

Appendix 3
Analysis Results for USPS Brentwood Processing and Distribution Center

APPENDIX 3

Test 7 Results Summary

Test 7 on 11/03/01
12 HOURS AT 500 PPMV, AMBIENT RH=46% AND AMBIENT TEMP=60°F

Berkeley Lab – Spore strips

Bacillus Species	Spore Concentration	Number Tested	Number Positive
B. subtilis	10 ⁶	30	5
B. stearothermophilus	10 ⁶	20	14
B. thuringiensis	10 ⁶	30	0
Negative Control	10 ⁶	15	0

EPA Lab – Spore strips

Bacillus Species	Spore Concentration	Number Tested	Number Positive
B. subtilis	10 ⁶	20	4
B. stearothermophilus	10 ⁶	30	0
B. thuringiensis	10 ⁶	10	3

EPA Lab - steri-charts

Bacillus Species	Spore Concentration	SC-SS-25	SC-SS-27	SC-SS-29
B. subtilis	10 ⁴	-	-	-
	10 ⁵	-	-	-
	10 ⁶	-	-	-
	10 ⁷	+	+	-
	10 ⁸	-	-	+

EPA Lab - steri-charts

Bacillus Species	Spore Concentration	SC-BS-13	SC-BS-15	SC-BS-17	SC-BS-19
B. stearothermophilus	10 ³	-	-	-	-
	10 ⁴	+/-	-	-	-
	10 ⁵	-	-	-	+/-
	10 ⁶	+/-	+	+	+
	10 ⁷	+	+	+	+

Berkeley Lab – Steri-charts

Bacillus Species	Spore Concentration	SC-BS-14	SC-BS-16	SC-BS-18	SC-BS-20
B. stearothermophilus	10 ³	-	-	-	-
	10 ⁴	-	-	-	-
	10 ⁵	-	-	+	-
	10 ⁶	+	+	+	-
	10 ⁷	+	+	+	-

Berkeley Lab – Steri-charts

Bacillus Species	Spore Concentration	SC-SS-26	SC-SS-28	SC-SS-30	SC-SS-31
B. subtilis	10 ⁴	-	-	-	-
	10 ⁵	-	-	-	-
	10 ⁶	-	-	-	-
	10 ⁷	-	+	+	+
	10 ⁸	-	+	+	+

Test 8 Results Summary

Test 8 on 11/06/01

12 HOURS AT 500 PPMV, AMBIENT RH=35% AND AMBIENT TEMP=55°F, MAIL EQUIPMENT TEST

Berkeley Lab – Spore strips

Bacillus Species	Spore Concentration	Number Tested	Number Positive
B. subtilis	10 ⁶	70	15
B. stearothermophilus	10 ⁶	70	64
B. thuringiensis	10 ⁶	70	6
Negative Control	10 ⁶	42	0

EPA Lab – Spore strips

Bacillus Species	Spore Concentration	Number Tested	Number Positive
B. subtilis	10 ⁶	20	6
B. stearothermophilus	10 ⁶	20	13
B. thuringiensis	10 ⁶	20	2
Negative Control	10 ⁶	4	0

EPA Lab – Steri-charts

Bacillus Species	Spore Concentration	SC-SS-39	SC-SS-40
B. subtilis	10 ⁴	-	-
	10 ⁵	-	-
	10 ⁶	+	-
	10 ⁷	+	+
	10 ⁸	+	+

Berkeley Lab – Steri-charts

Bacillus Species	Spore Concentration	SC-SS-32-FW	SC-SS-33-LF	SC-SS-34-RF	SC-SS-35-LW
B. subtilis	10 ⁴	-	-	-	-
	10 ⁵	-	-	-	-
	10 ⁶	+	-	-	-
	10 ⁷	+	+	+	+
	10 ⁸	+	+	+	+

Berkeley Lab – Steri-charts

Bacillus Species	Spore Concentration	SC-SS-36-RW	SC-SS-37-PS	SC-SS-38-OS
B. subtilis	10 ⁴	-	-	-
	10 ⁵	-	-	-
	10 ⁶	-	-	+
	10 ⁷	+	+	+
	10 ⁸	+	+	+

Test 9 Results Summary

Test 9 on 11/08/01

12 HOURS AT 1000 PPMV, AMBIENT RH=42% AND AMBIENT TEMP=65°F, MAIL EQUIPMENT TEST

Berkeley Lab – Spore strips

Bacillus Species	Spore Concentration	Number Tested	Number Positive
B. subtilis	10 ⁶	80	7
B. stearothermophilus	10 ⁶	80	8
B. thuringiensis	10 ⁶	80	31
Negative Control	10 ⁶	48	1

Berkeley Lab – Steri-charts

Bacillus Species	Spore Concentration	9SC-SS-FW	9SC-SS-LF	9SC-SS-RF	9SC-SS-LW
B. subtilis	10 ⁴	-	-	-	-
	10 ⁵	-	-	-	-
	10 ⁶	-	-	-	-
	10 ⁷	-	-	+	+
	10 ⁸	+	+	+	+

Berkeley Lab – Steri-charts

Bacillus Species	Spore Concentration	9SC-SS-RW	SC-SS-BC	SC-SS-OS	9SC-SS-FC
B. subtilis	10 ⁴	-	-	-	-
	10 ⁵	-	-	-	-
	10 ⁶	-	-	-	-
	10 ⁷	+	-	+	-
	10 ⁸	+	+	+	+

Berkeley Lab – Steri-charts

Bacillus Species	Spore Concentration	9SC-SS-SIM	9SC-SS-SORTER	SC-SS-DESK
B. subtilis	10 ⁴	-	-	-
	10 ⁵	-	-	-
	10 ⁶	+	-	-
	10 ⁷	+	-	+
	10 ⁸	+	-	+

Test 10 Results Summary

Test 10 on 11/10/01

12 HOURS AT 750 PPMV, AMBIENT RH=40% AND AMBIENT TEMP=62°F, ClO₂ KILL TEST

Berkeley Lab – Spore strips

Bacillus Species	Spore Concentration	Number Tested	Number Positive
B. subtilis	10 ⁶	60	5
B. stearothermophilus	10 ⁶	60	7
B. thuringiensis	10 ⁶	60	38
Negative Control	10 ⁶	36	0

Berkeley Lab – Steri-charts

Bacillus Species	Spore Concentration	109SC-SS-FW 1	10SC-SS-LF 1	10SC-SS-RF 1	10SC-SS-LW 1
B. subtilis	10 ⁴	-	-	-	-
	10 ⁵	-	-	-	-
	10 ⁶	-	-	+	-
	10 ⁷	+	-	+	+
	10 ⁸	+	+	+	+

Berkeley Lab – Steri-charts

Bacillus Species	Spore Concentration	10SC-SS-RW 1	10SC-SS-MC 1	10SC-SS-OS A1
B. subtilis	10 ⁴	-	-	-
	10 ⁵	-	-	-
	10 ⁶	-	-	-
	10 ⁷	+	-	-
	10 ⁸	+	-	+

Berkeley Lab – Steri-charts

Bacillus Species	Spore Concentration	10SC-SS-OS-B1	10SC-SS-OS-C1	10SC-SS-OS-D1
B. subtilis	10 ⁴	-	-	-
	10 ⁵	-	-	-
	10 ⁶	-	-	-
	10 ⁷	-	-	+
	10 ⁸	+	+	+

EPA Lab – Spore strips

Bacillus Species	Spore Concentration	Number Tested	Number Positive
B. subtilis	10 ⁶	15	0
B. stearothermophilus	10 ⁶	30	1
B. thuringiensis	10 ⁶	5	0

Berkeley Lab – Steri-charts

Bacillus Species	Spore Concentration	SC-SS-A2	SC-SS-B2	SC-SS-C2	SC-SS-D2
B. subtilis	10 ⁴	-	-	-	-
	10 ⁵	-	-	-	-
	10 ⁶	-	-	-	-
	10 ⁷	+	+	-	-
	10 ⁸	+	+	+	+

Berkeley Lab – Steri-charts

Bacillus Species	Spore Concentration	SC-SS-FW2	SC-SS-LW2	SC-SS-RW2
B. subtilis	10 ⁴	-	-	-
	10 ⁵	-	-	-
	10 ⁶	-	-	-
	10 ⁷	+/-	+	+/-
	10 ⁸	+	+	+

Berkeley Lab – Steri-charts

Bacillus Species	Spore Concentration	SC-SS-LF2	SC-SS-RF2	SC-SS-MC2
B. subtilis	10 ⁴	-	-	-
	10 ⁵	-	-	-
	10 ⁶	-	-	-
	10 ⁷	+	-	-
	10 ⁸	+	+	+

Test 11 Results Summary

Test 11 on 11/31/01

12 HOURS AT 2200 PPMV, AMBIENT RH=N/A AND AMBIENT TEMP=49°F, LETTER & MAIL TRAY PENETRATION TEST

Berkeley Lab – Spore strips

Bacillus Species	Spore Concentration	Number Tested	Number Positive
B. subtilis	10 ⁶	155	28
B. stearothermophilus	10 ⁶	35	10
B. thuringiensis	10 ⁶	35	13
B. megaterium	10 ⁶	35	0
B. cereus	10 ⁶	35	7
Negative Control	10 ⁶	16	0

Berkeley Lab – Steri-charts

Bacillus Species	Spore Concentration	OS1D	OS2B1	RF1	FW1
B. subtilis	10 ⁴	-	-	-	-
	10 ⁵	-	-	-	-
	10 ⁶	-	-	-	-
	10 ⁷	+	-	-	-
	10 ⁸	-	-	-	-

Berkeley Lab – Steri-charts

Bacillus Species	Spore Concentration	OS1D	OS2B1	RF1	FW1
B. stearothermophilus	10 ³	-	-	-	-
	10 ⁴	-	-	-	-
	10 ⁵	-	-	-	-
	10 ⁶	-	-	-	-
	10 ⁷	-	-	-	-

EPA Lab – Spore strips

Bacillus Species	Spore Concentration	Number Tested	Number Positive
B. subtilis	10 ⁶	20	1
B. stearothermophilus	10 ⁶	19	0
B. thuringiensis	10 ⁶	20	1
B. megaterium	10 ⁶	20	0
B. cereus	10 ⁶	20	0

EPA Lab – Steri-charts

Bacillus Species	Spore Concentration	11 SC-SSOS2B2	11 SC-SSFW2	11 SC-SSRF2
B. subtilis	10 ⁴	-	-	-
	10 ⁵	-	-	-
	10 ⁶	-	-	-
	10 ⁷	-	-	-
	10 ⁸	-	-	-

EPA Lab – Steri-charts

Bacillus Species	Spore Concentration	11 SC-SSOS2B2	11 SC-SSFW2	11 SC-SSRF2
B. stearothermophilus	10 ⁴	-	-	-
	10 ⁵	-	-	-
	10 ⁶	-	-	-
	10 ⁷	-	-	-
	10 ⁸	-	-	-

Test 12 Results Summary

Test 12 Run #1 on 11/26/01

Berkeley Lab – Spore strips

Bacillus Species	Spore Concentration	Number Tested	Number Positive
B. subtilis	10 ⁶	50	2

Berkeley Lab – Steri-charts

Bacillus Species	Spore Concentration	BLC1	RFC1	FLC1	OS1
B. subtilis	10 ⁴	-	-	-	-
	10 ⁵	-	-	-	-
	10 ⁶	+	-	-	+
	10 ⁷	-	+	+	+
	10 ⁸	+	+	+	+
	Spore Concentration	BRC1	BOX1-1	BOX2-1	
	10 ⁴	-	-	-	
	10 ⁵	-	-	-	
	10 ⁶	-	-	-	
	10 ⁷	-	+	-	
	10 ⁸	+	+	-	

Berkeley Lab – Steri-charts

Bacillus Species	Spore Concentration	BLC1	RFC1	OS1
B. stearothermophilus	10 ³	-	-	-
	10 ⁴	-	-	-
	10 ⁵	-	-	+
	10 ⁶	+	-	-
	10 ⁷	+	+	+
	Spore Concentration	BRC1	BOX1-1	FLC1
	10 ³	-	-	-
	10 ⁴	-	-	-
	10 ⁵	+	-	-
	10 ⁶	-	-	-
	10 ⁷	+	+	+

EPA Lab – Spore Strips

Bacillus Species	Spore Concentration	Number Tested	Number Positive
B. subtilis	10 ⁶	50	3

EPA – Steri-charts

Bacillus Species	Spore Concentration	FLC3	RFC3	BLC3	BRC3
B. subtilis	10 ⁴	-	-	-	-
	10 ⁵	-	-	-	-
	10 ⁶	+	+	-	-
	10 ⁷	-	+	+	+
	10 ⁸	+	+	-	+
	Spore Concentration	OS3	BOX1-3	BOX2-3	
	10 ⁴	-	-	-	
	10 ⁵	-	-	-	
	10 ⁶	-	-	-	
	10 ⁷	+	-	-	
	10 ⁸	+	-	+	

EPA Lab – Steri-charts

Bacillus Species	Spore Concentration	FLC3	RFC3	BLC3	BRC3
B. stearothermophilus	10 ³	-	-	-	-
	10 ⁴	-	-	-	-
	10 ⁵	-	-	-	+
	10 ⁶	-	-	-	-
	10 ⁷	+	+	+	+
	Spore Concentration	OS3	BOX1-3		
	10 ³	-	-		
	10 ⁴	-	-		
	10 ⁵	-	-		
	10 ⁶	-	-		
	10 ⁷	+	+		

Test 12 Run #2 on 11/26/01

Berkeley Lab – Spore strips

Bacillus Species	Spore Concentration	Number Tested	Number Positive
B. subtilis	10 ⁶	50	1

Berkeley Lab – Steri-charts

Bacillus Species	Spore Concentration	BLC2	RFC2	FLC2	OS2
B. subtilis	10 ⁴	-	-	-	-
	10 ⁵	-	-	-	-
	10 ⁶	-	-	-	-
	10 ⁷	-	-	-	-
	10 ⁸	-	-	+	+
	Spore Concentration	BRC2	BOX1-2	BOX2-2	
	10 ⁴	-	-	-	
	10 ⁵	-	-	-	
	10 ⁶	-	-	-	
	10 ⁷	-	-	-	
	10 ⁸	-	-	-	

Berkeley Lab – Steri-charts

Bacillus Species	Spore Concentration	BLC2	RFC2	OS2
B. stearothermophilus	10 ³	-	-	-
	10 ⁴	-	-	-
	10 ⁵	-	+	-
	10 ⁶	-	-	-
	10 ⁷	-	+	+
	Spore Concentration	BRC2	BOX1-2	FLC2
	10 ³	-	-	-
	10 ⁴	-	-	-
	10 ⁵	-	-	-
	10 ⁶	-	-	-
	10 ⁷	+	-	+

EPA Lab – Spore Strips

Bacillus Species	Spore Concentration	Number Tested	Number Positive
B. subtilis	10 ⁶	50	0

EPA – Steri-charts

Bacillus Species	Spore Concentration	FLC4	RFC4	BLC4	BRC4
B. subtilis	10 ⁴	-	-	-	-
	10 ⁵	-	-	-	-
	10 ⁶	-	-	-	-
	10 ⁷	-	-	-	-
	10 ⁸	+	+	-	-
	Spore Concentration	OS4	BOX1-4	BOX2-4	
	10 ⁴	-	-	-	
	10 ⁵	-	-	-	
	10 ⁶	-	-	-	
	10 ⁷	-	-	-	
	10 ⁸	-	-	+	

EPA Lab – Steri-charts

Bacillus Species	Spore Concentration	FLC4	RFC4	BLC4	BRC4
B. stearothermophilus	10 ³	-	-	-	-
	10 ⁴	-	-	-	-
	10 ⁵	-	-	-	-
	10 ⁶	-	-	-	-
	10 ⁷	+	+	+	+
	Spore Concentration	OS4			
	10 ³	-			
	10 ⁴	-			
	10 ⁵	-			
	10 ⁶	-			
	10 ⁷	-			