
MT6813	Petrifilm	25,000	0.27
MT6817	Petrifilm	15,000	-0.36
MT6821	Petrifilm	1,600	-3.14
MT6833	Petrifilm	11,500	-0.69
MT6837	Petrifilm	19,000	-0.07
MT6838	Petrifilm	<10	
MT6840	Petrifilm	33,800	0.65
MT6846	Other	12,000	-0.64
MT6847	Other	13,000	-0.54
MT6856	TEMPO	37,000	0.76
MT6859	Petrifilm	24,100	0.23
MT6860	Petrifilm	3,000	-2.36
MT6861	Petrifilm	21,000	0.06
MT6862	Petrifilm	10,000	-0.86
MT6870	Petrifilm	24,000	0.22
MT6874	Petrifilm	6,400	-1.42
MT6877	Other	24,000	0.22
MT6877	Petrifilm	23,000	0.17
MT6889	Petrifilm	26,400	0.34
MT6896	MPN	35,000	0.69
MT6896	Petrifilm	36,000	0.73
MT6902	Petrifilm	17,000	-0.20
MT6909	Other	36,000	0.73
MT6911	Petrifilm	10,700	-0.78
MT6912	Petrifilm	13,100	-0.53
MT6916	Petrifilm	27,000	0.37
MT6918	Petrifilm	17,500	-0.17
MT6949	Other	27,500	0.39
MT6966	Petrifilm	11,000	-0.74
MT6972	Petrifilm	670	-4.22
MT6975	Petrifilm	12,000	-0.64
MT6996	Petrifilm	5,100	-1.70
MT7038	Petrifilm	15,000	-0.36

Data Statistics

	Value
Number of Results	117
Number of Excluded Results	7
Mean	4.24 log10
Median	4.30 log10
Standard Deviation	0.33 log10
Robust Standard Deviation	0.20 log10
Result Range	670 to 164000 cfu/g

Performance Statistics

	Value
Assigned Value	20,050 cfu/g
Uncertainty of Assigned Value	0.02 log10
SDPA	0.35 log10
Satisfactory Range	4,001 to 100,488 cfu/g
Satisfactory z scores	93.6%
Questionable z scores	4.5%
Unsatisfactory z scores	1.8%

z score Histogram**Distribution Graph**

Methodology Summary

Method	Number of Results	Excluded Results	% of Total	Median	Robust SD	Range	Sat.
				Log10			%
VRBA PP 37	8	0	6.84	4.27	0.14	2100 to 33000	87.5
COLI ID PP 37	1	0	0.85	4.53	0.00	34000 to 34000	100.0
MPN	10	5	8.55	4.38	0.50	11000 to 92000	100.0
Petrifilm	83	1	70.94	4.30	0.19	670 to 164000	92.7
Chromogenic agar	1	0	0.85	4.50	0.00	31400 to 31400	100.0
TEMPO	7	0	5.98	4.34	0.17	9000 to 37000	100.0
Other	7	1	5.98	4.25	0.27	6600 to 36000	100.0
All	117	7	100	4.30	0.20	670 to 164000	93.6

Comments

The sample contained the Coliforms *Enterobacter aerogenes* and *Escherichia coli* at an assigned value of 20,050 cfu/g.

Coliforms are found in human and animal intestines, and their presence in foods is used as an indicator of faecal contamination. However, many coliforms are also found throughout the environment, being isolated from air, soil, water, plants, and animals. The presence of coliform indicator organisms in foods may therefore be indicative of faecal contamination, but may also be environmental in origin.

Sample: 756 - Quantitative Package vial B

Analyte: Enterobacteriaceae

Lab ID	Method	Result (cfu/g)	z score
MT0120	VRBGA PP 37	32,000	0.36
MT1019	TEMPO	25,000	0.05
MT1020	Petrifilm	37,000	0.54
MT1030	TEMPO	27,000	0.15
MT1031	TEMPO	27,500	0.17
MT1032	Petrifilm	25,000	0.05
MT1038	Petrifilm	44,000	0.75
MT1040	Petrifilm	26,000	0.10
MT4014	VRBGA PP 37	29,000	0.23
MT4075	Other	21,000	-0.17
MT4168	VRBGA PP 37	28,600	0.22
MT4206	VRBGA PP 37	19,600	-0.25
MT4241	Petrifilm	27,000	0.15
MT4490	Petrifilm	32,000	0.36
MT4761	VRBGA PP 30	18,900	-0.30
MT5180	Other	17,181	-0.41
MT5180	VRBGA PP 37	16,363	-0.48
MT5416	Other	39,091	0.61
MT5574	Petrifilm	26,000	0.10
MT5700	VRBGA PP 37	2,200	-2.97
MT5889	VRBGA PP 37	41,000	0.66
MT6037	Petrifilm	23,000	-0.05
MT6040	Petrifilm	30,000	0.28
MT6042	Petrifilm	23,000	-0.05
MT6043	Petrifilm	30,000	0.28
MT6045	Petrifilm	22,000	-0.11
MT6046	Petrifilm	26,000	0.10
MT6047	Petrifilm	32,000	0.36
MT6063	Petrifilm	22,000	-0.11
MT6130	Petrifilm	22,000	-0.11
MT6131	Petrifilm	32,000	0.36
MT6253	Petrifilm	29,000	0.23
MT6254	Other	18,000	-0.36
MT6255	Petrifilm	21,000	-0.17
MT6257	Petrifilm	20,000	-0.23
MT6260	Petrifilm	23,000	-0.05
MT6367	Petrifilm	35,000	0.47
MT6492	VRBGA PP 37	24,000	0.00
MT6536	VRBGA PP 37	15,500	-0.54
MT6632	Petrifilm	25,800	0.09
MT6632	TEMPO	27,000	0.15
MT6674	Petrifilm	26,000	0.10
MT6679	Petrifilm	3,500	-2.39
MT6685	Petrifilm	36,000	0.50
MT6686	Petrifilm	21,000	-0.17
MT6689	Petrifilm	14,000	-0.67
MT6691	Petrifilm	17,000	-0.43
MT6694	Petrifilm	23,000	-0.05
MT6699	Petrifilm	38,000	0.57
MT6718	Petrifilm	18,000	-0.36
MT6723	VRBGA PP 37	35,000	0.47
MT6740	Petrifilm	35,000	0.47
MT6749	Petrifilm	14,700	-0.61
MT6780	Petrifilm	19,000	-0.29
MT6792	Petrifilm	14,000	-0.67
MT6803	Other	25,000	0.05
MT6806	VRBGA PP 37	28,000	0.19
MT6810	Petrifilm	27,000	0.15
MT6811	Petrifilm	23,000	-0.05
MT6812	Petrifilm	19,000	-0.29
MT6813	Petrifilm	23,000	-0.05

Lab ID	Method	Result (cfu/g)	z score
MT6837	Petrifilm	24,000	0.00
MT6840	Petrifilm	30,000	0.28
MT6846	Other	10,700	-1.00
MT6847	Other	15,000	-0.58
MT6859	Petrifilm	31,000	0.32
MT6862	Petrifilm	10,900	-0.98
MT6870	Petrifilm	34,000	0.43
MT6874	Petrifilm	24,000	0.00
MT6889	Petrifilm	18,000	-0.36
MT6896	Other	35,000	0.47
MT6909	Other	31,000	0.32
MT6911	Petrifilm	17,000	-0.43
MT6949	Other	31,000	0.32
MT6966	Petrifilm	12,000	-0.86
MT6975	Petrifilm	18,000	-0.36
MT7038	VRBGA PP 37	20,000	-0.23

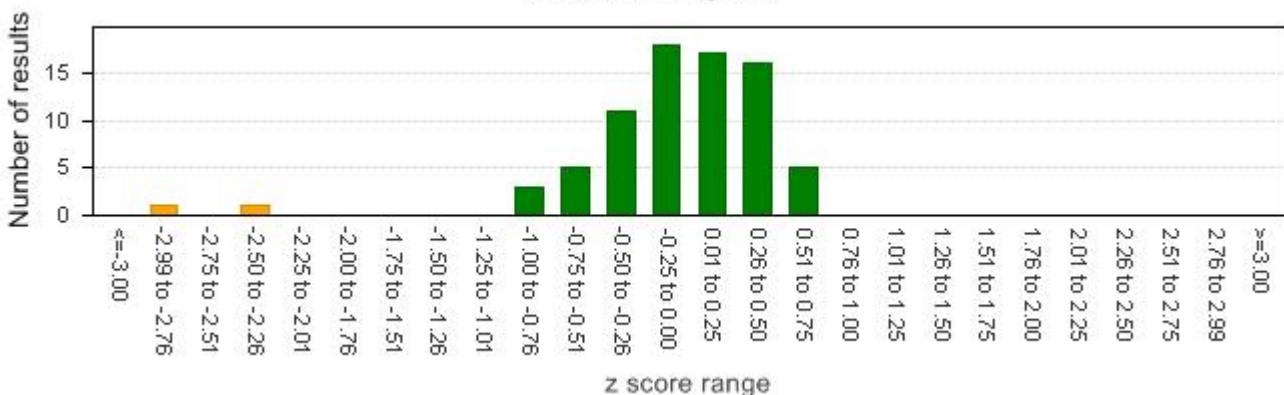
Data Statistics

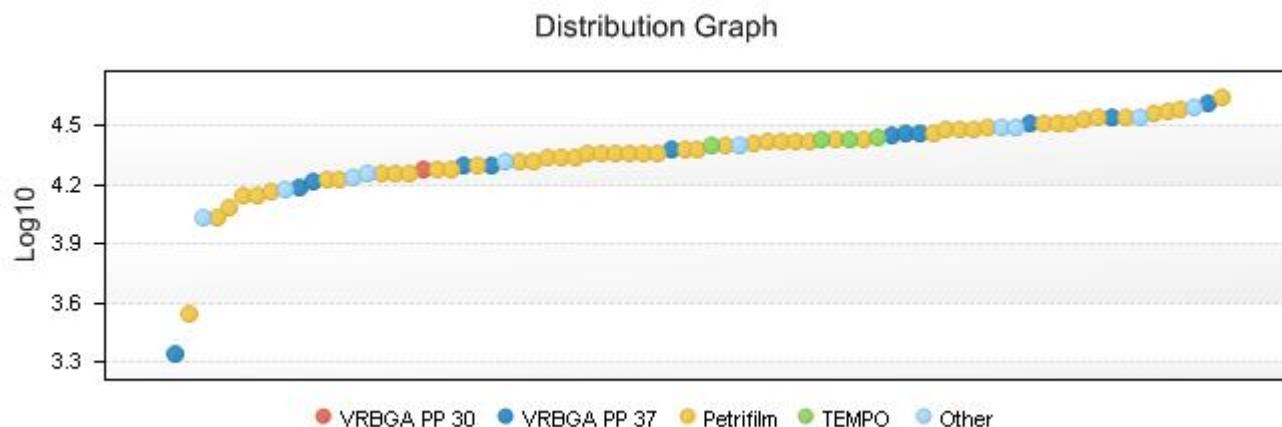
	Value
Number of Results	77
Number of Excluded Results	0
Mean	4.35 log10
Median	4.38 log10
Standard Deviation	0.20 log10
Robust Standard Deviation	0.15 log10
Result Range	2200 to 44000 cfu/g

Performance Statistics

	Value
Assigned Value	24,000 cfu/g
Uncertainty of Assigned Value	0.02 log10
SDPA	0.35 log10
Satisfactory Range	4,789 to 120,285 cfu/g
Satisfactory z scores	97.4%
Questionable z scores	2.6%
Unsatisfactory z scores	0.0%

z score Histogram





Methodology Summary

Method	Number of Results	Excluded Results	% of Total	Median	Robust SD	Range	Sat.
				Log10			%
VRBGA PP 30	1	0	1.3	4.28	0.00	18900 to 18900	100.0
VRBGA PP 37	12	0	15.58	4.41	0.17	2200 to 41000	91.7
Petrifilm	50	0	64.94	4.37	0.15	3500 to 44000	98.0
TEMPO	4	0	5.19	4.43	0.01	25000 to 27500	100.0
Other	10	0	12.99	4.36	0.19	10700 to 39091	100.0
All	77	0	100	4.38	0.15	2200 to 44000	97.4

Comments

The sample contained the Enterobacteriaceae *Enterobacter aerogenes* and *Escherichia coli* at an assigned value of 24,000 cfu/g.

Members of the Enterobacteriaceae family are distributed worldwide and found in soil, water, fruits, vegetables, grains, flowering plants, and a wide range of animals, from insects to humans.

Lab ID	Method	Result (cfu/g)	z score
MT0144	TEMPO	17,000	1.93
MT0172	VRBA PP 37-44	5,000	0.41
MT0180	TEMPO	8,350	1.04
MT1014	Petrifilm	1,200	-1.36
MT1019	TEMPO	11,000	1.39
MT1020	Petrifilm	4,400	0.25
MT1030	TEMPO	8,600	1.08
MT1031	TEMPO	8,300	1.04
MT1032	Petrifilm	4,000	0.13
MT1038	Petrifilm	3,700	0.03
MT1040	MPN	4,600	0.30
MT1040	Petrifilm	4,000	0.13
MT4014	COLI ID PP 37-44	370	-2.82
MT4075	Other	1,100	-1.47
MT4168	Petrifilm	3,450	-0.05
MT4206	Chromogenic agar	4,600	0.30
MT4241	Petrifilm	3,200	-0.15
MT4278	Petrifilm	2,800	-0.31
MT4285	Petrifilm	2,800	-0.31
MT4295	MPN	>1,100	
MT4490	Petrifilm	3,900	0.10
MT4761	Chromogenic agar	8,580	1.08
MT5180	Other	965	-1.63
MT5180	TBX PP 37-44	985	-1.61
MT5334	MPN	4,900	0.38
MT5334	Other	2,900	-0.27
MT5334	Petrifilm	4,700	0.33
MT5416	TBX PP 37-44	3,164	-0.16
MT5574	Petrifilm	4,200	0.19
MT5700	TBX PP 37-44	420	-2.67
MT5889	TBX PP 37-44	3,500	-0.03
MT6037	Petrifilm	6,800	0.79
MT6040	Petrifilm	4,100	0.16
MT6042	Petrifilm	5,000	0.41
MT6043	Petrifilm	2,700	-0.36
MT6045	Petrifilm	6,400	0.71
MT6046	Petrifilm	6,900	0.81
MT6047	Petrifilm	5,000	0.41
MT6063	Petrifilm	6,500	0.73
MT6092	TBX PP 37-44	570	-2.29
MT6130	Petrifilm	3,700	0.03
MT6131	Petrifilm	4,400	0.25
MT6158	Petrifilm	6,400	0.71
MT6253	Petrifilm	3,000	-0.23
MT6254	Other	3,000	-0.23
MT6255	Petrifilm	2,000	-0.73
MT6257	Petrifilm	4,300	0.22
MT6260	Petrifilm	3,500	-0.03
MT6367	Petrifilm	4,300	0.22
MT6449	TBX PP 37-44	2,800	-0.31
MT6449	MPN	2,400	-0.50
MT6492	TBX PP 37-44	1,300	-1.26
MT6523	Petrifilm	1,800	-0.86
MT6536	TBX PP 37-44	5,864	0.61
MT6632	Petrifilm	3,000	-0.23
MT6632	TEMPO	5,200	0.46
MT6657	Petrifilm	3,300	-0.11
MT6658	Petrifilm	4,100	0.16
MT6665	Petrifilm	700	-2.03
MT6674	Petrifilm	3,000	-0.23
MT6679	Petrifilm	400	-2.73

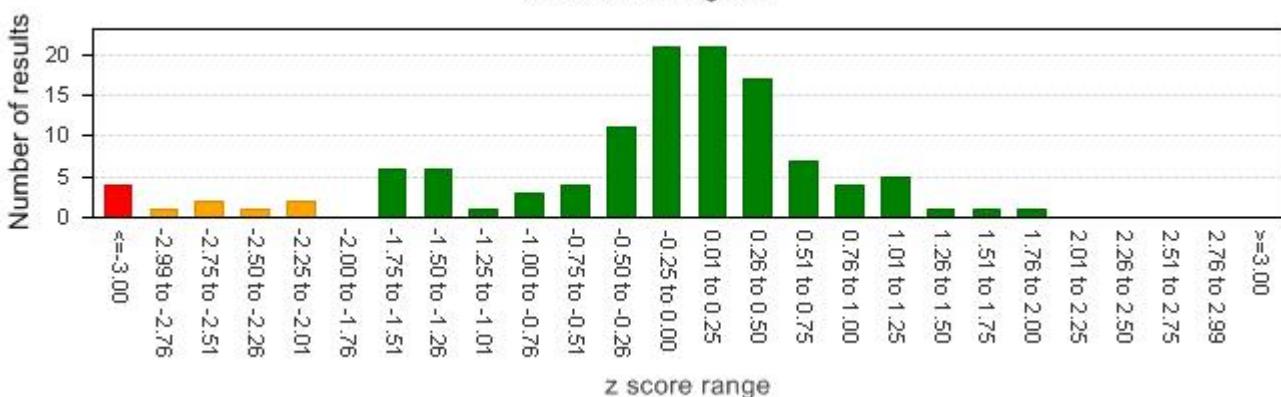
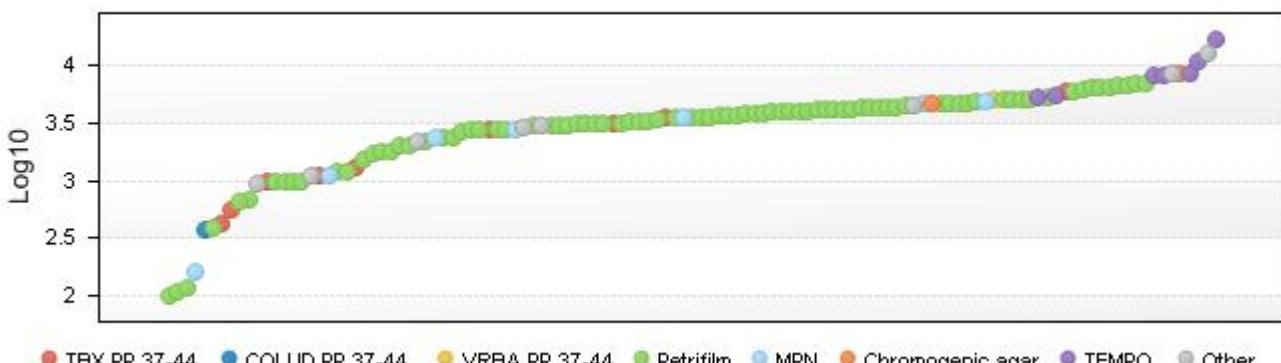
Lab ID	Method	Result (cfu/g)	z score
MT6685	Petrifilm	7,000	0.83
MT6686	Petrifilm	3,600	0.00
MT6689	Petrifilm	2,800	-0.31
MT6691	Petrifilm	2,800	-0.31
MT6692	Petrifilm	4,100	0.16
MT6694	Petrifilm	1,000	-1.59
MT6699	Petrifilm	2,400	-0.50
MT6713	Petrifilm	6,000	0.63
MT6718	Petrifilm	3,100	-0.19
MT6721	Petrifilm	1,000	-1.59
MT6723	MPN	160	-3.86
MT6724	MPN	2,800	-0.31
MT6724	Petrifilm	3,100	-0.19
MT6735	Petrifilm	4,000	0.13
MT6736	Petrifilm	1,800	-0.86
MT6737	Petrifilm	6,200	0.67
MT6738	Petrifilm	3,600	0.00
MT6740	Petrifilm	4,500	0.28
MT6749	Petrifilm	3,100	-0.19
MT6780	Petrifilm	3,300	-0.11
MT6792	Petrifilm	4,100	0.16
MT6795	Petrifilm	3,900	0.10
MT6803	Petrifilm	3,700	0.03
MT6806	TBX PP 37-44	1,100	-1.47
MT6810	Petrifilm	3,000	-0.23
MT6811	Petrifilm	3,100	-0.19
MT6812	MPN	1,100	-1.47
MT6812	Petrifilm	1,000	-1.59
MT6813	Petrifilm	4,600	0.30
MT6817	Petrifilm	2,000	-0.73
MT6821	Petrifilm	120	-4.22
MT6833	Petrifilm	4,600	0.30
MT6837	Petrifilm	1,200	-1.36
MT6838	Petrifilm	110	-4.33
MT6840	Petrifilm	4,800	0.36
MT6846	Other	2,200	-0.61
MT6847	Other	13,000	1.59
MT6856	TEMPO	5,500	0.53
MT6859	Petrifilm	5,200	0.46
MT6860	Petrifilm	<10	
MT6861	Petrifilm	4,000	0.13
MT6862	Petrifilm	1,500	-1.09
MT6870	Petrifilm	6,800	0.79
MT6874	Petrifilm	2,400	-0.50
MT6877	Petrifilm	3,300	-0.11
MT6889	Petrifilm	1,700	-0.93
MT6896	MPN	3,500	-0.03
MT6896	Petrifilm	4,000	0.13
MT6902	Petrifilm	1,000	-1.59
MT6909	Other	4,500	0.28
MT6911	Petrifilm	100	-4.45
MT6912	Petrifilm	3,800	0.07
MT6916	Petrifilm	4,400	0.25
MT6918	Petrifilm	3,600	0.00
MT6949	Other	8,450	1.06
MT6966	Petrifilm	5,000	0.41
MT6972	Petrifilm	670	-2.09
MT6975	Petrifilm	2,200	-0.61
MT6996	Petrifilm	5,100	0.43
MT7038	Petrifilm	4,700	0.33

Data Statistics

	Value
Number of Results	121
Number of Excluded Results	2
Mean	3.45 log10
Median	3.56 log10
Standard Deviation	0.40 log10
Robust Standard Deviation	0.20 log10
Result Range	100 to 17000 cfu/g

Performance Statistics

	Value
Assigned Value	3,600 cfu/g
Uncertainty of Assigned Value	0.02 log10
SDPA	0.35 log10
Satisfactory Range	718 to 18,043 cfu/g
Satisfactory z scores	91.6%
Questionable z scores	5.0%
Unsatisfactory z scores	3.4%

z score Histogram**Distribution Graph**

Methodology Summary

Method	Number of Results	Excluded Results	% of Total	Median	Robust SD	Range	Sat.
				Log10		%	
TBX PP 37-44	9	0	7.44	3.11	0.53	420 to 5864	77.8
COLI ID PP 37-44	1	0	0.83	2.57	0.00	370 to 370	0.0
VRBA PP 37-44	1	0	0.83	3.70	0.00	5000 to 5000	100.0
Petrifilm	85	1	70.25	3.56	0.16	100 to 7000	92.9
MPN	8	1	6.61	3.45	0.32	160 to 4900	85.7
Chromogenic agar	2	0	1.65	3.80	0.20	4600 to 8580	100.0
TEMPO	7	0	5.79	3.92	0.18	5200 to 17000	100.0
Other	8	0	6.61	3.47	0.45	965 to 13000	100.0
All	121	2	100	3.56	0.20	100 to 17000	91.6

Comments

The sample contained *Escherichia coli* at an assigned value of 3,600 cfu/g.

Escherichia coli is found in human and animal intestines, and, therefore, the presence of the organism in foods is thought to indicate faecal contamination. It is historically used as an 'indicator' organism, to indicate whether more serious pathogens, such as *Salmonella* are also likely to be present.

Sample: 756 - Quantitative Package vial B

Analyte: *Bacillus cereus*

Lab ID	Method	Result (cfu/g)
MT0172	BC SP 30	<100
MT0180	Other	<10
MT1019	Other	<10
MT1020	Other	<10
MT4014	Compass BC SP 30	<10
MT4761	MYP SP 30	<10
MT5334	Other	<25
MT5416	MYP SP 30	<10
MT5700	MYP SP 30	<10
MT6037	MYP SP 30	<10
MT6040	Other	<10
MT6043	MYP SP 30	<10
MT6045	MYP SP 30	<10
MT6046	MYP SP 30	<10
MT6047	MYP SP 30	<10
MT6092	MYP SP 30	<100
MT6095	Other	<100
MT6130	MYP SP 30	<10
MT6131	Other	<10
MT6253	MYP SP 30	<10
MT6254	Other	<10
MT6449	Other	<10
MT6492	MYP SP 30	<10
MT6632	BC SP 30	<100
MT6632	Other	<100
MT6658	Other	<100
MT6679	MYP SP 30	4,200
MT6699	Other	<10
MT6723	MYP SP 30	<10
MT6740	Other	<10
MT6806	MYP SP 30	<10
MT6813	Other	<10
MT6847	MYP SP 30	<5
MT6874	Other	<10
MT6909	Other	<5
MT6912	BC SP 30	<10
MT7038	MYP SP 30	<10

Data Statistics

	Value
Number of Results	37
Number of Excluded Results	N/A
Mean	N/A
Median	N/A
Standard Deviation	N/A
Robust Standard Deviation	N/A
Result Range	4,200 to 4,200 cfu/g

Performance Statistics

	Value
Assigned Value	Absent
Uncertainty of Assigned Value	N/A
SDPA	N/A
Satisfactory Range	N/A
Satisfactory z scores	N/A
Questionable z scores	N/A
Unsatisfactory z scores	N/A

Comments

The sample did not contain *Bacillus cereus*. The assigned value is therefore 'absent' using a detection level of <10 cfu/g.

In foodstuffs, *Bacillus cereus* is both a spoilage organism and a causative agent of food poisoning. The organism is commonly found in a

Scheme: Meat & Fish (QMAS)

Round: 266

Sample: 756 - Quantitative Package vial B

Analyte: **Bacillus cereus**

range of foods, including rice, eggs, bread, meat, milk and other dairy products.

Lab ID	Method	Result (cfu/g)	z score
MT0144	TEMPO	2,900	0.11
MT0172	BP SP 37	2,800	0.07
MT0180	TEMPO	5,000	0.79
MT1019	TEMPO	3,700	0.41
MT1020	Other	4,000	0.51
MT1032	Petrifilm	2,100	-0.29
MT1038	Petrifilm	2,700	0.02
MT1040	Other	6	-7.56
MT4014	BP SP 37	2,500	-0.07
MT4168	BP SP 37	3,775	0.44
MT4206	BP SP 37	3,000	0.15
MT4241	Petrifilm	430	-2.26
MT4278	Petrifilm	1,400	-0.79
MT4285	Petrifilm	4,100	0.54
MT4295	Other	4,200	0.57
MT4761	BP SP 37	4,050	0.53
MT5180	Other	3,454	0.33
MT5180	BP SP 37	3,454	0.33
MT5334	Other	3,900	0.48
MT5416	BP + RPF SP 37	3,486	0.34
MT5574	Petrifilm	2,700	0.02
MT5700	BP + RPF SP 37	460	-2.17
MT5889	BP + RPF SP 37	1,390	-0.80
MT6037	Petrifilm	2,700	0.02
MT6040	Petrifilm	2,100	-0.29
MT6042	Petrifilm	1,300	-0.88
MT6043	Petrifilm	2,100	-0.29
MT6045	Petrifilm	2,500	-0.07
MT6046	Petrifilm	3,000	0.15
MT6047	Petrifilm	1,400	-0.79
MT6063	Petrifilm	3,500	0.35
MT6092	BP SP 37	2,600	-0.02
MT6095	Other	2,800	0.07
MT6130	Petrifilm	2,100	-0.29
MT6131	Petrifilm	2,200	-0.23
MT6158	Other	2,900	0.11
MT6253	Petrifilm	2,000	-0.35
MT6254	Other	1,800	-0.48
MT6255	Petrifilm	1,900	-0.41
MT6257	Petrifilm	1,900	-0.41
MT6260	Petrifilm	2,900	0.11
MT6449	Other	4,400	0.63
MT6492	BP SP 37	2,800	0.07
MT6523	Petrifilm	2,000	-0.35
MT6536	BP SP 37	<100	
MT6632	Rapid Staph	4,100	0.54
MT6632	TEMPO	5,000	0.79
MT6640	BP SP 37	130	-3.74
MT6657	BP SP 37	2,400	-0.12
MT6658	Petrifilm	2,400	-0.12
MT6679	Petrifilm	3,900	0.48
MT6685	Petrifilm	4,000	0.51
MT6686	Petrifilm	1,700	-0.55
MT6689	Petrifilm	2,000	-0.35
MT6692	Petrifilm	4,000	0.51
MT6694	Petrifilm	1,400	-0.79
MT6699	Petrifilm	2,100	-0.29
MT6713	Petrifilm	3,600	0.38
MT6721	Petrifilm	1,900	-0.41
MT6723	BP SP 37	3,800	0.45
MT6724	Other	3,400	0.31

Sample: 756 - Quantitative Package vial B**Analyte: Coagulase positive staphylococci**

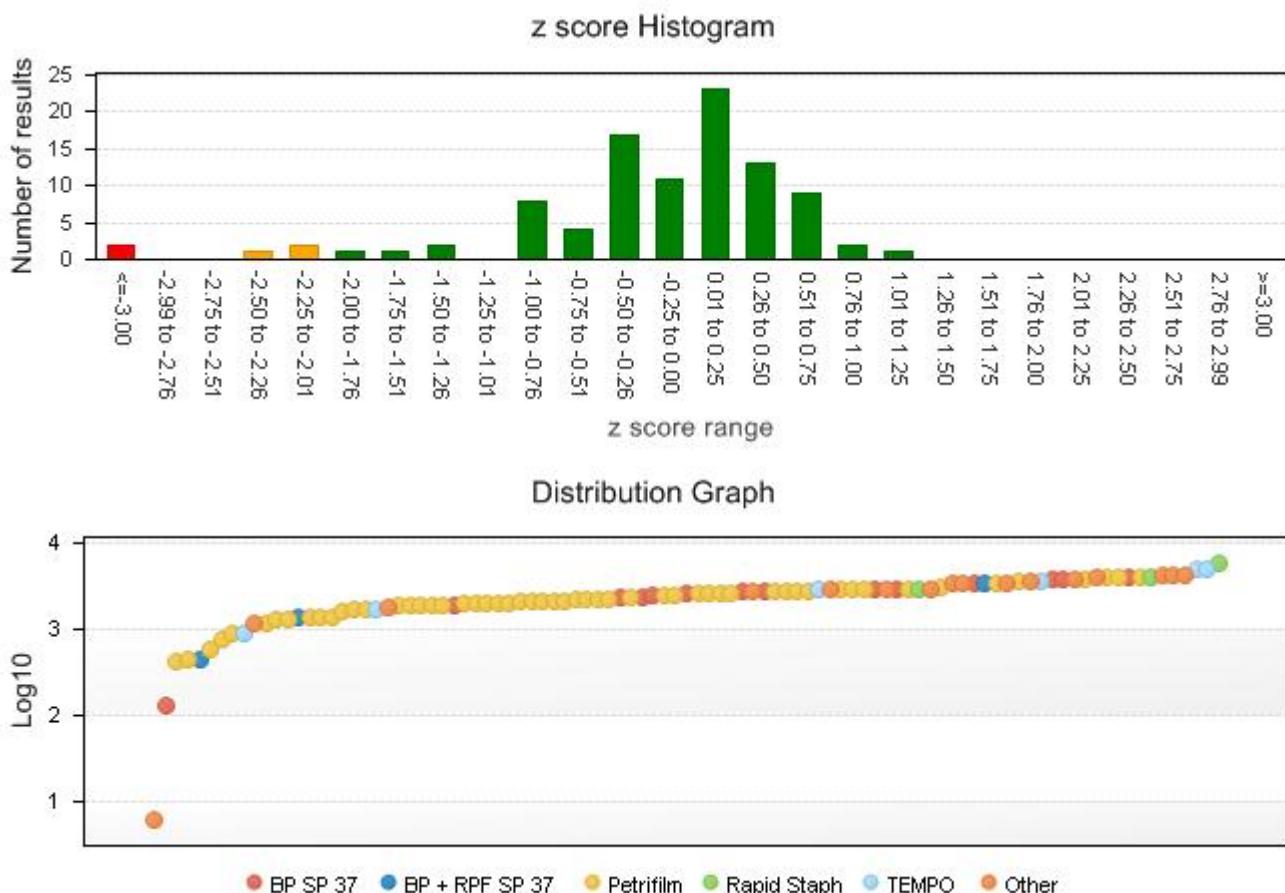
Lab ID	Method	Result (cfu/g)	z score
MT6735	Other	3,500	0.35
MT6736	Petrifilm	2,200	-0.23
MT6737	Petrifilm	2,500	-0.07
MT6738	Petrifilm	2,800	0.07
MT6740	Petrifilm	2,300	-0.18
MT6749	Rapid Staph	3,000	0.15
MT6792	Petrifilm	1,300	-0.88
MT6795	Petrifilm	2,900	0.11
MT6803	Petrifilm	2,900	0.11
MT6806	BP SP 37	2,900	0.11
MT6810	Petrifilm	580	-1.89
MT6811	Petrifilm	1,700	-0.55
MT6812	Petrifilm	2,200	-0.23
MT6813	Petrifilm	2,800	0.07
MT6817	Petrifilm	1,600	-0.63
MT6833	Petrifilm	1,900	-0.41
MT6837	Petrifilm	<10	
MT6838	Petrifilm	450	-2.20
MT6840	Petrifilm	2,700	0.02
MT6846	Other	1,200	-0.98
MT6847	Other	3,000	0.15
MT6856	TEMPO	1,700	-0.55
MT6859	Petrifilm	2,800	0.07
MT6860	Rapid Staph	6,000	1.01
MT6861	Petrifilm	1,900	-0.41
MT6874	Petrifilm	2,800	0.07
MT6889	Petrifilm	2,000	-0.35
MT6890	TEMPO	890	-1.35
MT6896	Other	4,200	0.57
MT6902	Petrifilm	2,000	-0.35
MT6909	Other	3,600	0.38
MT6912	BP SP 37	2,400	-0.12
MT6949	Other	2,950	0.13
MT6966	Petrifilm	3,200	0.23
MT6972	Petrifilm	760	-1.55
MT6975	Petrifilm	1,200	-0.98
MT6996	Petrifilm	880	-1.37
MT7038	BP SP 37	1,900	-0.41

Data Statistics

	Value
Number of Results	99
Number of Excluded Results	3
Mean	3.36 log10
Median	3.42 log10
Standard Deviation	0.26 log10
Robust Standard Deviation	0.18 log10
Result Range	130 to 6000 cfu/g

Performance Statistics

	Value
Assigned Value	2,650 cfu/g
Uncertainty of Assigned Value	0.02 log10
SDPA	0.35 log10
Satisfactory Range	529 to 13,281 cfu/g
Satisfactory z scores	94.8%
Questionable z scores	3.1%
Unsatisfactory z scores	2.1%



Methodology Summary

Method	Number of Results	Excluded Results	% of Total	Median	Robust SD	Range	Sat.
				Log10			%
BP SP 37	15	1	15.15	3.45	0.10	130 to 4050	92.9
BP + RPF SP 37	3	0	3.03	3.14	0.59	460 to 3486	66.7
Petrifilm	56	1	56.57	3.32	0.16	430 to 4100	96.4
Rapid Staph	3	0	3.03	3.61	0.20	3000 to 6000	100.0
TEMPO	6	0	6.06	3.52	0.27	890 to 5000	100.0
Other	16	1	16.16	3.54	0.10	1200 to 4400	93.8
All	99	3	100	3.42	0.18	130 to 6000	94.8

Comments

The sample contained *Staphylococcus aureus* at an assigned value of 2,650 cfu/g.

The most significant food borne coagulase positive staphylococcus is *Staphylococcus aureus*. *Staphylococcus aureus* can be present on the skin, and in the nose and throat of healthy individuals with no ill effect. It is important to test for it in foods as it can be an indicator of general hygiene and, and be a causative agent of food poisoning.

Sample: 756 - Quantitative Package vial B

Analyte: Coagulase positive staphylococci (P/A)

Lab ID	Method	Result
MT4014	Other	Detected
MT4206	BP SP 37	Detected
MT4241	Rapid Staph	Detected
MT4761	BP SP 37	Detected
MT5180	Other	Detected
MT5180	BP SP 37	Detected
MT5889	BP + RPF SP 37	Detected
MT6045	Petrifilm	Detected
MT6092	BP SP 37	Detected
MT6130	Petrifilm	Detected
MT6492	BP SP 37	Detected
MT6536	BP SP 37	Not Detected
MT6632	Rapid Staph	Detected
MT6632	TEMPO	Detected
MT6806	Other	Detected
MT6846	Other	Detected
MT6859	Petrifilm	Detected
MT6874	Other	Detected
MT6896	Other	Detected
MT6909	Other	Detected
MT6972	Petrifilm	Detected

Data Statistics

	Result
Assigned Value	Detected
Number of Results	21
Satisfactory	95%

Methodology Summary

Method	% Satisfactory
BP SP 37	83%
BP + RPF SP 37	100%
Petrifilm	100%
Rapid Staph	100%
TEMPO	100%
Other	100%

Comments

The sample contained *Staphylococcus aureus* at an approximate level of 2,650 cfu/g. The assigned value is therefore 'detected'.

The most significant food borne coagulase positive staphylococcus is *Staphylococcus aureus*. *Staphylococcus aureus* can be present on the skin, and in the nose and throat of healthy individuals with no ill effect. It is important to test for it in foods as it can be an indicator of general hygiene and, and be a causative agent of food poisoning.

Sample: 756 - Quantitative Package vial B

Analyte: Yeast

Lab ID	Method	Result (cfu/g)
MT0172	DRBC SP 22-25	<100
MT0180	Petrifilm	<10
MT1020	Other	<10
MT1038	Petrifilm	<10
MT4014	RB SP 22-25	<10
MT4168	OGYE PP 22-25	<10
MT4206	YGC SP 22-25	<10
MT4241	Petrifilm	<10
MT4295	Other	<10
MT4761	Other	<10
MT5180	DG18 SP 22-25	<100
MT5180	DRBC SP 22-25	<100
MT5416	DRBC SP 22-25	<10
MT5574	Other	<10
MT5574	Petrifilm	<10
MT5700	YGC SP 22-25	<10
MT5889	Other	<10
MT6045	Petrifilm	<10
MT6063	Petrifilm	<100
MT6092	OGYE SP 22-25	<10
MT6492	DRBC PP 22-25	<10
MT6523	Petrifilm	<10
MT6632	Petrifilm	<10
MT6665	Petrifilm	500
MT6674	Petrifilm	<100
MT6691	Petrifilm	<100
MT6694	Petrifilm	<10
MT6699	Other	<10
MT6713	Petrifilm	<10
MT6723	DG18 PP 22-25	<10
MT6735	Other	<10
MT6737	Petrifilm	<10
MT6740	Petrifilm	<10
MT6780	Other	<10
MT6792	Petrifilm	<10
MT6806	DG18 SP 22-25	<10
MT6810	Petrifilm	<10
MT6811	Petrifilm	<10
MT6812	Petrifilm	<100
MT6813	DRBC SP 22-25	<10
MT6833	Petrifilm	<10
MT6837	Petrifilm	<10
MT6846	Other	<10
MT6847	Other	<10
MT6859	Petrifilm	<10
MT6860	Petrifilm	6,000
MT6870	Petrifilm	<100
MT6874	Petrifilm	<10
MT6889	Other	<10
MT6890	Other	21,000
MT6896	Other	<10
MT6909	Other	<10
MT6912	Petrifilm	<10
MT6949	Other	<10
MT6972	Petrifilm	<10
MT6996	Petrifilm	<10

Data Statistics

	Value
Number of Results	56
Number of Excluded Results	N/A
Mean	N/A
Median	N/A
Standard Deviation	N/A
Robust Standard Deviation	N/A
Result Range	500 to 21,000 cfu/g

Performance Statistics

	Value
Assigned Value	Absent
Uncertainty of Assigned Value	N/A
SDPA	N/A
Satisfactory Range	N/A
Satisfactory z scores	N/A
Questionable z scores	N/A
Unsatisfactory z scores	N/A

Comments

The sample did not contain yeast. The assigned value is therefore 'absent' using a detection level of <10 cfu/g.

Yeasts are simply fungi whose main growth form is unicellular and which usually replicate by budding.

Sample: 756 - Quantitative Package vial B

Analyte: Mould

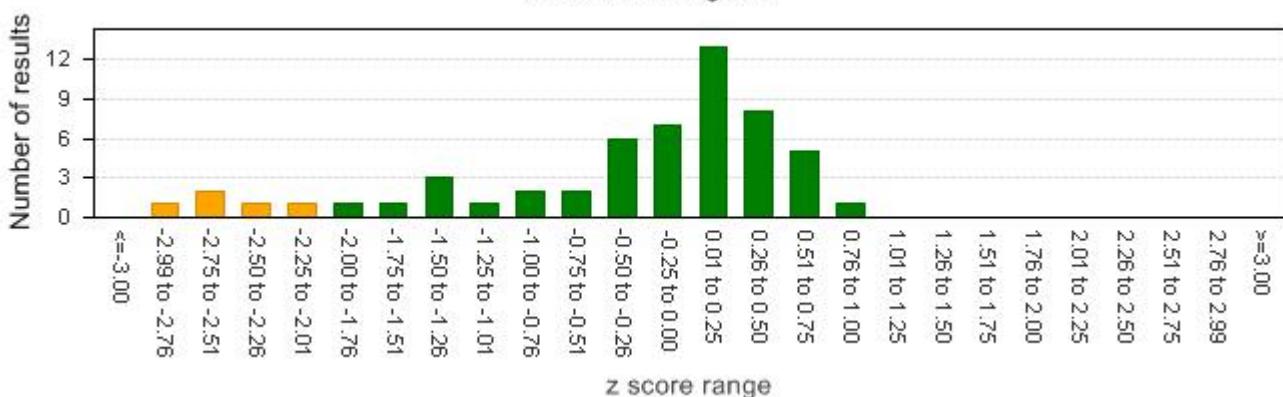
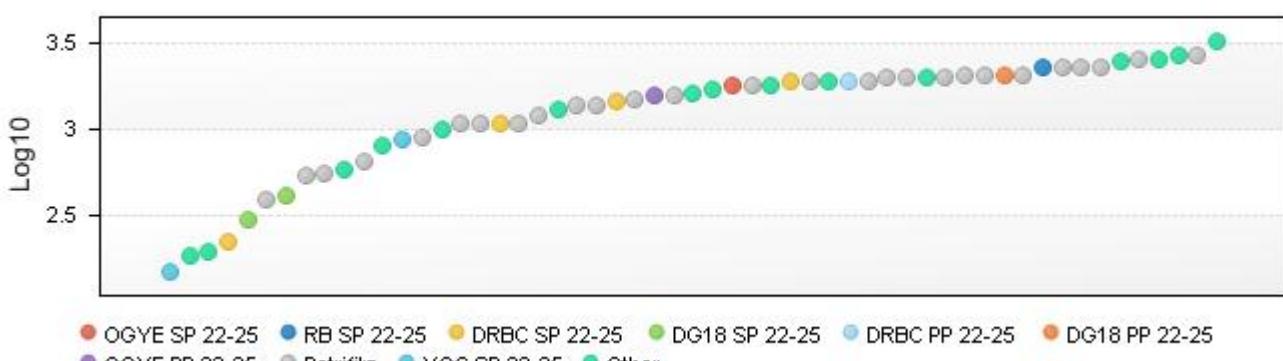
Lab ID	Method	Result (cfu/g)	z score
MT0172	DRBC SP 22-25	1,900	0.18
MT0180	Petrifilm	1,900	0.18
MT1020	Other	2,700	0.61
MT1038	Petrifilm	2,100	0.30
MT4014	RB SP 22-25	2,300	0.41
MT4168	OGYE PP 22-25	1,600	-0.04
MT4206	YGC SP 22-25	885	-0.77
MT4241	Petrifilm	1,400	-0.20
MT4295	Other	820	-0.87
MT4761	Other	1,900	0.18
MT5180	DG18 SP 22-25	300	-2.12
MT5180	DRBC SP 22-25	227	-2.46
MT5416	DRBC SP 22-25	1,455	-0.16
MT5574	Other	3,300	0.86
MT5574	Petrifilm	2,700	0.61
MT5700	YGC SP 22-25	150	-2.98
MT5889	Other	595	-1.27
MT6045	Petrifilm	550	-1.36
MT6063	Petrifilm	2,100	0.30
MT6092	OGYE SP 22-25	1,800	0.11
MT6492	DRBC PP 22-25	1,900	0.18
MT6523	Petrifilm	2,300	0.41
MT6632	Petrifilm	2,000	0.24
MT6665	Petrifilm	400	-1.76
MT6674	Petrifilm	1,100	-0.50
MT6691	Petrifilm	650	-1.16
MT6694	Petrifilm	2,000	0.24
MT6699	Other	2,000	0.24
MT6713	Petrifilm	2,600	0.56
MT6723	DG18 PP 22-25	2,100	0.30
MT6735	Other	2,600	0.56
MT6737	Petrifilm	1,500	-0.12
MT6740	Petrifilm	1,200	-0.40
MT6780	Other	1,315	-0.28
MT6792	Petrifilm	2,300	0.41
MT6806	DG18 SP 22-25	420	-1.70
MT6810	Petrifilm	2,000	0.24
MT6811	Petrifilm	1,100	-0.50
MT6812	Petrifilm	1,400	-0.20
MT6813	DRBC SP 22-25	1,100	-0.50
MT6833	Petrifilm	1,100	-0.50
MT6837	Petrifilm	1,600	-0.04
MT6846	Other	1,000	-0.62
MT6847	Other	1,700	0.04
MT6859	Petrifilm	2,300	0.41
MT6860	Petrifilm	<10	
MT6870	Petrifilm	1,800	0.11
MT6874	Petrifilm	1,900	0.18
MT6889	Other	1,800	0.11
MT6890	Other	200	-2.62
MT6896	Other	190	-2.68
MT6909	Other	2,500	0.52
MT6912	Petrifilm	900	-0.75
MT6949	Other	1,650	0.00
MT6972	Petrifilm	560	-1.34
MT6996	Petrifilm	2,100	0.30

Data Statistics

	Value
Number of Results	56
Number of Excluded Results	1
Mean	3.10 log10
Median	3.22 log10
Standard Deviation	0.33 log10
Robust Standard Deviation	0.21 log10
Result Range	150 to 3300 cfu/g

Performance Statistics

	Value
Assigned Value	1,650 cfu/g
Uncertainty of Assigned Value	0.04 log10
SDPA	0.35 log10
Satisfactory Range	329 to 8,270 cfu/g
Satisfactory z scores	90.9%
Questionable z scores	9.1%
Unsatisfactory z scores	0.0%

z score Histogram**Distribution Graph**

Methodology Summary

Method	Number of Results	Excluded Results	% of Total	Median	Robust SD	Range	Sat.
				Log10		%	
OGYE SP 22-25	1	0	1.79	3.26	0.00	1800 to 1800	100.0
RB SP 22-25	1	0	1.79	3.36	0.00	2300 to 2300	100.0
DRBC SP 22-25	4	0	7.14	3.10	0.18	227 to 1900	75.0
DG18 SP 22-25	2	0	3.57	2.55	0.11	300 to 420	50.0
DRBC PP 22-25	1	0	1.79	3.28	0.00	1900 to 1900	100.0
DG18 PP 22-25	1	0	1.79	3.32	0.00	2100 to 2100	100.0
OGYE PP 22-25	1	0	1.79	3.20	0.00	1600 to 1600	100.0
Petrifilm	28	1	50	3.26	0.16	400 to 2700	100.0
YGC SP 22-25	2	0	3.57	2.56	0.57	150 to 885	50.0
Other	15	0	26.79	3.23	0.27	190 to 3300	86.7
All	56	1	100	3.22	0.21	150 to 3300	90.9

Comments

The sample contained the mould *Penicillium chrysogenum* at an assigned value of 1,650 cfu/g.

Visible mould growth can often be seen on foods, such as bread and vegetables, and in the environment, such as in bathrooms and air conditioning units. Many fungi are saprophytes, causing spoilage of foods and other commodities.

Sample: 756 - Quantitative Package vial B**Analyte: Yeast & Mould**

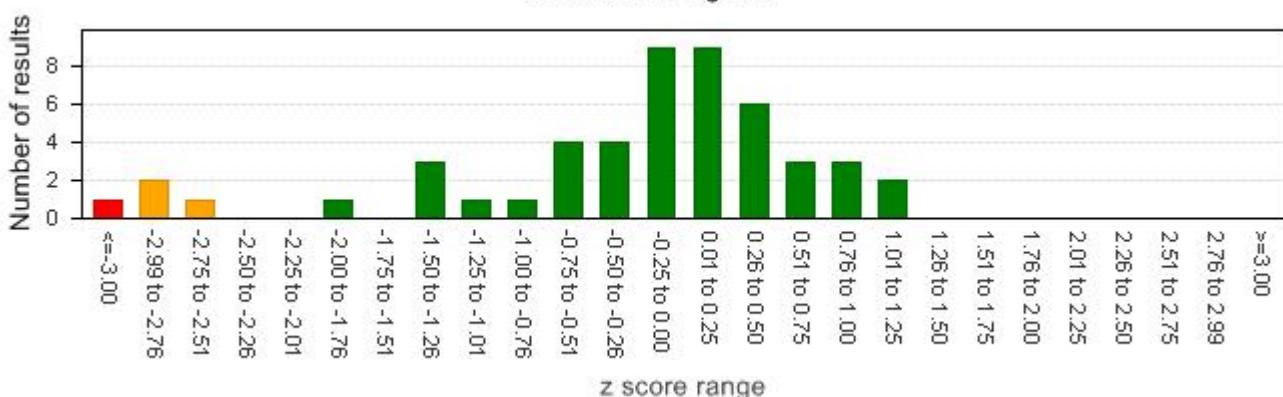
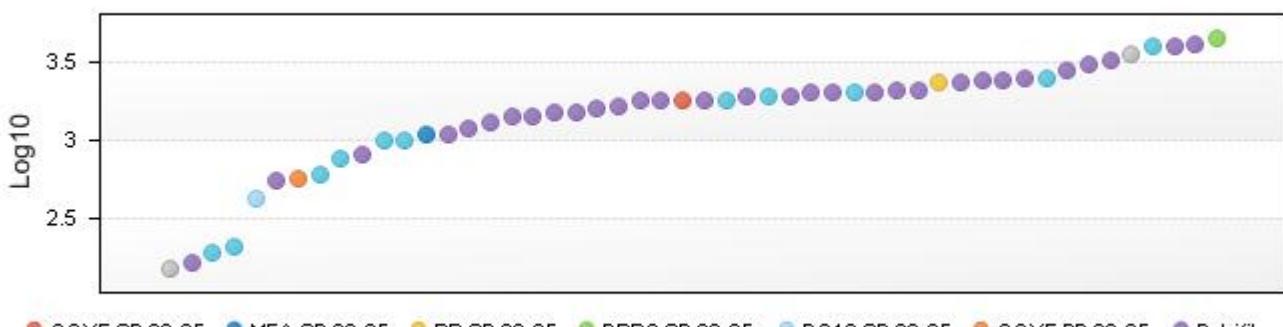
Lab ID	Method	Result (cfu/g)	z score
MT0180	Petrifilm	1,900	0.07
MT1019	Other	210	-2.67
MT1032	Petrifilm	2,400	0.36
MT1040	Petrifilm	2,800	0.55
MT4014	RB SP 22-25	2,300	0.30
MT4278	Petrifilm	2,100	0.19
MT4490	Petrifilm	1,800	0.00
MT4761	Other	1,900	0.07
MT5700	YGC SP 22-25	150	-3.08
MT5889	Other	595	-1.37
MT6037	Petrifilm	1,300	-0.40
MT6040	Petrifilm	1,800	0.00
MT6042	Petrifilm	2,400	0.36
MT6043	Petrifilm	3,000	0.63
MT6045	Petrifilm	550	-1.47
MT6046	Petrifilm	1,500	-0.23
MT6047	Petrifilm	1,600	-0.15
MT6063	Petrifilm	2,100	0.19
MT6092	OGYE SP 22-25	1,800	0.00
MT6130	Petrifilm	1,800	0.00
MT6131	Petrifilm	2,000	0.13
MT6253	Petrifilm	4,000	0.99
MT6254	Other	1,000	-0.73
MT6255	Petrifilm	1,430	-0.29
MT6260	Petrifilm	1,500	-0.23
MT6367	Petrifilm	3,200	0.71
MT6449	Other	760	-1.07
MT6536	MEA SP 22-25	1,091	-0.62
MT6632	Petrifilm	2,000	0.13
MT6640	OGYE PP 22-25	570	-1.43
MT6657	YGC SP 22-25	3,500	0.83
MT6658	Petrifilm	4,100	1.02
MT6679	Petrifilm	165	-2.97
MT6689	Petrifilm	1,100	-0.61
MT6699	Other	2,000	0.13
MT6718	Petrifilm	2,500	0.41
MT6749	Other	3,900	0.96
MT6792	Petrifilm	2,300	0.30
MT6795	Petrifilm	1,200	-0.50
MT6803	Petrifilm	1,900	0.07
MT6806	DG18 SP 22-25	420	-1.81
MT6840	Petrifilm	1,400	-0.31
MT6846	Other	1,000	-0.73
MT6856	Other	1,800	0.00
MT6861	Petrifilm	2,000	0.13
MT6896	Other	190	-2.79
MT6909	Other	2,500	0.41
MT6918	Petrifilm	1,650	-0.11
MT6975	Petrifilm	810	-0.99
MT7038	DRBC SP 22-25	4,500	1.14

Data Statistics

	Value
Number of Results	50
Number of Excluded Results	0
Mean	3.15 log10
Median	3.26 log10
Standard Deviation	0.35 log10
Robust Standard Deviation	0.21 log10
Result Range	150 to 4500 cfu/g

Performance Statistics

	Value
Assigned Value	1,800 cfu/g
Uncertainty of Assigned Value	0.04 log10
SDPA	0.35 log10
Satisfactory Range	359 to 9,021 cfu/g
Satisfactory z scores	92.0%
Questionable z scores	6.0%
Unsatisfactory z scores	2.0%

z score Histogram**Distribution Graph**

● OGYE SP 22-25 ● MEA SP 22-25 ● RB SP 22-25 ● DRBC SP 22-25 ● DG18 SP 22-25 ● OGYE PP 22-25 ● Petrifilm
● YGC SP 22-25 ● Other

Methodology Summary

Method	Number of Results	Excluded Results	% of Total	Median	Robust SD	Range	Sat. %
				Log10	Log10	Log10	
OGYE SP 22-25	1	0	2	3.26	0.00	1800 to 1800	100.0
MEA SP 22-25	1	0	2	3.04	0.00	1091 to 1091	100.0
RB SP 22-25	1	0	2	3.36	0.00	2300 to 2300	100.0
DRBC SP 22-25	1	0	2	3.65	0.00	4500 to 4500	100.0
DG18 SP 22-25	1	0	2	2.62	0.00	420 to 420	100.0
OGYE PP 22-25	1	0	2	2.76	0.00	570 to 570	100.0
Petrifilm	31	0	62	3.28	0.15	165 to 4100	96.8
YGC SP 22-25	2	0	4	2.86	1.01	150 to 3500	50.0
Other	11	0	22	3.00	0.41	190 to 3900	81.8
All	50	0	100	3.26	0.21	150 to 4500	92.0

Comments

The sample contained the mould *Penicillium chrysogenum* at an assigned value of 1,800 cfu/g. The sample did not contain yeast.

Fungi, including yeast and moulds, are ubiquitous throughout the environment, being found in air, water, soils, animals and foods. They can survive adverse conditions by the production of spores. Many fungi are saprophytes, causing spoilage of foods and other commodities.

Sample: 757 - Qualitative Package vial A

Analyte: Escherichia coli O157 (P/A)

Lab ID	Method	Result
MT0186	BROTH + CT-SMAC	Detected
MT1019	PCR	Detected
MT1019	VIDAS	Detected
MT1020	ELISA	Detected
MT1030	PCR	Detected
MT1031	Other	Detected
MT1040	PCR	Detected
MT1040	REVEAL	Detected
MT4057	Other	Detected
MT4057	PCR	Detected
MT4075	Other	Detected
MT4154	PCR	Detected
MT4155	REVEAL	Detected
MT4168	Other	Detected
MT4285	Other	Not Detected
MT4388	PCR	Detected
MT4490	PCR	Detected
MT5771	Other	Detected
MT5897	BROTH + CT-SMAC	Detected
MT5897	Other	Detected
MT5897	PCR	Detected
MT6037	VIDAS	Detected
MT6040	PCR	Detected
MT6042	VIDAS	Detected
MT6043	PCR	Detected
MT6045	VIDAS	Detected
MT6046	PCR	Not Detected
MT6047	VIDAS	Detected
MT6092	IMS + CT-SMAC	Detected
MT6104	REVEAL	Not Detected
MT6130	PCR	Detected
MT6131	VIDAS	Detected
MT6158	PCR	Detected
MT6173	PCR	Detected
MT6245	ELISA	Detected
MT6255	VIDAS	Detected
MT6257	PCR	Detected
MT6260	PCR	Detected
MT6338	Other	Detected
MT6367	PCR	Detected
MT6523	PCR	Detected
MT6541	Other	Detected
MT6632	Other	Detected
MT6670	PCR	Detected
MT6675	VIDAS	Detected
MT6699	PCR	Detected
MT6701	Other	Detected
MT6715	VIDAS	Detected
MT6723	PCR	Detected
MT6724	PCR	Detected
MT6724	Other	Detected
MT6727	Other	Detected
MT6729	Other	Detected
MT6735	REVEAL	Detected
MT6737	PCR	Detected
MT6738	Other	Detected
MT6749	REVEAL	Detected
MT6770	PCR	Detected
MT6790	PCR	Detected
MT6792	Other	Detected
MT6795	PCR	Detected
MT6798	PCR	Detected

Sample: 757 - Qualitative Package vial A

Analyte: Escherichia coli O157 (P/A)

Lab ID	Method	Result
MT6799	Other	Detected
MT6802	PCR	Detected
MT6803	PCR	Detected
MT6808	PCR	Detected
MT6813	VIDAS	Detected
MT6840	PCR	Detected
MT6847	PCR	Detected
MT6859	VIDAS	Detected
MT6896	Other	Detected
MT6906	PCR	Not Detected
MT6909	Other	Detected
MT6915	Other	Detected
MT6916	PCR	Detected
MT6918	PCR	Detected
MT6949	Other	Detected
MT6957	PCR	Detected
MT6966	PCR	Detected
MT6974	PCR	Detected
MT6975	ELISA	Detected
MT6986	Other	Detected
MT6996	PCR	Detected
MT7018	REVEAL	Detected
MT7038	PCR	Detected

Data Statistics

	Result
Assigned Value	Detected
Number of Results	85
Satisfactory	95%

Methodology Summary

Method	% Satisfactory
BROTH + CT-SMAC	100%
IMS + CT-SMAC	100%
REVEAL	83%
PCR	95%
ELISA	100%
VIDAS	100%
Other	95%

Comments

The sample contained *Escherichia coli* O157 (non toxigenic strain) at an approximate level of 68 cfu/g. The assigned value is therefore *Escherichia coli* O157 'detected'.

Escherichia coli belongs to the Enterobacteriaceae family and the coliform group of indicator organisms. Cells of this organism are typically Gram-negative rods that are motile, oxidase negative, produce gas from lactose at 37 and 44°C, possess the enzyme β-glucuronidase and produce indole from tryptophan at 44°C. Some strains of *Escherichia coli* O157, in contrast, do not grow at 44°C and do not possess the β-glucuronidase enzyme, so their presence may not be detected on chromogenic agars and in standard laboratory isolation procedures. Differentiation of *Escherichia coli* O157 from most other strains of *Escherichia coli* can usually be achieved using sorbitol MacConkey agar, as most strains of *Escherichia coli* O157 do not ferment sorbitol. There are also commercially available kits for confirmation of suspect colonies, including latex agglutination kits.

Sample: 757 - Qualitative Package vial A

Analyte: Listeria species (P/A)

Lab ID	Method	Result
MT0186	Fraser + ALOA 37	Not Detected
MT1014	VIDAS	Detected
MT1019	PCR	Detected
MT1019	VIDAS	Detected
MT1032	Other	Detected
MT1038	PCR	Detected
MT1040	PCR	Detected
MT4014	VIDAS	Detected
MT4155	ELISA	Detected
MT4168	Rapid L.mono	Detected
MT4181	VIDAS	Detected
MT4241	VIDAS	Detected
MT4278	VIDAS	Detected
MT4295	Other	Detected
MT4388	Broth 37/agar 37 (Various)	Detected
MT4490	PCR	Detected
MT4908	Other	Detected
MT5574	PCR	Detected
MT5731	Fraser + ALOA 37	Detected
MT5897	Broth 37/agar 37 (Various)	Detected
MT5897	PCR	Detected
MT5995	Other	Detected
MT6037	Fraser + ALOA 37	Detected
MT6040	PCR	Detected
MT6042	Other	Detected
MT6043	Broth 37/agar 37 (Various)	Detected
MT6063	Other	Detected
MT6104	VIDAS	Detected
MT6130	Fraser + ALOA 37	Detected
MT6158	VIDAS	Detected
MT6173	PCR	Detected
MT6245	ELISA	Detected
MT6338	Other	Detected
MT6523	PCR	Detected
MT6658	Other	Detected
MT6674	Other	Detected
MT6675	VIDAS	Detected
MT6679	PCR	Detected
MT6689	Other	Detected
MT6691	Other	Detected
MT6699	PCR	Detected
MT6713	PCR	Detected
MT6718	PCR	Detected
MT6723	VIDAS	Detected
MT6724	PCR	Detected
MT6727	Other	Detected
MT6729	Other	Detected
MT6735	Other	Detected
MT6736	VIDAS	Detected
MT6737	Other	Detected
MT6738	Other	Detected
MT6749	Other	Detected
MT6770	PCR	Detected
MT6790	PCR	Detected
MT6792	Other	Detected
MT6802	PCR	Detected
MT6808	PCR	Detected
MT6812	Other	Detected
MT6813	VIDAS	Detected
MT6833	VIDAS	Detected
MT6837	Other	Detected
MT6840	PCR	Detected

Sample: 757 - Qualitative Package vial A

Analyte: Listeria species (P/A)

Lab ID	Method	Result
MT6847	PCR	Detected
MT6859	VIDAS	Detected
MT6861	VIDAS	Detected
MT6870	Other	Detected
MT6889	Other	Detected
MT6896	Other	Detected
MT6906	PCR	Detected
MT6909	Other	Detected
MT6912	Other	Detected
MT6915	Other	Detected
MT6918	PCR	Detected
MT6949	Other	Detected
MT6957	PCR	Detected
MT6975	ELISA	Detected
MT6986	Other	Detected
MT6996	PCR	Detected
MT7018	Other	Detected

Data Statistics

	Result
Assigned Value	Detected
Number of Results	79
Satisfactory	99%

Methodology Summary

Method	% Satisfactory
Fraser + ALOA 37	75%
Broth 37/agar 37 (Various)	100%
Rapid L.mono	100%
VIDAS	100%
PCR	100%
ELISA	100%
Other	100%

Comments

The sample contained *Listeria welshimeri* at an approximate inoculum level of 27 cfu/g. The assigned value is *Listeria* species 'detected'.

There are ten species of *Listeria*, the most clinically significant being *Listeria monocytogenes*, which is pathogenic for humans and animals. While other members of the *Listeria* genus are not usually implicated in disease, their presence indicates an increased risk of contamination by *Listeria monocytogenes*.

Lab ID	Method	Result
MT1019	Biochemical	Listeria welshimeri
MT4295	Biochemical	Listeria welshimeri
MT4908	Biochemical	Listeria welshimeri
MT5574	Biochemical	Listeria welshimeri
MT5731	Other	Listeria welshimeri
MT5897	Biochemical	Listeria welshimeri
MT6104	Biochemical	Listeria welshimeri
MT6130	Biochemical	Listeria welshimeri
MT6158	Biochemical	Listeria welshimeri
MT6523	Biochemical	Listeria welshimeri
MT6658	Other	Listeria innocua
MT6689	Other	Listeria welshimeri
MT6699	Biochemical	Listeria welshimeri
MT6713	Biochemical	Listeria welshimeri
MT6724	Biochemical	Listeria welshimeri
MT6727	Biochemical	Listeria welshimeri
MT6729	Other	Listeria welshimeri
MT6737	Other	Listeria welshimeri
MT6738	Biochemical	Listeria welshimeri
MT6770	Biochemical	Listeria welshimeri
MT6790	Other	Listeria welshimeri
MT6802	Biochemical	Listeria welshimeri
MT6808	Biochemical	Listeria welshimeri
MT6811	Other	Listeria welshimeri
MT6812	Biochemical	Listeria welshimeri
MT6813	Other	Listeria welshimeri
MT6896	Biochemical	Listeria welshimeri
MT6909	Other	Listeria innocua
MT6949	Other	Listeria welshimeri
MT6957	Biochemical	Listeria welshimeri
MT6996	Biochemical	Listeria welshimeri

Data Statistics

	Result
Assigned Value	Listeria welshimeri
Number of Results	31
Satisfactory	94%

Methodology Summary

Method	% Satisfactory
Biochemical	100%
Other	80%

Comments

The sample contained *Listeria welshimeri* at an approximate inoculum level of 27 cfu/g.

Sample: 757 - Qualitative Package vial A

Analyte: Listeria monocytogenes (P/A)

Lab ID	Method	Result
MT0172	VIDAS	Not Detected
MT0180	VIDAS	Not Detected
MT0186	Fraser + ALOA 37	Not Detected
MT1019	PCR	Not Detected
MT1019	VIDAS	Not Detected
MT1020	ELISA	Not Detected
MT1030	PCR	Not Detected
MT1031	Other	Not Detected
MT1040	PCR	Not Detected
MT4014	Fraser + ALOA 37	Not Detected
MT4057	VIDAS	Not Detected
MT4075	Other	Not Detected
MT4154	PCR	Not Detected
MT4168	Rapid L.mono	Not Detected
MT4241	VIDAS	Not Detected
MT4388	Broth 37/agar 37 (Various)	Not Detected
MT4490	PCR	Not Detected
MT4640	Other	Not Detected
MT4908	Other	Not Detected
MT5574	Other	Not Detected
MT5574	PCR	Not Detected
MT5731	VIDAS	Not Detected
MT5897	Broth 37/agar 37 (Various)	Not Detected
MT5897	PCR	Not Detected
MT5995	Other	Not Detected
MT6037	VIDAS	Not Detected
MT6040	PCR	Not Detected
MT6042	PCR	Not Detected
MT6043	PCR	Not Detected
MT6045	VIDAS	Not Detected
MT6046	PCR	Not Detected
MT6047	VIDAS	Not Detected
MT6092	VIDAS	Not Detected
MT6104	Other	Not Detected
MT6130	VIDAS	Not Detected
MT6131	VIDAS	Not Detected
MT6158	VIDAS	Not Detected
MT6173	PCR	Not Detected
MT6245	ELISA	Not Detected
MT6253	VIDAS	Not Detected
MT6254	VIDAS	Not Detected
MT6255	VIDAS	Not Detected
MT6257	VIDAS	Not Detected
MT6260	PCR	Not Detected
MT6449	Other	Not Detected
MT6523	PCR	Not Detected
MT6541	Other	Not Detected
MT6632	VIDAS	Not Detected
MT6632	Other	Not Detected
MT6640	Fraser + PL 37	Detected
MT6658	Other	Not Detected
MT6674	VIDAS	Not Detected
MT6675	VIDAS	Not Detected
MT6679	PCR	Not Detected
MT6689	Other	Not Detected
MT6699	PCR	Not Detected
MT6713	Other	Not Detected
MT6715	PCR	Not Detected
MT6718	PCR	Not Detected
MT6723	VIDAS	Not Detected
MT6724	Other	Not Detected
MT6724	PCR	Not Detected

Sample: 757 - Qualitative Package vial A

Analyte: Listeria monocytogenes (P/A)

Lab ID	Method	Result
MT6727	Other	Not Detected
MT6729	Other	Not Detected
MT6735	Other	Not Detected
MT6737	Other	Not Detected
MT6738	Other	Not Detected
MT6770	PCR	Not Detected
MT6790	PCR	Not Detected
MT6792	Other	Not Detected
MT6795	PCR	Not Detected
MT6798	PCR	Not Detected
MT6799	Other	Not Detected
MT6802	PCR	Not Detected
MT6803	PCR	Not Detected
MT6808	PCR	Not Detected
MT6813	Other	Not Detected
MT6838	Other	Detected
MT6840	PCR	Not Detected
MT6847	PCR	Not Detected
MT6859	VIDAS	Not Detected
MT6861	VIDAS	Not Detected
MT6896	Other	Not Detected
MT6906	PCR	Not Detected
MT6909	Other	Not Detected
MT6912	Other	Not Detected
MT6918	PCR	Not Detected
MT6949	Other	Not Detected
MT6957	PCR	Not Detected
MT6966	PCR	Not Detected
MT6974	PCR	Detected
MT6975	PCR	Not Detected
MT6986	Other	Not Detected

Data Statistics

	Result
Assigned Value	Not Detected
Number of Results	93
Satisfactory	97%

Methodology Summary

Method	% Satisfactory
Fraser + ALOA 37	100%
Fraser + PL 37	0%
Broth 37/agar 37 (Various)	100%
Rapid L.mono	100%
VIDAS	100%
PCR	97%
ELISA	100%
Other	96%

Comments

The sample contained *Listeria welshimeri* at an approximate inoculum level of 27 cfu/g. The assigned value is *Listeria monocytogenes* 'not detected'.

There are ten species of *Listeria*, the most clinically significant being *Listeria monocytogenes*, which is pathogenic for humans and animals. While other members of the *Listeria* genus are not usually implicated in disease, their presence indicates an increased risk of contamination by *Listeria monocytogenes*.

Sample: 757 - Qualitative Package vial A

Analyte: **Salmonella species (P/A)**

Lab ID	Method	Result
MT0172	VIDAS	Detected
MT0180	VIDAS	Detected
MT0186	MKTT/RV + XLD + BGA 37	Detected
MT1019	PCR	Detected
MT1019	VIDAS	Detected
MT1020	PCR	Detected
MT1030	PCR	Detected
MT1031	Other	Detected
MT1032	Other	Detected
MT1038	PCR	Detected
MT1040	PCR	Detected
MT4014	VIDAS	Detected
MT4057	Other	Detected
MT4057	PCR	Detected
MT4075	Other	Detected
MT4154	PCR	Detected
MT4155	VIDAS	Detected
MT4168	Rapid test (Various)	Detected
MT4181	VIDAS	Detected
MT4241	VIDAS	Detected
MT4278	VIDAS	Detected
MT4285	Other	Detected
MT4295	Rapid test (Various)	Detected
MT4388	Broth 37/agar 37 (Various)	Detected
MT4490	PCR	Detected
MT4640	Other	Detected
MT4908	Other	Detected
MT5574	Other	Detected
MT5574	VIDAS	Detected
MT5731	MKTT/RV + XLD + BGA 37	Detected
MT5897	MKTT/RV + XLD + BGA 37	Detected
MT5897	Other	Detected
MT5897	PCR	Detected
MT5995	Other	Detected
MT6037	VIDAS	Detected
MT6040	Other	Detected
MT6042	PCR	Detected
MT6043	PCR	Detected
MT6045	VIDAS	Detected
MT6046	VIDAS	Detected
MT6047	VIDAS	Detected
MT6063	Other	Detected
MT6092	MKTT/RV + XLD + BGA 37	Detected
MT6104	VIDAS	Detected
MT6130	PCR	Detected
MT6131	VIDAS	Detected
MT6158	VIDAS	Detected
MT6173	PCR	Detected
MT6173	Other	Detected
MT6245	ELISA	Detected
MT6253	VIDAS	Detected
MT6254	Other	Detected
MT6255	VIDAS	Detected
MT6257	VIDAS	Detected
MT6260	PCR	Detected
MT6338	Other	Detected
MT6367	PCR	Detected
MT6449	VIDAS	Detected
MT6523	VIDAS	Detected
MT6541	Other	Detected
MT6632	VIDAS	Detected
MT6632	Other	Detected

Sample: 757 - Qualitative Package vial A

Analyte: **Salmonella species (P/A)**

Lab ID	Method	Result
MT6640	MKTT/RV + XLD + BGA 37	Detected
MT6658	Other	Detected
MT6674	Chromogenic agar	Detected
MT6674	VIDAS	Detected
MT6675	VIDAS	Detected
MT6679	PCR	Detected
MT6689	Other	Detected
MT6699	PCR	Detected
MT6713	Other	Detected
MT6713	PCR	Detected
MT6715	VIDAS	Detected
MT6718	PCR	Detected
MT6723	VIDAS	Detected
MT6724	Other	Detected
MT6724	PCR	Detected
MT6727	Rapid test (Various)	Detected
MT6729	Other	Detected
MT6735	Other	Detected
MT6736	VIDAS	Detected
MT6737	Other	Detected
MT6738	Other	Detected
MT6749	Other	Detected
MT6770	PCR	Detected
MT6780	PCR	Detected
MT6790	PCR	Detected
MT6792	Other	Detected
MT6795	PCR	Detected
MT6798	PCR	Detected
MT6799	Other	Detected
MT6802	PCR	Detected
MT6803	PCR	Detected
MT6803	Other	Detected
MT6808	Broth 37/agar 37 (Various)	Detected
MT6808	PCR	Detected
MT6811	Rapid test (Various)	Not Detected
MT6812	VIDAS	Detected
MT6813	VIDAS	Detected
MT6833	VIDAS	Detected
MT6837	PCR	Detected
MT6838	Other	Detected
MT6840	PCR	Detected
MT6847	PCR	Detected
MT6859	VIDAS	Detected
MT6861	VIDAS	Detected
MT6870	Rapid test (Various)	Detected
MT6877	Other	Detected
MT6877	PCR	Detected
MT6889	Chromogenic agar	Detected
MT6896	Other	Detected
MT6906	PCR	Detected
MT6909	Other	Detected
MT6912	Other	Detected
MT6915	Other	Detected
MT6918	PCR	Detected
MT6949	Other	Detected
MT6957	PCR	Detected
MT6966	PCR	Detected
MT6974	PCR	Detected
MT6975	PCR	Detected
MT6986	Other	Detected
MT6996	PCR	Detected
MT7018	Other	Detected

Lab ID	Method	Result
MT7038	MKTT/RV + XLD + BGA 37	Detected

Data Statistics

	Result
Assigned Value	Detected
Number of Results	125
Satisfactory	99%

Methodology Summary

Method	% Satisfactory
MKTT/RV + XLD + BGA 37	100%
Broth 37/agar 37 (Various)	100%
VIDAS	100%
Rapid test (Various)	80%
Chromogenic agar	100%
PCR	100%
ELISA	100%
Other	100%

Comments

The sample contained *Salmonella* Indiana at an approximate level of 15 cfu/g. The assigned value is therefore *Salmonella* species 'detected'.

Salmonella Indiana is characteristic of the genus on selective media and in confirmatory tests, being H₂S positive, motile, lactose negative, citrate positive and urease negative. It is a group B *Salmonella* according to the Kauffmann-White Scheme, with a full serological profile of 'O' antigen: 1, 4, 12; 'H' phase 1 antigen: z and 'H' phase 2 antigen: 1, 7. This organism is a wild strain originally isolated from food.

Salmonellae are Gram-negative non-spore forming rods that are oxidase negative and catalase positive, and are members of the Enterobacteriaceae family. Almost all *Salmonella* serotypes cause acute gastro-enteritis and account for a large proportion of all food poisoning outbreaks. Primary sources of Salmonellae are the gastrointestinal tract of animals; the organism can be transmitted via faeces into soil, water, feeds, foods and other animals, including humans.

Sample: 757 - Qualitative Package vial B

Analyte: Escherichia coli O157 (P/A)

Lab ID	Method	Result
MT0186	BROTH + CT-SMAC	Detected
MT1019	PCR	Detected
MT1019	VIDAS	Detected
MT1020	ELISA	Detected
MT1030	PCR	Detected
MT1031	Other	Detected
MT1040	PCR	Detected
MT1040	REVEAL	Detected
MT4057	PCR	Detected
MT4057	Other	Detected
MT4075	Other	Detected
MT4154	PCR	Detected
MT4155	REVEAL	Detected
MT4168	Other	Detected
MT4285	Other	Detected
MT4388	PCR	Detected
MT4490	PCR	Detected
MT5771	Other	Detected
MT5897	BROTH + CT-SMAC	Detected
MT5897	Other	Detected
MT5897	PCR	Detected
MT6037	VIDAS	Detected
MT6040	PCR	Detected
MT6042	VIDAS	Detected
MT6043	PCR	Detected
MT6045	VIDAS	Detected
MT6046	PCR	Detected
MT6047	VIDAS	Detected
MT6092	IMS + CT-SMAC	Detected
MT6104	Other	Detected
MT6130	PCR	Detected
MT6131	PCR	Detected
MT6158	PCR	Detected
MT6173	PCR	Detected
MT6245	ELISA	Detected
MT6255	VIDAS	Detected
MT6257	PCR	Detected
MT6260	PCR	Detected
MT6338	Other	Not Detected
MT6367	PCR	Detected
MT6523	PCR	Detected
MT6541	Other	Detected
MT6632	Other	Detected
MT6670	PCR	Detected
MT6699	PCR	Detected
MT6701	Other	Detected
MT6715	VIDAS	Detected
MT6723	PCR	Detected
MT6724	PCR	Detected
MT6724	Other	Detected
MT6727	Other	Detected
MT6729	Other	Detected
MT6735	PCR	Detected
MT6737	PCR	Detected
MT6738	Other	Detected
MT6749	REVEAL	Detected
MT6770	PCR	Detected
MT6790	PCR	Detected
MT6792	Other	Detected
MT6795	PCR	Detected
MT6798	PCR	Detected
MT6799	Other	Detected

Lab ID	Method	Result
MT6802	PCR	Detected
MT6803	PCR	Detected
MT6808	PCR	Detected
MT6813	VIDAS	Detected
MT6840	PCR	Detected
MT6847	PCR	Detected
MT6859	VIDAS	Detected
MT6896	Other	Detected
MT6906	PCR	Detected
MT6909	Other	Detected
MT6915	Other	Detected
MT6916	PCR	Detected
MT6918	PCR	Detected
MT6949	Other	Detected
MT6957	PCR	Detected
MT6966	PCR	Detected
MT6974	PCR	Detected
MT6975	ELISA	Detected
MT6986	Other	Detected
MT6996	PCR	Detected
MT7018	REVEAL	Detected
MT7038	PCR	Detected

Data Statistics

	Result
Assigned Value	Detected
Number of Results	84
Satisfactory	99%

Methodology Summary

Method	% Satisfactory
BROTH + CT-SMAC	100%
IMS + CT-SMAC	100%
REVEAL	100%
PCR	100%
ELISA	100%
VIDAS	100%
Other	96%

Comments

The sample contained *Escherichia coli* O157 (non toxigenic strain) at an approximate level of 33 cfu/g. The assigned value is therefore *Escherichia coli* O157 'detected'.

Escherichia coli belongs to the Enterobacteriaceae family and the coliform group of indicator organisms. Cells of this organism are typically Gram-negative rods that are motile, oxidase negative, produce gas from lactose at 37 and 44°C, possess the enzyme β-glucuronidase and produce indole from tryptophan at 44°C. Some strains of *Escherichia coli* O157, in contrast, do not grow at 44°C and do not possess the β-glucuronidase enzyme, so their presence may not be detected on chromogenic agars and in standard laboratory isolation procedures. Differentiation of *Escherichia coli* O157 from most other strains of *Escherichia coli* can usually be achieved using sorbitol MacConkey agar, as most strains of *Escherichia coli* O157 do not ferment sorbitol. There are also commercially available kits for confirmation of suspect colonies, including latex agglutination kits.

Lab ID	Method	Result
MT1014	VIDAS	Detected
MT1019	PCR	Detected
MT1019	VIDAS	Detected
MT1032	Other	Detected
MT1038	PCR	Detected
MT1040	PCR	Detected
MT4014	VIDAS	Detected
MT4155	ELISA	Detected
MT4168	Rapid L.mono	Detected
MT4181	VIDAS	Detected
MT4241	VIDAS	Detected
MT4278	VIDAS	Detected
MT4295	Other	Detected
MT4388	Broth 37/agar 37 (Various)	Detected
MT4490	PCR	Detected
MT4908	Other	Detected
MT5574	Other	Detected
MT5731	Fraser + ALOA 37	Detected
MT5897	Broth 37/agar 37 (Various)	Detected
MT5897	PCR	Detected
MT5995	Other	Detected
MT6037	Fraser + ALOA 37	Detected
MT6040	PCR	Detected
MT6042	Other	Detected
MT6043	Broth 37/agar 37 (Various)	Detected
MT6063	Other	Detected
MT6104	VIDAS	Detected
MT6130	Fraser + ALOA 37	Detected
MT6158	VIDAS	Detected
MT6173	PCR	Detected
MT6245	ELISA	Detected
MT6338	Other	Detected
MT6523	PCR	Detected
MT6632	VIDAS	Detected
MT6640	Fraser + PL 37	Detected
MT6658	Other	Detected
MT6674	Other	Detected
MT6675	VIDAS	Detected
MT6679	PCR	Detected
MT6689	Other	Detected
MT6691	Other	Detected
MT6699	PCR	Detected
MT6713	PCR	Detected
MT6718	PCR	Detected
MT6723	VIDAS	Detected
MT6724	PCR	Detected
MT6727	Other	Detected
MT6729	Other	Detected
MT6735	Other	Detected
MT6736	VIDAS	Detected
MT6737	Other	Detected
MT6738	Other	Detected
MT6749	Other	Detected
MT6770	PCR	Detected
MT6790	PCR	Detected
MT6792	Other	Detected
MT6802	PCR	Detected
MT6808	PCR	Detected
MT6812	Other	Detected
MT6813	VIDAS	Detected
MT6833	VIDAS	Detected
MT6837	Other	Detected

Lab ID	Method	Result
MT6840	PCR	Detected
MT6847	PCR	Detected
MT6859	VIDAS	Detected
MT6861	VIDAS	Detected
MT6870	Other	Detected
MT6889	Other	Detected
MT6896	Other	Detected
MT6906	PCR	Detected
MT6909	Other	Detected
MT6912	Other	Detected
MT6915	Other	Detected
MT6918	PCR	Detected
MT6949	Other	Detected
MT6957	PCR	Detected
MT6975	ELISA	Detected
MT6996	PCR	Detected
MT7018	Other	Detected

Data Statistics

	Result
Assigned Value	Detected
Number of Results	79
Satisfactory	100%

Methodology Summary

Method	% Satisfactory
Fraser + ALOA 37	100%
Fraser + PL 37	100%
Broth 37/agar 37 (Various)	100%
Rapid L.mono	100%
VIDAS	100%
PCR	100%
ELISA	100%
Other	100%

Comments

The sample contained *Listeria monocytogenes* at an approximate inoculum level of 24 cfu/g and *Listeria welshimeri* at an approximate inoculum level of 17 cfu/g. The assigned value is *Listeria* species 'detected'.

There are ten species of *Listeria*, the most clinically significant being *Listeria monocytogenes*, which is pathogenic for humans and animals. While other members of the *Listeria* genus are not usually implicated in disease, their presence indicates an increased risk of contamination by *Listeria monocytogenes*.

Lab ID	Method	Identification 1	Identification 2
MT1019	Biochemical	Listeria welshimeri	Listeria monocytogenes
MT4295	Biochemical	Listeria welshimeri	Listeria innocua
MT4908	Biochemical	Listeria welshimeri	Listeria monocytogenes
MT5574	Biochemical	Listeria welshimeri	Listeria monocytogenes
MT5731	Other	Listeria welshimeri	Listeria monocytogenes
MT5897	Biochemical	Listeria monocytogenes	Listeria monocytogenes
MT6130	Biochemical	Listeria monocytogenes	Listeria monocytogenes
MT6158	Biochemical	Listeria welshimeri	Listeria monocytogenes
MT6523	Biochemical	Listeria welshimeri	Listeria monocytogenes
MT6632	Biochemical	Listeria monocytogenes	Listeria monocytogenes
MT6658	Other	Listeria monocytogenes	Listeria monocytogenes
MT6689	Other	Listeria welshimeri	Listeria monocytogenes
MT6699	Biochemical	No Listeria Detected	Listeria monocytogenes
MT6713	Other	Listeria welshimeri	Listeria monocytogenes
MT6724	Biochemical	Listeria welshimeri	Listeria monocytogenes
MT6727	Other	Listeria welshimeri	Listeria monocytogenes
MT6729	Other	Listeria welshimeri	Listeria monocytogenes
MT6737	Other	Listeria welshimeri	Listeria monocytogenes
MT6738	Biochemical	Listeria welshimeri	Listeria monocytogenes
MT6770	Biochemical	Listeria welshimeri	Listeria monocytogenes
MT6790	Other	Listeria welshimeri	Listeria monocytogenes
MT6802	Biochemical	No Listeria Detected	Listeria monocytogenes
MT6808	Biochemical	Listeria welshimeri	Listeria monocytogenes
MT6811	Other	Listeria welshimeri	Listeria monocytogenes
MT6813	Other	Listeria welshimeri	Listeria monocytogenes
MT6896	Biochemical	Listeria welshimeri	Listeria monocytogenes
MT6906	Biochemical	Listeria monocytogenes	Listeria monocytogenes
MT6909	Other	Listeria welshimeri	Listeria monocytogenes
MT6949	Other	Listeria welshimeri	Listeria monocytogenes
MT6957	Biochemical	Listeria welshimeri	Listeria monocytogenes
MT6996	Biochemical	Listeria welshimeri	No Listeria Detected

Data Statistics

	Identification 1	Identification 2
Assigned Value	Listeria welshimeri	Listeria monocytogenes
Number of Results	31	31
Satisfactory	77%	94%

Methodology Summary

Method	Identification 1	Identification 2
Biochemical	68%	89%
Other	92%	100%

Comments

The sample contained *Listeria monocytogenes* at an approximate inoculum level of 24 cfu/g and *Listeria welshimeri* at an approximate inoculum level of 17 cfu/g.

Sample: 757 - Qualitative Package vial B

Analyte: Listeria monocytogenes (P/A)

Lab ID	Method	Result
MT0172	VIDAS	Detected
MT0180	VIDAS	Detected
MT0186	Fraser + ALOA 37	Not Detected
MT1019	PCR	Detected
MT1019	VIDAS	Detected
MT1020	ELISA	Detected
MT1030	PCR	Detected
MT1031	Other	Detected
MT1040	PCR	Detected
MT4014	Fraser + ALOA 37	Detected
MT4057	VIDAS	Detected
MT4075	Other	Detected
MT4154	PCR	Detected
MT4168	Rapid L.mono	Detected
MT4241	VIDAS	Detected
MT4388	PCR	Detected
MT4490	PCR	Detected
MT4908	Other	Detected
MT5574	Other	Detected
MT5574	PCR	Detected
MT5731	VIDAS	Detected
MT5897	Broth 37/agar 37 (Various)	Detected
MT5897	PCR	Detected
MT5897	Other	Detected
MT5995	Other	Detected
MT6037	VIDAS	Detected
MT6040	PCR	Detected
MT6042	PCR	Detected
MT6043	PCR	Detected
MT6045	VIDAS	Detected
MT6046	PCR	Detected
MT6047	VIDAS	Detected
MT6092	VIDAS	Detected
MT6104	Other	Detected
MT6130	VIDAS	Detected
MT6131	PCR	Detected
MT6158	Rapid L.mono	Detected
MT6173	PCR	Detected
MT6245	ELISA	Detected
MT6253	VIDAS	Detected
MT6254	VIDAS	Detected
MT6255	VIDAS	Detected
MT6257	VIDAS	Detected
MT6260	PCR	Detected
MT6449	Other	Not Detected
MT6523	PCR	Detected
MT6541	Other	Detected
MT6632	VIDAS	Detected
MT6632	Other	Detected
MT6658	Other	Detected
MT6674	VIDAS	Detected
MT6679	PCR	Detected
MT6689	Other	Detected
MT6699	PCR	Detected
MT6713	PCR	Detected
MT6715	PCR	Detected
MT6718	PCR	Detected
MT6723	VIDAS	Detected
MT6724	Other	Detected
MT6724	PCR	Detected
MT6727	Other	Detected
MT6729	Other	Detected

Lab ID	Method	Result
MT6735	Other	Detected
MT6737	Other	Detected
MT6738	Other	Detected
MT6770	PCR	Detected
MT6790	PCR	Detected
MT6792	Other	Detected
MT6795	PCR	Detected
MT6798	PCR	Detected
MT6799	Other	Detected
MT6802	PCR	Detected
MT6803	PCR	Detected
MT6808	PCR	Not Detected
MT6812	Other	Detected
MT6813	Other	Detected
MT6838	Other	Detected
MT6840	PCR	Detected
MT6847	PCR	Detected
MT6859	VIDAS	Detected
MT6861	VIDAS	Detected
MT6896	Other	Detected
MT6906	PCR	Detected
MT6909	Other	Detected
MT6912	Other	Detected
MT6918	PCR	Detected
MT6949	Other	Detected
MT6957	PCR	Detected
MT6966	PCR	Detected
MT6974	PCR	Detected
MT6975	PCR	Detected
MT6986	Other	Detected

Data Statistics

	Result
Assigned Value	Detected
Number of Results	92
Satisfactory	97%

Methodology Summary

Method	% Satisfactory
Fraser + ALOA 37	50%
Broth 37/agar 37 (Various)	100%
Rapid L.mono	100%
VIDAS	100%
PCR	97%
ELISA	100%
Other	96%

Comments

The sample contained *Listeria monocytogenes* at an approximate inoculum level of 24 cfu/g and *Listeria welshimeri* at an approximate inoculum level of 17 cfu/g. The assigned value is *Listeria monocytogenes* 'detected'.

There are ten species of *Listeria*, the most clinically significant being *Listeria monocytogenes*, which is pathogenic for humans and animals. While other members of the *Listeria* genus are not usually implicated in disease, their presence indicates an increased risk of contamination by *Listeria monocytogenes*.

Sample: 757 - Qualitative Package vial B

Analyte: **Salmonella species (P/A)**

Lab ID	Method	Result
MT0172	VIDAS	Not Detected
MT0180	VIDAS	Not Detected
MT0186	MKTT/RV + XLD + BGA 37	Not Detected
MT1019	PCR	Not Detected
MT1019	VIDAS	Not Detected
MT1020	PCR	Not Detected
MT1030	PCR	Not Detected
MT1031	Other	Not Detected
MT1032	Other	Not Detected
MT1038	PCR	Not Detected
MT1040	PCR	Not Detected
MT4014	VIDAS	Not Detected
MT4057	PCR	Not Detected
MT4057	Other	Not Detected
MT4075	Other	Not Detected
MT4154	PCR	Not Detected
MT4155	VIDAS	Not Detected
MT4168	Rapid test (Various)	Not Detected
MT4181	VIDAS	Not Detected
MT4241	VIDAS	Not Detected
MT4278	VIDAS	Not Detected
MT4285	Other	Not Detected
MT4295	Rapid test (Various)	Not Detected
MT4388	Broth 37/agar 37 (Various)	Detected
MT4490	PCR	Not Detected
MT4908	Other	Not Detected
MT5574	Other	Not Detected
MT5574	VIDAS	Not Detected
MT5731	MKTT/RV + XLD + BGA 37	Detected
MT5897	Broth 37/agar 37 (Various)	Not Detected
MT5897	Other	Not Detected
MT5897	PCR	Not Detected
MT5995	Other	Not Detected
MT6037	VIDAS	Not Detected
MT6040	Other	Not Detected
MT6042	PCR	Not Detected
MT6043	PCR	Not Detected
MT6045	VIDAS	Not Detected
MT6046	VIDAS	Not Detected
MT6047	VIDAS	Not Detected
MT6063	Other	Not Detected
MT6092	MKTT/RV + XLD + BGA 37	Not Detected
MT6104	VIDAS	Not Detected
MT6130	PCR	Not Detected
MT6131	PCR	Not Detected
MT6158	VIDAS	Not Detected
MT6173	PCR	Not Detected
MT6245	ELISA	Not Detected
MT6253	VIDAS	Not Detected
MT6254	Other	Not Detected
MT6255	VIDAS	Not Detected
MT6257	VIDAS	Not Detected
MT6260	PCR	Not Detected
MT6338	Other	Not Detected
MT6367	PCR	Not Detected
MT6449	VIDAS	Not Detected
MT6523	VIDAS	Not Detected
MT6541	Other	Not Detected
MT6632	VIDAS	Detected
MT6632	Other	Detected
MT6640	MKTT/RV + XLD + BGA 37	Detected
MT6658	Other	Not Detected

Sample: 757 - Qualitative Package vial B

Analyte: **Salmonella species (P/A)**

Lab ID	Method	Result
MT6674	VIDAS	Not Detected
MT6675	VIDAS	Not Detected
MT6679	PCR	Not Detected
MT6689	Other	Not Detected
MT6699	PCR	Not Detected
MT6713	Other	Not Detected
MT6713	PCR	Not Detected
MT6715	VIDAS	Not Detected
MT6718	PCR	Not Detected
MT6723	VIDAS	Not Detected
MT6724	Other	Not Detected
MT6724	PCR	Not Detected
MT6727	Rapid test (Various)	Not Detected
MT6729	Other	Not Detected
MT6735	Other	Not Detected
MT6736	VIDAS	Not Detected
MT6737	Other	Not Detected
MT6738	Other	Not Detected
MT6749	Other	Not Detected
MT6770	PCR	Not Detected
MT6780	PCR	Not Detected
MT6790	PCR	Not Detected
MT6792	Other	Not Detected
MT6795	PCR	Not Detected
MT6798	PCR	Not Detected
MT6799	Other	Not Detected
MT6802	PCR	Not Detected
MT6803	PCR	Not Detected
MT6803	Other	Not Detected
MT6808	Broth 37/agar 37 (Various)	Not Detected
MT6808	PCR	Not Detected
MT6811	Rapid test (Various)	Detected
MT6812	VIDAS	Detected
MT6813	VIDAS	Not Detected
MT6833	VIDAS	Not Detected
MT6837	PCR	Not Detected
MT6838	Other	Detected
MT6840	PCR	Not Detected
MT6847	PCR	Not Detected
MT6859	VIDAS	Not Detected
MT6861	VIDAS	Not Detected
MT6870	Rapid test (Various)	Not Detected
MT6877	Other	Not Detected
MT6877	PCR	Not Detected
MT6889	Chromogenic agar	Not Detected
MT6896	Other	Not Detected
MT6906	PCR	Not Detected
MT6909	Other	Not Detected
MT6912	Other	Not Detected
MT6915	Other	Not Detected
MT6918	PCR	Not Detected
MT6949	Other	Not Detected
MT6957	PCR	Not Detected
MT6966	PCR	Not Detected
MT6974	PCR	Not Detected
MT6975	PCR	Not Detected
MT6986	Other	Not Detected
MT6996	PCR	Not Detected
MT7018	Other	Not Detected
MT7038	VIDAS	Not Detected

Data Statistics

	Result
Assigned Value	Not Detected
Number of Results	122
Satisfactory	93%

Methodology Summary

Method	% Satisfactory
MKTT/RV + XLD + BGA 37	50%
Broth 37/agar 37 (Various)	67%
VIDAS	94%
Rapid test (Various)	80%
Chromogenic agar	100%
PCR	100%
ELISA	100%
Other	94%

Comments

The sample did not contain *Salmonella* species. The assigned value is therefore *Salmonella* species 'not detected'.

Salmonellae are Gram-negative non-spore forming rods that are oxidase negative and catalase positive, and are members of the Enterobacteriaceae family. Almost all *Salmonella* serotypes cause acute gastro-enteritis and account for a large proportion of all food poisoning outbreaks. Primary sources of Salmonellae are the gastrointestinal tract of animals; the organism can be transmitted via faeces into soil, water, feeds, foods and other animals, including humans.