APPENDIX

Appendix A

Microbiological Examination Record Forms

Collector(s): __ _____

No.	Type of Sample	Sampling place	Time	Measure at…….			Storage duration (at……..^{0}C)	Other/Remarks
				Temp.	a_w	pH		

Note/Remarks……

……

……

Colony Counting Result:

Aerobic Plate Count

No.	Plate No.	Dilution							Final Result
		10^{-2}	10^{-3}	10^{-4}	10^{-5}	10^{-6}	10^{-7}	10^{-8}	
							Date:		Signature:

Mold Count

No.	Plate No.	Dilution							Final Result
		10^{-2}	10^{-3}	10^{-4}	10^{-5}	10^{-6}	10^{-7}	10^{-8}	
							Date:		Signature:

Yeast Count

No.	Plate No.	Dilution							Final Result
		10^{-2}	10^{-3}	10^{-4}	10^{-5}	10^{-6}	10^{-7}	10^{-8}	
1									
2									
3									
4									
5									
6									
							Date:		Signature:

Detection of *Salmonella* spp.

No.	Media	Plate	Selective agar	TSI H/G	Urease	Motility	Indole	Lysine - decarboxylase	Lysine - deaminase	VP	Biochem Result	Serogroup	Stock No.
1	BPLS-RV	1	-										
		2	-										
		3											
		4											
		5											
	BPLS-TT	1	-										
		2	-										
		3											
		4											
		5											
	XLT4-RV	1	-										
		2	-										
		3											

Date: …… Signature: ……

MPN of *Escherlichia coli*

No.	LS								EC								EMB								Indole								Final Result
	10^{0}	10^{-1}	10^{-2}	10^{-3}	10^{-4}	10^{-5}	10^{-6}	10^{-7}	10^{0}	10^{-1}	10^{-2}	10^{-3}	10^{-4}	10^{-5}	10^{-6}	10^{-7}	10^{0}	10^{-1}	10^{-2}	10^{-3}	10^{-4}	10^{-5}	10^{-6}	10^{-7}	10^{0}	10^{-1}	10^{-2}	10^{-3}	10^{-4}	10^{-5}	10^{-6}	10^{-7}	
1																																	
2																																	
3																																	
4																																	
5																																	
6																																	
7																																	
8																																	
9																																	
10																																	
																													Date:				Sig:

Date: ………………………………. Signature: ………………………..

Clostridium perfingens

No.	TSC agar				Lactose sulfite medium				Remarks	Final Result
	Plate 1		Plate 2		Plate 1		Plate 2			
	S	L	S	L	S	L	S	L		Not found in 0.1 gram
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										

S = Small colony

L = Large colony

Date	Sig.

Staphylococcus aureus

No.	Plate No.	Baird- Parker					Coagulase Test					Remarks	Final Result
		10^{-1}	10^{-2}	10^{-3}	10^{-4}	10^{-5}	10^{-1}	10^{-2}	10^{-3}	10^{-4}	10^{-5}		
1	1												
	2												
2	1												
	2												
3	1												
	2												
4	1												
	2												
5	1												
	2												
												Date:	Sig:

APPENDIX B

Most probable number table

(http://www.fsis.usda.gov/PDF/MLG_Appendix_2_03.pdf)

Table 1. MPN Index and 95% Confidence Limits for Various Combinations of Positive Tubes in a 3 Tube Dilution Series Using Inoculum Quantities of 10, 1 and 0.1 g (ml).

Combination of Positives	MPN Index per g (ml)	95% Confidence Limits Lower	Upper
0-0-0	<0.03	---	0.095
0-0-1	0.030	0.0015	0.096
0-1-0	0.030	0.0015	0.11
0-1-1	0.061	0.012	0.18
0-2-0	0.062	0.012	0.18
0-3-0	0.094	0.036	0.38
1-0-0	0.036	0.0017	0.18
1-0-1	0.072	0.013	0.18
1-0-2	0.11	0.036	0.38
1-1-0	0.074	0.013	0.20
1-1-1	0.11	0.036	0.38
1-2-0	0.11	0.036	0.42
1-2-1	0.15	0.045	0.42
1-3-0	0.16	0.045	0.42
2-0-0	0.092	0.014	0.38
2-0-1	0.14	0.036	0.42
2-0-2	0.02	0.045	0.42
2-1-0	0.15	0.037	0.42
2-1-1	0.20	0.045	0.42
2-1-2	0.27	0.087	0.94
2-2-0	0.21	0.045	0.42
2-2-1	0.28	0.087	0.94
2-2-2	0.35	0.087	0.94
2-3-0	0.29	0.087	0.94
2-3-1	0.36	0.087	0.94
3-0-0	0.23	0.046	0.94
3-0-1	0.38	0.087	1.1
3-0-2	0.64	0.17	1.8
3-1-0	0.43	0.09	1.8
3-1-1	0.75	0.17	2.0
3-1-2	1.2	0.37	4.2
3-1-3	1.6	0.40	4.2
3-2-0	0.93	0.18	4.2
3-2-1	1.5	0.37	4.2
3-2-2	2.1	0.40	4.3
3-2-3	2.9	0.90	10.
3-3-0	2.4	0.42	10.
3-3-1	4.6	0.90	20.
3-3-2	11.	1.8	41.
3-3-3	>11.	4.2	---

Approved by Laboratory Quality Assurance Division (LQAD)

Table 2. MPN Index and 95% Confidence Limits for Various Combinations of Positive Tubes in a 3 Tube Dilution Series Using Inoculum Quantities of 1, 0.1 and 0.01 g (ml).

Combination of Positives	MPN Index per g (ml)	95% Confidence Limits Lower	Upper
0-0-0	<0.3	-----	0.95
0-0-1	0.30	0.015	0.96
0-1-0	0.30	0.015	1.1
0-1-1	0.61	0.12	1.8
0-2-0	0.62	0.12	1.8
0-3-0	0.94	0.36	3.8
1-0-0	0.36	0.017	1.8
1-0-1	0.72	0.13	1.8
1-0-2	1.1	0.36	3.8
1-1-0	0.74	0.13	2.0
1-1-1	1.1	0.36	3.8
1-2-0	1.1	0.36	4.2
1-2-1	1.5	0.45	4.2
1-3-0	1.6	0.45	4.2
2-0-0	0.92	0.14	3.8
2-0-1	1.4	0.36	4.2
2-0-2	2.0	0.45	4.2
2-1-0	1.5	0.37	4.2
2-1-1	2.0	0.45	4.2
2-1-2	2.7	0.87	9.4
2-2-0	2.1	0.45	4.2
2-2-1	2.8	0.87	9.4
2-2-2	3.5	0.87	9.4
2-3-0	2.9	0.87	9.4
2-3-1	3.6	0.87	9.4
3-0-0	2.3	0.46	9.4
3-0-1	3.8	0.87	11.
3-0-2	6.4	1.7	18.
3-1-0	4.3	0.90	18.
3-1-1	7.5	1.7	20.
3-1-2	12.	3.7	42.
3-1-3	16.	4.0	42.
3-2-0	9.3	1.8	42.
3-2-1	15.	3.7	42.
3-2-2	21.	4.0	43.
3-2-3	29.	9.0	100.
3-3-0	24.	4.2	100.
3-3-1	46.	9.0	200.
3-3-2	110.	18.	410.
3-3-3	>110.	42.	---

Table 3. MPN Index and 95% Confidence Limits for Various Combinations of Positive Tubes in a 3 Tube Dilution Series Using Inoculum Quantities of 0.1, 0.01 and 0.001 g (ml).

Combination of Positives	MPN Index per g (ml)	95% Confidence Limits Lower	Upper
0-0-0	<3.0	---	9.5
0-0-1	3.0	0.15	9.6
0-1-0	3.0	0.15	11.
0-1-1	6.1	1.2	18.
0-2-0	6.2	1.2	18.
0-3-0	9.4	3.6	38.
1-0-0	3.6	0.17	18.
1-0-1	7.2	1.3	18.
1-0-2	11.	3.6	38.
1-1-0	7.4	1.3	20.
1-1-1	11.	3.6	38.
1-2-0	11.	3.6	42.
1-2-1	15.	4.5	42.
1-3-0	16.	4.5	42.
2-0-0	9.2	1.4	38.
2-0-1	14.	3.6	42.
2-0-2	20.	4.5	42.
2-1-0	15.	3.7	42.
2-1-1	20.	4.5	42.
2-1-2	27.	8.7	94.
2-2-0	21.	4.5	42.
2-2-1	28.	8.7	94.
2-2-2	35.	8.7	94.
2-3-0	29.	8.7	94.
2-3-1	36.	8.7	94.
3-0-0	23.	4.6	94.
3-0-1	38.	8.7	110.
3-0-2	64.	17.	180.
3-1-0	43.	9.0	180.
3-1-1	75.	17.	200.
3-1-2	120.	37.	420.
3-1-3	160.	40.	420.
3-2-0	93.	18.	420.
3-2-1	150.	37.	420.
3-2-2	210.	40.	430.
3-2-3	290.	90.	1000.
3-3-0	240.	42.	1000.
3-3-1	460.	90.	2000.
3-3-2	1100.	180.	4100.
3-3-3	>1100.	420.	-

Table 4. MPN Index and 95% Confidence Limits for Various Combinations of Positive Tubes in a 3 Tube Dilution Series Using Inoculum Quantities of .01, 0.001 and 0.0001 g (ml).

Combination of Positives	MPN Index per g (ml)	95% Confidence Limits Lower	Upper
0-0-0	<30.	---	95.
0-0-1	30.	1.5	96.
0-1-0	30.	1.5	110.
0-1-1	61.	12.	180.
0-2-0	62.	12.	180.
0-3-0	94.	36.	380.
1-0-0	36.	1.7	180.
1-0-1	72.	13.	180.
1-0-2	110.	36.	380.
1-1-0	74.	13.	200.
1-1-1	110.	36.	380.
1-2-0	110.	36.	420.
1-2-1	150.	45.	420.
1-3-0	160.	45.	420.
2-0-0	92.	14.	380.
2-0-1	140.	36.	420.
2-0-2	200.	45.	420.
2-1-0	150.	37.	420.
2-1-1	200.	45.	420.
2-1-2	270.	87.	940.
2-2-0	210.	45.	420.
2-2-1	280.	87.	940.
2-2-2	350.	87.	940.
2-3-0	290.	87.	940.
2-3-1	360.	87.	940.
3-0-0	230.	46.	940.
3-0-1	380.	87.	1100.
3-0-2	640.	170.	1800.
3-1-0	430.	90.	1800.
3-1-1	750.	170.	2000.
3-1-2	1200.	370.	4200.
3-1-3	1600.	400.	4200.
3-2-0	930.	180.	4200.
3-2-1	1500.	370.	4200.
3-2-2	2100.	400.	4300.
3-2-3	2900.	900.	10000.
3-3-0	2400.	420.	10000.
3-3-1	4600.	900.	20000.
3-3-2	11000.	1800.	41000.
3-3-3	>11000.	4200.	-

DECLARATION

I, the undersigned, declare that the thesis is my original work and has not been presented for a degree in any university.

Name: Papaspong Jongchansittoe

Signature…….....

Date of submission……..

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