

APPENDIX A2

PEAK PEEL FORCE SPECIMEN DESCRIPTIVE STATISTICS

Table A2-1. Summary of specimen quantities by package, location, and category

		Package									All Packages
		PS1	PS2	PS3	PS4	PS5	PS6	PS7	PS8	PS9	
Category	Location										
A	A	12	.	.	12	.	.	.	34	.	58
	B	12	12	.	12	.	.	.	34	.	70
	C	12	12	.	.	.	.	.	34	.	58
	D	12	12	.	12	.	.	.	34	.	70
	E	.	.	17	.	17	17	.	.	12	63
	F	.	.	.	.	17	17	12	.	12	58
	G	.	12	.	.	17	.	.	.	12	41
	H	.	.	.	.	17	.	12	.	12	41
	HP	.	.	17	.	.	.	.	.	.	17
	J	.	.	.	12	.	.	12	.	.	24
	M	.	.	17	.	.	.	.	.	.	17
	N	.	.	.	.	.	17	.	.	.	17
	OG	.	.	.	.	.	17	.	.	.	17
	W	.	12	17	.	.	17	.	34	12	92
	X	.	12	17	12	.	17	.	34	.	92
	Y	.	.	17	.	.	17	12	34	12	92
	Z	.	12	17	.	1	17	12	34	12	105
Subtotal		48	84	119	60	69	136	60	272	84	932

Table A2-1 Continued

		Package									All Packages
		PS1	PS2	PS3	PS4	PS5	PS6	PS7	PS8	PS9	
Category	Location										
B	L	.	.	.	.	.	.	12	.	.	12
	W	12	.	.	12	.	.	12	.	.	36
	X	12	.	.	.	17	.	.	.	.	29
	Y	12	.	.	.	17	.	.	.	.	29
	Z	12	.	.	.	16	.	.	.	.	28
	Subtotal		48	.	.	12	50	.	24	.	.	134
C	Location										
	W	.	.	.	.	1	.	.	.	.	1
	X	.	.	.	.	.	.	.	.	12	12
	Subtotal		.	.	.	1	.	.	.	12	13
D	Location										
	X	.	.	.	.	.	.	12	.	.	12
	Subtotal		.	.	.	.	.	12	.	.	12
E	Location										
	W	.	.	.	.	16	.	.	.	.	16
	Y	.	12	.	.	.	.	.	.	.	12
	YK	.	.	.	12	.	.	.	.	.	12
	Subtotal		12	.	12	16	.	.	.	.	40
Total for All Categories		96	96	119	84	136	136	96	272	96	1131

Table A2-3. Peak peel force statistics for each sealed package, grouped by point number, comparing adhesives

			Adhesive		Adhesive		Adhesive		Adhesive		Adhesive	
			Amcor	Perfecseal	Amcor	Perfecseal	Amcor	Perfecseal	Amcor	Perfecseal	Amcor	Perfecseal
Point Number	Package	Package ID	Specimens	Specimens	Mean	Mean	Std	Std	Min	Min	Max	Max
1	PS1	1732	8	.	5.57	.	0.55	.	4.79	.	6.20	.
	PS2	1770	8	.	5.77	.	0.58	.	4.76	.	6.53	.
	PS3	1803	7	.	4.31	.	0.45	.	3.66	.	4.75	.
	PS4	1841	7	.	6.31	.	0.52	.	5.37	.	6.88	.
	PS5	1871	8	.	4.74	.	0.70	.	3.99	.	6.30	.
	PS6	1904	8	.	4.80	.	0.39	.	4.12	.	5.29	.
	PS7	1939	8	.	6.76	.	0.81	.	5.46	.	7.91	.
	PS8	3001	8	.	4.00	.	0.75	.	3.08	.	5.48	.
		3018	.	8	.	4.91	.	1.66	.	3.08	.	7.92
	PS9	1974	8	.	5.74	.	0.50	.	5.01	.	6.71	.
2	PS1	1745	8	.	5.37	.	0.42	.	4.63	.	5.78	.
	PS2	1780	8	.	5.52	.	0.66	.	4.28	.	6.14	.
	PS3	1817	7	.	4.98	.	0.24	.	4.69	.	5.41	.
	PS4	1851	7	.	6.63	.	0.57	.	5.96	.	7.73	.
	PS5	1883	8	.	4.84	.	0.95	.	2.60	.	5.83	.
	PS6	1920	8	.	5.65	.	0.52	.	5.04	.	6.65	.
	PS7	1951	8	.	6.72	.	0.83	.	5.55	.	7.91	.
	PS8	3002	8	.	4.34	.	0.93	.	3.41	.	6.04	.
		3019	.	8	.	5.11	.	0.79	.	4.03	.	6.12
	PS9	1983	8	.	5.83	.	0.28	.	5.58	.	6.47	.

Table A2-3 Continued

			Adhesive		Adhesive		Adhesive		Adhesive		Adhesive	
			Amcor	Perfecseal	Amcor	Perfecseal	Amcor	Perfecseal	Amcor	Perfecseal	Amcor	Perfecseal
Point Number	Package	Package ID	Specimens	Specimens	Mean	Mean	Std	Std	Min	Min	Max	Max
3	PS1	1753	8	.	4.39	.	0.64	.	3.07	.	5.18	.
	PS2	1786	8	.	4.93	.	0.43	.	4.51	.	5.88	.
	PS3	1824	7	.	1.21	.	2.07	.	0.00	.	4.27	.
	PS4	1857	7	.	5.70	.	0.39	.	5.24	.	6.28	.
	PS5	1889	8	.	3.87	.	0.35	.	3.25	.	4.37	.
	PS6	1926	8	.	4.07	.	1.00	.	2.54	.	5.21	.
	PS7	1961	8	.	5.82	.	0.72	.	4.60	.	7.12	.
	PS8	3003	8	.	3.08	.	0.85	.	1.56	.	4.70	.
		3020	.	8	.	3.13	.	0.82	.	1.95	.	4.21
	PS9	1988	8	.	5.47	.	0.48	.	4.59	.	5.99	.
4	PS3	1834	7	.	6.51	.	0.49	.	5.77	.	7.19	.
	PS5	1895	8	.	6.20	.	0.89	.	4.81	.	7.84	.
	PS6	1934	8	.	5.90	.	1.04	.	4.52	.	7.73	.
	PS8	3004	8	.	5.65	.	0.62	.	4.37	.	6.13	.
			3021	.	8	.	6.72	.	0.80	.	5.61	.	8.27
5	PS1	1733	8	.	5.13	.	0.59	.	4.29	.	6.11	.
	PS2	1771	8	.	5.02	.	0.63	.	4.56	.	6.48	.
	PS3	1804	7	.	3.36	.	0.59	.	2.72	.	4.26	.
	PS4	1842	7	.	5.43	.	0.65	.	4.07	.	5.96	.

Table A2-3 Continued

			Adhesive		Adhesive		Adhesive		Adhesive		Adhesive	
			Amcor	Perfecseal	Amcor	Perfecseal	Amcor	Perfecseal	Amcor	Perfecseal	Amcor	Perfecseal
Point Number	Package	Package ID	Specimens	Specimens	Mean	Mean	Std	Std	Min	Min	Max	Max
5	PS5	1872	8	.	3.89	.	0.75	.	2.93	.	5.30	.
	PS6	1907	8	.	3.99	.	1.04	.	2.64	.	5.25	.
	PS7	1940	8	.	5.73	.	1.09	.	4.22	.	7.40	.
	PS8	3005	8	.	2.23	.	0.68	.	1.32	.	3.63	.
		3022	.	8	.	1.54	.	0.72	.	0.00	.	2.18
	PS9	1975	8	.	5.86	.	0.33	.	5.41	.	6.30	.
6	PS1	1734	8	.	6.05	.	0.50	.	5.25	.	6.71	.
	PS2	1774	8	.	6.41	.	0.88	.	5.62	.	8.10	.
	PS3	1806	7	.	5.71	.	0.38	.	5.05	.	6.18	.
	PS4	1845	7	.	6.27	.	0.46	.	5.57	.	6.88	.
	PS5	1873	8	.	5.35	.	0.54	.	4.64	.	6.12	.
	PS6	1910	8	.	6.33	.	0.62	.	5.83	.	7.35	.
	PS7	1945	8	.	6.12	.	0.86	.	4.15	.	6.96	.
	PS8	3006	8	.	4.76	.	0.58	.	3.73	.	5.58	.
		3023	.	8	.	6.82	.	1.62	.	4.79	.	9.56
	PS9	1976	8	.	5.81	.	0.51	.	5.09	.	6.70	.

Table A2-3 Continued

			Adhesive		Adhesive		Adhesive		Adhesive		Adhesive	
			Amcor	Perfecseal	Amcor	Perfecseal	Amcor	Perfecseal	Amcor	Perfecseal	Amcor	Perfecseal
Point Number	Package	Package ID	Specimens	Specimens	Mean	Mean	Std	Std	Min	Min	Max	Max
7	PS1	1749	8	.	3.32	.	1.21	.	1.02	.	4.88	.
	PS2	1784	8	.	3.70	.	0.32	.	3.27	.	4.23	.
	PS3	1819	7	.	2.72	.	0.54	.	2.08	.	3.61	.
	PS4	1855	7	.	4.54	.	0.40	.	3.82	.	4.97	.
	PS5	1886	8	.	1.60	.	1.00	.	0.00	.	2.98	.
	PS6	1924	8	.	2.53	.	0.96	.	1.06	.	3.70	.
	PS7	1956	8	.	4.17	.	0.92	.	3.24	.	6.07	.
	PS8	3007	8	.	1.09	.	0.92	.	0.00	.	2.92	.
		3024	.	8	.	0.85	.	0.76	.	0.00	.	1.81
8	PS9	1985	8	.	4.69	.	0.46	.	4.07	.	5.53	.
	PS1	1752	8	.	5.76	.	0.78	.	4.85	.	6.99	.
	PS2	1785	8	.	5.37	.	0.42	.	4.86	.	6.06	.
	PS3	1822	7	.	4.57	.	0.29	.	3.96	.	4.85	.
	PS4	1856	7	.	6.06	.	0.47	.	5.51	.	6.85	.
	PS5	1888	8	.	4.23	.	0.53	.	3.56	.	5.23	.
	PS6	1925	8	.	5.31	.	0.30	.	4.73	.	5.62	.
	PS7	1957	8	.	5.96	.	0.83	.	4.71	.	7.03	.
	PS8	3008	8	.	4.36	.	0.59	.	3.33	.	5.21	.
		3025	.	8	.	5.44	.	0.82	.	4.76	.	7.37
	PS9	1986	8	.	5.19	.	0.38	.	4.47	.	5.69	.

Table A2-3 Continued

			Adhesive		Adhesive		Adhesive		Adhesive		Adhesive	
			Amcor	Perfecseal	Amcor	Perfecseal	Amcor	Perfecseal	Amcor	Perfecseal	Amcor	Perfecseal
Point Number	Package	Package ID	Specimens	Specimens	Mean	Mean	Std	Std	Min	Min	Max	Max
9	PS1	1754	8	.	4.53	.	0.74	.	3.94	.	6.19	.
	PS2	1787	8	.	4.45	.	0.25	.	4.09	.	4.74	.
	PS3	1826	7	.	3.05	.	0.58	.	2.32	.	3.89	.
	PS4	1861	7	.	4.41	.	1.09	.	2.56	.	5.64	.
	PS5	1890	8	.	2.99	.	0.71	.	2.10	.	4.23	.
	PS6	1927	8	.	3.02	.	1.21	.	0.55	.	4.22	.
	PS7	1962	8	.	5.68	.	0.95	.	4.38	.	7.04	.
	PS8	3009	8	.	1.06	.	0.82	.	0.00	.	2.19	.
		3026	.	8	.	0.71	.	1.17	.	0.00	.	2.66
	PS9	1989	8	.	5.02	.	0.28	.	4.58	.	5.52	.
10	PS1	1755	8	.	5.27	.	0.45	.	4.77	.	6.06	.
	PS2	1788	8	.	5.50	.	0.57	.	4.74	.	6.48	.
	PS3	1828	7	.	5.30	.	0.60	.	4.56	.	6.14	.
	PS4	1863	7	.	6.09	.	0.57	.	5.14	.	6.78	.
	PS5	1891	8	.	4.30	.	0.53	.	3.25	.	4.94	.
	PS6	1928	8	.	5.00	.	0.38	.	4.48	.	5.56	.
	PS7	1963	8	.	6.17	.	0.82	.	5.12	.	7.27	.
	PS8	3010	8	.	4.54	.	0.92	.	3.94	.	6.66	.
		3027	.	8	.	5.76	.	0.65	.	5.12	.	6.85
	PS9	1992	8	.	5.46	.	0.60	.	4.64	.	6.52	.

Table A2-3 Continued

			Adhesive		Adhesive		Adhesive		Adhesive		Adhesive	
			Amcor	Perfecseal	Amcor	Perfecseal	Amcor	Perfecseal	Amcor	Perfecseal	Amcor	Perfecseal
Point Number	Package	Package ID	Specimens	Specimens	Mean	Mean	Std	Std	Min	Min	Max	Max
11	PS3	1832	7	.	5.54	.	0.55	.	5.00	.	6.62	.
	PS5	1893	8	.	5.84	.	0.97	.	4.53	.	7.60	.
	PS6	1929	8	.	5.19	.	0.54	.	4.34	.	5.83	.
	PS8	3011	8	.	4.11	.	0.88	.	2.93	.	5.48	.
		3028	.	8	.	4.70	.	0.96	.	3.13	.	5.92
12	PS3	1833	7	.	6.53	.	0.27	.	6.16	.	7.04	.
	PS5	1894	8	.	6.15	.	0.66	.	5.25	.	7.43	.
	PS6	1931	8	.	6.43	.	0.49	.	5.64	.	7.06	.
	PS8	3012	8	.	6.41	.	0.73	.	5.21	.	7.71	.
		3029	.	8	.	7.11	.	1.12	.	5.97	.	9.14
13	PS3	1838	7	.	5.77	.	0.66	.	5.12	.	7.17	.
	PS5	1896	8	.	6.25	.	1.08	.	4.61	.	7.66	.
	PS6	1936	8	.	6.04	.	0.40	.	5.56	.	6.91	.
	PS8	3013	8	.	2.66	.	1.45	.	0.74	.	4.96	.
		3030	.	8	.	3.43	.	1.80	.	0.00	.	5.54
14	PS3	1840	7	.	6.60	.	0.48	.	5.80	.	7.15	.
	PS5	1899	8	.	6.58	.	0.81	.	5.91	.	8.28	.
	PS6	1937	8	.	6.59	.	0.59	.	5.87	.	7.64	.
	PS8	3014	8	.	5.74	.	0.96	.	4.72	.	7.25	.
		3031	.	8	.	6.99	.	0.82	.	6.03	.	8.70

Table A2-3 Continued

			Adhesive		Adhesive		Adhesive		Adhesive		Adhesive	
			Amcor	Perfecseal	Amcor	Perfecseal	Amcor	Perfecseal	Amcor	Perfecseal	Amcor	Perfecseal
Point Number	Package	Package ID	Specimens	Specimens	Mean	Mean	Std	Std	Min	Min	Max	Max
15	PS1	1735	8	.	5.86	.	0.41	.	5.16	.	6.27	.
	PS2	1776	8	.	5.53	.	0.33	.	5.07	.	5.96	.
	PS3	1808	7	.	5.46	.	0.31	.	4.80	.	5.71	.
	PS4	1846	7	.	6.13	.	0.48	.	5.37	.	6.84	.
	PS5	1879	8	.	4.87	.	0.57	.	3.88	.	5.74	.
	PS6	1911	8	.	5.20	.	0.89	.	3.96	.	6.79	.
	PS7	1946	8	.	7.12	.	1.09	.	5.80	.	9.26	.
	PS8	1037	8	.	3.77	.	0.85	.	2.73	.	5.63	.
		3032	.	8	.	4.26	.	1.73	.	1.13	.	7.26
	PS9	1977	8	.	6.22	.	0.42	.	5.33	.	6.60	.
16	PS1	1738	8	.	5.41	.	0.51	.	4.72	.	6.15	.
	PS2	1777	8	.	5.80	.	0.58	.	5.34	.	7.11	.
	PS3	1810	7	.	5.53	.	0.52	.	5.15	.	6.66	.
	PS4	1847	7	.	5.66	.	1.32	.	2.92	.	6.87	.
	PS5	1881	8	.	5.24	.	0.66	.	4.50	.	6.30	.
	PS6	1912	8	.	4.86	.	0.48	.	4.31	.	5.76	.
	PS7	1947	8	.	6.49	.	1.02	.	5.00	.	7.76	.
	PS8	3016	8	.	3.63	.	0.70	.	2.68	.	5.07	.
			3033	.	8	.	4.05	.	1.08	.	2.46	.	5.34
	PS9	1978	8	.	5.85	.	0.60	.	5.13	.	6.94	.

Table A2-3 Continued

			Adhesive		Adhesive		Adhesive		Adhesive		Adhesive	
			Amcor	Perfecseal	Amcor	Perfecseal	Amcor	Perfecseal	Amcor	Perfecseal	Amcor	Perfecseal
Point Number	Package	Package ID	Specimens	Specimens	Mean	Mean	Std	Std	Min	Min	Max	Max
17	PS1	1742	8	.	6.02	.	0.80	.	4.60	.	7.32	.
	PS2	1779	8	.	5.51	.	0.42	.	5.08	.	6.14	.
	PS3	1813	7	.	5.24	.	0.27	.	4.95	.	5.74	.
	PS4	1850	7	.	5.90	.	0.44	.	5.21	.	6.37	.
	PS5	1882	8	.	5.59	.	0.89	.	4.41	.	6.88	.
	PS6	1914	8	.	4.38	.	0.38	.	3.63	.	4.90	.
	PS7	1948	8	.	7.03	.	0.90	.	5.89	.	8.25	.
	PS8	3017	8	.	4.03	.	0.92	.	3.42	.	6.24	.
		3034	.	8	.	4.21	.	0.72	.	3.04	.	5.28
	PS9	1982	8	.	6.00	.	0.45	.	5.33	.	6.63	.

Table A2-4. Comparison of peak peel forces across specimen locations within each sealed package

				Specimen Location																				
				A	B	C	D	E	F	G	H	HP	J	L	M	N	OG	W	X	Y	YK	Z	Mean	Std
Package ID	Package	Max	Min																					
1037	PS8	5.63	2.73	3.49	*2.73	3.74	3.62	.	.	.	.	.	.	.	.	.	.	4.10	5.63	3.66	.	3.22	3.77	0.85
1732	PS1	6.20	4.79	6.20	5.95	5.98	*4.79	.	.	.	.	.	.	.	.	.	.	5.26	5.45	6.05	.	4.88	5.57	0.55
1733	PS1	6.11	4.29	4.85	5.01	5.22	4.63	.	.	.	.	.	.	.	.	.	.	5.79	*4.29	6.11	.	5.10	5.13	0.59
1734	PS1	6.71	5.25	5.50	6.02	6.71	6.06	.	.	.	.	.	.	.	.	.	.	6.64	*5.25	6.22	.	6.03	6.05	0.50
1735	PS1	6.27	5.16	*5.16	5.31	6.08	5.89	.	.	.	.	.	.	.	.	.	.	6.18	6.27	6.03	.	5.98	5.86	0.41
1738	PS1	6.15	4.72	5.02	5.64	6.15	4.97	.	.	.	.	.	.	.	.	.	.	5.46	6.02	5.28	.	*4.72	5.41	0.51
1742	PS1	7.32	4.60	*4.60	5.64	5.81	6.23	.	.	.	.	.	.	.	.	.	.	6.30	6.63	7.32	.	5.65	6.02	0.80
1745	PS1	5.78	4.63	*4.63	5.51	5.74	5.34	.	.	.	.	.	.	.	.	.	.	5.78	5.69	5.41	.	4.89	5.37	0.42
1749	PS1	4.88	1.02	3.40	3.86	4.32	*1.02	.	.	.	.	.	.	.	.	.	.	2.54	2.76	4.88	.	3.80	3.32	1.21
1752	PS1	6.99	4.85	5.13	5.55	6.99	*4.85	.	.	.	.	.	.	.	.	.	.	6.03	6.00	6.61	.	4.94	5.76	0.78
1753	PS1	5.18	3.07	4.22	4.68	4.95	*3.07	.	.	.	.	.	.	.	.	.	.	4.31	4.15	5.18	.	4.54	4.39	0.64
1754	PS1	6.19	3.94	3.99	4.14	4.96	*3.94	.	.	.	.	.	.	.	.	.	.	4.21	4.42	6.19	.	4.38	4.53	0.74
1755	PS1	6.06	4.77	5.32	5.66	5.48	5.10	.	.	.	.	.	.	.	.	.	.	4.82	*4.77	6.06	.	4.97	5.27	0.45
1770	PS2	6.53	4.76	.	5.61	*4.76	5.55	.	.	5.44	.	.	.	.	.	.	.	6.20	6.53	6.40	.	5.64	5.77	0.58
1771	PS2	6.48	4.56	.	4.76	4.58	5.02	.	.	4.98	.	.	.	.	.	.	.	4.61	5.14	6.48	.	*4.56	5.02	0.63
1774	PS2	8.10	5.62	.	6.33	6.00	6.86	.	.	*5.62	.	.	.	.	.	.	.	5.68	5.65	8.10	.	7.07	6.41	0.88
1776	PS2	5.96	5.07	.	5.57	5.23	5.96	.	.	5.53	.	.	.	.	.	.	.	*5.07	5.79	5.83	.	5.22	5.53	0.33
1777	PS2	7.11	5.34	.	6.02	5.45	5.36	.	.	5.77	.	.	.	.	.	.	.	*5.34	5.80	7.11	.	5.58	5.80	0.58
1779	PS2	6.14	5.08	.	5.55	5.24	5.83	.	.	*5.08	.	.	.	.	.	.	.	5.96	5.13	6.14	.	5.12	5.51	0.42
1780	PS2	6.14	4.28	.	6.14	4.82	6.14	.	.	5.71	.	.	.	.	.	.	.	5.64	6.00	*4.28	.	5.42	5.52	0.66
1784	PS2	4.23	3.27	.	3.87	*3.27	4.23	.	.	3.59	.	.	.	.	.	.	.	3.52	3.77	3.96	.	3.37	3.70	0.32
1785	PS2	6.06	4.86	.	5.22	5.12	5.06	.	.	5.71	.	.	.	.	.	.	.	*4.86	5.77	6.06	.	5.14	5.37	0.42

Table A2-4 Continued

				Specimen Location																				
				A	B	C	D	E	F	G	H	HP	J	L	M	N	OG	W	X	Y	YK	Z	Mean	Std
Package ID	Package	Max	Min																					
1786	PS2	5.88	4.51	.	5.08	4.53	*4.51	.	.	4.75	.	.	.	.	.	.	.	4.81	4.89	5.88	.	5.01	4.93	0.43
1787	PS2	4.74	4.09	.	4.23	4.37	4.74	.	.	4.68	.	.	.	.	.	.	.	4.30	*4.09	4.74	.	4.42	4.45	0.25
1788	PS2	6.48	4.74	.	5.05	*4.74	5.14	.	.	6.01	.	.	.	.	.	.	.	5.23	5.50	6.48	.	5.82	5.50	0.57
1803	PS3	4.75	3.66	.	.	.	.	3.70	.	.	.	4.35	.	.	*3.66	.	.	4.53	4.75	4.71	.	4.45	4.31	0.45
1804	PS3	4.26	2.72	.	.	.	.	*2.72	.	.	.	3.32	.	.	2.73	.	.	4.26	3.88	3.62	.	2.97	3.36	0.59
1806	PS3	6.18	5.05	.	.	.	.	6.06	.	.	.	5.70	.	.	5.53	.	.	6.18	5.86	5.61	.	*5.05	5.71	0.38
1808	PS3	5.71	4.80	.	.	.	.	5.59	.	.	.	5.37	.	.	*4.80	.	.	5.56	5.48	5.69	.	5.71	5.46	0.31
1810	PS3	6.66	5.15	.	.	.	.	5.32	.	.	.	*5.15	.	.	5.55	.	.	5.35	6.66	5.17	.	5.54	5.53	0.52
1813	PS3	5.74	4.95	.	.	.	.	5.05	.	.	.	5.30	.	.	5.16	.	.	5.09	5.39	*4.95	.	5.74	5.24	0.27
1817	PS3	5.41	4.69	.	.	.	.	4.88	.	.	.	*4.69	.	.	4.89	.	.	4.85	5.18	4.95	.	5.41	4.98	0.24
1819	PS3	3.61	2.08	.	.	.	.	2.51	.	.	.	2.23	.	.	*2.08	.	.	2.89	3.17	2.56	.	3.61	2.72	0.54
1822	PS3	4.85	3.96	.	.	.	.	4.63	.	.	.	*3.96	.	.	4.61	.	.	4.85	4.72	4.67	.	4.53	4.57	0.29
1824	PS3	4.27	0.00	.	.	.	.	*0.00	.	.	.	*0.00	.	.	*0.00	.	.	4.21	*0.00	4.27	.	*0.00	1.21	2.07
1826	PS3	3.89	2.32	.	.	.	.	2.73	.	.	.	*2.32	.	.	2.82	.	.	3.89	3.04	2.77	.	3.81	3.05	0.58
1828	PS3	6.14	4.56	.	.	.	.	4.67	.	.	.	5.20	.	.	5.45	.	.	6.14	5.98	*4.56	.	5.10	5.30	0.60
1832	PS3	6.62	5.00	.	.	.	.	5.07	.	.	.	*5.00	.	.	5.57	.	.	5.66	6.62	5.68	.	5.20	5.54	0.55
1833	PS3	7.04	6.16	.	.	.	.	*6.16	.	.	.	6.42	.	.	6.68	.	.	6.53	6.43	6.45	.	7.04	6.53	0.27
1834	PS3	7.19	5.77	.	.	.	.	6.55	.	.	.	6.08	.	.	6.48	.	.	7.19	*5.77	6.48	.	6.99	6.51	0.49
1838	PS3	7.17	5.12	.	.	.	.	5.72	.	.	.	5.40	.	.	5.57	.	.	7.17	5.65	*5.12	.	5.76	5.77	0.66
1840	PS3	7.15	5.80	.	.	.	.	*5.80	.	.	.	6.39	.	.	6.85	.	.	6.49	7.15	6.38	.	7.13	6.60	0.48
1841	PS4	6.88	5.37	6.41	6.68	.	6.57	.	.	.	.	.	5.89	.	.	.	.	6.88	6.35	.	*5.37	.	6.31	0.52

Table A2-4 Continued

				Specimen Location																				
				A	B	C	D	E	F	G	H	HP	J	L	M	N	OG	W	X	Y	YK	Z	Mean	Std
Package ID	Package	Max	Min																					
1842	PS4	5.96	4.07	5.23	5.68	.	5.96	.	.	.	.	.	5.87	.	.	.	.	5.43	5.79	.	*4.07	.	5.43	0.65
1845	PS4	6.88	5.57	*5.57	6.88	.	6.58	.	.	.	.	.	6.24	.	.	.	.	6.58	6.21	.	5.81	.	6.27	0.46
1846	PS4	6.84	5.37	6.26	6.84	.	5.72	.	.	.	.	.	*5.37	.	.	.	.	6.44	6.01	.	6.30	.	6.13	0.48
1847	PS4	6.87	2.92	6.33	6.87	.	5.64	.	.	.	.	.	5.43	.	.	.	.	6.66	5.74	.	*2.92	.	5.66	1.32
1850	PS4	6.37	5.21	5.97	6.34	.	6.17	.	.	.	.	.	6.37	.	.	.	.	5.75	5.47	.	*5.21	.	5.90	0.44
1851	PS4	7.73	5.96	6.26	7.73	.	6.82	.	.	.	.	.	6.75	.	.	.	.	6.45	*5.96	.	6.43	.	6.63	0.57
1855	PS4	4.97	3.82	4.50	4.94	.	4.97	.	.	.	.	.	4.32	.	.	.	.	*3.82	4.54	.	4.70	.	4.54	0.40
1856	PS4	6.85	5.51	5.90	6.05	.	6.39	.	.	.	.	.	6.14	.	.	.	.	5.56	*5.51	.	6.85	.	6.06	0.47
1857	PS4	6.28	5.24	5.66	6.28	.	6.11	.	.	.	.	.	5.27	.	.	.	.	5.70	5.67	.	*5.24	.	5.70	0.39
1861	PS4	5.64	2.56	4.37	5.64	.	5.08	.	.	.	.	.	3.44	.	.	.	.	4.47	5.33	.	*2.56	.	4.41	1.09
1863	PS4	6.78	5.14	6.39	6.05	.	6.65	.	.	.	.	.	*5.14	.	.	.	.	5.86	5.77	.	6.78	.	6.09	0.57
1871	PS5	6.30	3.99	.	.	.	.	4.72	*3.99	6.30	4.19	.	.	.	.	.	.	4.45	4.56	4.87	.	4.81	4.74	0.70
1872	PS5	5.30	2.93	.	.	.	.	3.72	3.44	5.30	3.17	.	.	.	.	.	.	*2.93	4.08	4.29	.	4.21	3.89	0.75
1873	PS5	6.12	4.64	.	.	.	.	5.65	4.84	6.12	5.40	.	.	.	.	.	.	*4.64	4.80	5.47	.	5.90	5.35	0.54
1879	PS5	5.74	3.88	.	.	.	.	5.01	5.01	5.74	4.57	.	.	.	.	.	.	*3.88	4.51	5.42	.	4.85	4.87	0.57
1881	PS5	6.30	4.50	.	.	.	.	4.68	4.95	6.30	5.03	.	.	.	.	.	.	*4.50	4.78	5.80	.	5.86	5.24	0.66
1882	PS5	6.88	4.41	.	.	.	.	*4.41	4.95	6.88	5.74	.	.	.	.	.	.	6.75	4.89	5.17	.	5.89	5.59	0.89
1883	PS5	5.83	2.60	.	.	.	.	5.07	4.95	5.83	4.94	.	.	.	.	.	.	*2.60	5.19	5.26	.	4.85	4.84	0.95
1886	PS5	2.98	0.00	.	.	.	.	0.54	*0.00	2.14	2.05	.	.	.	.	.	.	0.92	2.19	2.98	.	1.97	1.60	1.00
1888	PS5	5.23	3.56	.	.	.	.	4.26	4.16	5.23	3.61	.	.	.	.	.	.	*3.56	4.18	4.24	.	4.57	4.23	0.53
1889	PS5	4.37	3.25	.	.	.	.	4.14	3.88	4.37	*3.25	.	.	.	.	.	.	3.58	3.74	4.14	.	3.84	3.87	0.35

Table A2-4 Continued

				Specimen Location																				
				A	B	C	D	E	F	G	H	HP	J	L	M	N	OG	W	X	Y	YK	Z	Mean	Std
Package ID	Package	Max	Min																					
1890	PS5	4.23	2.10	.	.	.	.	2.28	2.74	4.23	2.50	.	.	.	.	.	.	*2.10	3.34	3.39	.	3.30	2.99	0.71
1891	PS5	4.94	3.25	.	.	.	.	4.08	4.34	4.94	4.55	.	.	.	.	.	.	*3.25	4.07	4.84	.	4.29	4.30	0.53
1893	PS5	7.60	4.53	.	.	.	.	5.65	5.58	7.60	5.18	.	.	.	.	.	.	*4.53	6.86	5.86	.	5.42	5.84	0.97
1894	PS5	7.43	5.25	.	.	.	.	7.43	5.65	6.52	5.77	.	.	.	.	.	.	*5.25	6.27	6.33	.	5.94	6.15	0.66
1895	PS5	7.84	4.81	.	.	.	.	6.00	5.68	7.84	6.28	.	.	.	.	.	.	*4.81	6.85	5.81	.	6.29	6.20	0.89
1896	PS5	7.66	4.61	.	.	.	.	5.55	5.44	7.35	7.25	.	.	.	.	.	.	*4.61	6.11	6.06	.	7.66	6.25	1.08
1899	PS5	8.28	5.91	.	.	.	.	6.09	6.94	8.28	5.97	.	.	.	.	.	.	6.10	*5.91	6.34	.	7.02	6.58	0.81
1904	PS6	5.29	4.12	.	.	.	.	4.47	*4.12	.	.	.	.	.	.	4.62	5.29	4.76	5.22	4.96	.	4.95	4.80	0.39
1907	PS6	5.25	2.64	.	.	.	.	3.09	3.00	.	.	.	.	.	.	*2.64	4.57	5.25	5.23	3.54	.	4.56	3.99	1.04
1910	PS6	7.35	5.83	.	.	.	.	*5.83	7.27	.	.	.	.	.	.	6.10	5.85	6.27	6.08	5.91	.	7.35	6.33	0.62
1911	PS6	6.79	3.96	.	.	.	.	4.69	5.09	.	.	.	.	.	.	*3.96	6.07	5.12	6.79	4.53	.	5.34	5.20	0.89
1912	PS6	5.76	4.31	.	.	.	.	4.63	5.16	.	.	.	.	.	.	4.38	5.76	4.73	5.18	*4.31	.	4.75	4.86	0.48
1914	PS6	4.90	3.63	.	.	.	.	4.53	4.60	.	.	.	.	.	.	4.07	*3.63	4.42	4.90	4.35	.	4.56	4.38	0.38
1920	PS6	6.65	5.04	.	.	.	.	5.05	5.72	.	.	.	.	.	.	*5.04	6.65	5.52	5.86	5.90	.	5.49	5.65	0.52
1924	PS6	3.70	1.06	.	.	.	.	*1.06	2.44	.	.	.	.	.	.	1.89	2.53	3.63	3.70	1.68	.	3.29	2.53	0.96
1925	PS6	5.62	4.73	.	.	.	.	5.15	5.62	.	.	.	.	.	.	*4.73	5.61	5.40	5.47	5.15	.	5.36	5.31	0.30
1926	PS6	5.21	2.54	.	.	.	.	3.38	3.27	.	.	.	.	.	.	*2.54	4.59	5.21	4.92	3.57	.	5.04	4.07	1.00
1927	PS6	4.22	0.55	.	.	.	.	2.23	2.51	.	.	.	.	.	.	*0.55	3.81	3.96	4.22	3.24	.	3.60	3.02	1.21
1928	PS6	5.56	4.48	.	.	.	.	4.83	*4.48	.	.	.	.	.	.	4.56	5.01	4.93	5.56	5.17	.	5.44	5.00	0.38
1929	PS6	5.83	4.34	.	.	.	.	5.10	5.83	.	.	.	.	.	.	*4.34	4.96	5.83	5.47	4.62	.	5.39	5.19	0.54
1931	PS6	7.06	5.64	.	.	.	.	6.23	7.06	.	.	.	.	.	.	*5.64	6.85	6.48	5.87	6.72	.	6.57	6.43	0.49

Table A2-4 Continued

				Specimen Location																				
				A	B	C	D	E	F	G	H	HP	J	L	M	N	OG	W	X	Y	YK	Z	Mean	Std
Package ID	Package	Max	Min																					
1934	PS6	7.73	4.52	.	.	.	.	4.99	5.32	.	.	.	.	.	.	*4.52	6.31	6.68	7.73	6.21	.	5.40	5.90	1.04
1936	PS6	6.91	5.56	.	.	.	.	6.00	5.92	.	.	.	.	.	.	5.73	6.91	5.94	6.08	*5.56	.	6.15	6.04	0.40
1937	PS6	7.64	5.87	.	.	.	.	6.41	6.89	.	.	.	.	.	.	6.07	6.14	*5.87	7.64	6.64	.	7.02	6.59	0.59
1939	PS7	7.91	5.46	.	.	.	.	.	6.89	.	5.92	.	7.01	7.91	.	.	.	6.36	*5.46	7.51	.	6.99	6.76	0.81
1940	PS7	7.40	4.22	.	.	.	.	.	4.94	.	4.71	.	7.40	6.06	.	.	.	5.40	*4.22	6.59	.	6.52	5.73	1.09
1945	PS7	6.96	4.15	.	.	.	.	.	6.04	.	6.50	.	6.39	5.92	.	.	.	6.31	*4.15	6.96	.	6.68	6.12	0.86
1946	PS7	9.26	5.80	.	.	.	.	.	7.30	.	*5.80	.	6.27	6.61	.	.	.	7.33	6.52	9.26	.	7.85	7.12	1.09
1947	PS7	7.76	5.00	.	.	.	.	.	5.36	.	6.79	.	7.76	7.26	.	.	.	6.18	*5.00	6.02	.	7.54	6.49	1.02
1948	PS7	8.25	5.89	.	.	.	.	.	6.40	.	7.01	.	6.53	8.25	.	.	.	6.29	*5.89	8.10	.	7.73	7.03	0.90
1951	PS7	7.91	5.55	.	.	.	.	.	7.21	.	6.79	.	7.36	7.91	.	.	.	*5.55	5.58	6.50	.	6.84	6.72	0.83
1956	PS7	6.07	3.24	.	.	.	.	.	*3.24	.	3.54	.	4.52	4.55	.	.	.	3.45	3.70	6.07	.	4.32	4.17	0.92
1957	PS7	7.03	4.71	.	.	.	.	.	5.23	.	6.02	.	5.74	6.48	.	.	.	5.49	*4.71	7.03	.	6.96	5.96	0.83
1961	PS7	7.12	4.60	.	.	.	.	.	5.74	.	5.42	.	5.97	6.23	.	.	.	5.56	*4.60	7.12	.	5.89	5.82	0.72
1962	PS7	7.04	4.38	.	.	.	.	.	4.80	.	4.81	.	5.98	6.15	.	.	.	6.67	*4.38	7.04	.	5.58	5.68	0.95
1963	PS7	7.27	5.12	.	.	.	.	.	6.06	.	*5.12	.	5.55	7.27	.	.	.	5.32	6.11	6.90	.	7.06	6.17	0.82
1974	PS9	6.71	5.01	.	.	.	.	6.71	5.76	5.60	*5.01	.	.	.	.	.	.	6.16	5.56	5.49	.	5.64	5.74	0.50
1975	PS9	6.30	5.41	.	.	.	.	6.22	5.73	*5.41	6.30	.	.	.	.	.	.	5.68	5.85	6.15	.	5.55	5.86	0.33
1976	PS9	6.70	5.09	.	.	.	.	5.50	*5.09	6.10	5.81	.	.	.	.	.	.	5.41	6.21	6.70	.	5.66	5.81	0.51
1977	PS9	6.60	5.33	.	.	.	.	6.17	6.29	6.60	5.99	.	.	.	.	.	.	6.56	6.27	6.54	.	*5.33	6.22	0.42
1978	PS9	6.94	5.13	.	.	.	.	6.37	6.94	5.57	*5.13	.	.	.	.	.	.	5.49	6.14	5.34	.	5.80	5.85	0.60
1982	PS9	6.63	5.33	.	.	.	.	5.93	6.08	5.37	6.23	.	.	.	.	.	.	6.13	*5.33	6.33	.	6.63	6.00	0.45

Table A2-4 Continued

				Specimen Location																				
				A	B	C	D	E	F	G	H	HP	J	L	M	N	OG	W	X	Y	YK	Z	Mean	Std
Package ID	Package	Max	Min																					
1983	PS9	6.47	5.58	.	.	.	.	5.80	5.62	5.86	5.73	.	.	.	.	.	.	5.85	5.73	6.47	.	*5.58	5.83	0.28
1985	PS9	5.53	4.07	.	.	.	.	4.82	4.34	4.96	5.53	.	.	.	.	.	.	4.35	4.89	*4.07	.	4.55	4.69	0.46
1986	PS9	5.69	4.47	.	.	.	.	5.22	5.12	5.25	5.61	.	.	.	.	.	.	5.00	*4.47	5.16	.	5.69	5.19	0.38
1988	PS9	5.99	4.59	.	.	.	.	5.96	5.51	4.94	5.61	.	.	.	.	.	.	5.99	*4.59	5.56	.	5.63	5.47	0.48
1989	PS9	5.52	4.58	.	.	.	.	4.97	4.83	5.52	4.83	.	.	.	.	.	.	5.19	5.13	5.10	.	*4.58	5.02	0.28
1992	PS9	6.52	4.64	.	.	.	.	6.52	4.94	5.37	5.65	.	.	.	.	.	.	5.71	*4.64	5.81	.	5.01	5.46	0.60
3001	PS8	5.48	3.08	4.22	3.83	5.48	4.04	.	.	.	.	.	.	.	.	.	.	3.19	4.34	3.83	.	*3.08	4.00	0.75
3002	PS8	6.04	3.41	4.11	5.50	*3.41	4.08	.	.	.	.	.	.	.	.	.	.	4.19	6.04	3.74	.	3.67	4.34	0.93
3003	PS8	4.70	1.56	2.97	3.06	3.33	2.97	.	.	.	.	.	.	.	.	.	.	3.03	4.70	2.99	.	*1.56	3.08	0.85
3004	PS8	6.13	4.37	6.13	5.57	6.10	6.13	.	.	.	.	.	.	.	.	.	.	5.79	5.95	5.15	.	*4.37	5.65	0.62
3005	PS8	3.63	1.32	2.47	1.91	1.83	1.97	.	.	.	.	.	.	.	.	.	.	2.22	3.63	2.49	.	*1.32	2.23	0.68
3006	PS8	5.58	3.73	5.03	4.50	4.87	5.12	.	.	.	.	.	.	.	.	.	.	4.98	5.58	4.24	.	*3.73	4.76	0.58
3007	PS8	2.92	0.00	0.83	1.19	1.25	1.46	.	.	.	.	.	.	.	.	.	.	2.92	1.06	*0.00	.	*0.00	1.09	0.92
3008	PS8	5.21	3.33	*3.33	4.54	4.71	4.60	.	.	.	.	.	.	.	.	.	.	5.21	4.38	4.43	.	3.69	4.36	0.59
3009	PS8	2.19	0.00	0.94	*0.00	0.94	2.12	.	.	.	.	.	.	.	.	.	.	2.19	1.26	1.00	.	*0.00	1.06	0.82
3010	PS8	6.66	3.94	4.14	4.12	*3.94	5.01	.	.	.	.	.	.	.	.	.	.	4.10	6.66	4.13	.	4.23	4.54	0.92
3011	PS8	5.48	2.93	4.82	3.76	4.69	4.37	.	.	.	.	.	.	.	.	.	.	5.48	3.62	3.20	.	*2.93	4.11	0.88
3012	PS8	7.71	5.21	*5.21	6.82	6.23	6.79	.	.	.	.	.	.	.	.	.	.	6.10	7.71	6.00	.	6.39	6.41	0.73
3013	PS8	4.96	0.74	3.37	1.35	3.92	3.12	.	.	.	.	.	.	.	.	.	.	2.37	4.96	1.42	.	*0.74	2.66	1.45
3014	PS8	7.25	4.72	*4.72	5.10	5.54	5.73	.	.	.	.	.	.	.	.	.	.	7.25	7.01	4.73	.	5.80	5.74	0.96
3016	PS8	5.07	2.68	3.74	*2.68	3.99	3.46	.	.	.	.	.	.	.	.	.	.	3.43	5.07	3.52	.	3.12	3.63	0.70

Table A2-4 Continued

				Specimen Location																				
				A	B	C	D	E	F	G	H	HP	J	L	M	N	OG	W	X	Y	YK	Z	Mean	Std
Package ID	Package	Max	Min																					
3017	PS8	6.24	3.42	3.78	*3.42	3.67	3.79	.	.	.	.	.	.	.	.	.	.	4.11	6.24	3.80	.	3.44	4.03	0.92
3018	PS8	7.92	3.08	5.14	4.38	3.59	5.71	.	.	.	.	.	.	.	.	.	.	6.17	7.92	3.30	.	*3.08	4.91	1.66
3019	PS8	6.12	4.03	5.76	4.49	4.37	5.50	.	.	.	.	.	.	.	.	.	.	5.86	6.12	4.77	.	*4.03	5.11	0.79
3020	PS8	4.21	1.95	2.31	4.21	2.40	3.24	.	.	.	.	.	.	.	.	.	.	3.44	3.75	3.76	.	*1.95	3.13	0.82
3021	PS8	8.27	5.61	6.29	6.34	6.70	6.41	.	.	.	.	.	.	.	.	.	.	7.33	8.27	6.78	.	*5.61	6.72	0.80
3022	PS8	2.18	0.00	2.16	2.18	1.91	1.56	.	.	.	.	.	.	.	.	.	.	1.93	1.36	1.20	.	*0.00	1.54	0.72
3023	PS8	9.56	4.79	6.57	5.92	5.78	7.79	.	.	.	.	.	.	.	.	.	.	8.45	9.56	5.69	.	*4.79	6.82	1.62
3024	PS8	1.81	0.00	1.81	0.52	1.81	0.48	.	.	.	.	.	.	.	.	.	.	1.51	0.65	*0.00	.	*0.00	0.85	0.76
3025	PS8	7.37	4.76	4.90	5.13	5.29	5.21	.	.	.	.	.	.	.	.	.	.	7.37	5.46	*4.76	.	5.38	5.44	0.82
3026	PS8	2.66	0.00	2.52	*0.00	2.66	*0.00	.	.	.	.	.	.	.	.	.	.	*0.00	*0.00	0.51	.	*0.00	0.71	1.17
3027	PS8	6.85	5.12	5.73	5.42	5.58	*5.12	.	.	.	.	.	.	.	.	.	.	6.67	6.85	5.28	.	5.41	5.76	0.65
3028	PS8	5.92	3.13	4.93	4.61	3.63	4.51	.	.	.	.	.	.	.	.	.	.	5.67	5.92	5.22	.	*3.13	4.70	0.96
3029	PS8	9.14	5.97	*5.97	6.78	6.27	7.15	.	.	.	.	.	.	.	.	.	.	8.41	9.14	6.25	.	6.89	7.11	1.12
3030	PS8	5.54	0.00	1.59	3.81	3.41	4.78	.	.	.	.	.	.	.	.	.	.	4.37	5.54	3.96	.	*0.00	3.43	1.80
3031	PS8	8.70	6.03	6.67	*6.03	7.50	6.42	.	.	.	.	.	.	.	.	.	.	7.00	8.70	6.58	.	7.01	6.99	0.82
3032	PS8	7.26	1.13	3.39	4.21	3.96	5.22	.	.	.	.	.	.	.	.	.	.	4.87	7.26	4.06	.	*1.13	4.26	1.73
3033	PS8	5.34	2.46	2.52	4.91	4.72	4.62	.	.	.	.	.	.	.	.	.	.	5.34	4.01	3.84	.	*2.46	4.05	1.08
3034	PS8	5.28	3.04	3.83	4.66	4.03	3.71	.	.	.	.	.	.	.	.	.	.	4.94	5.28	4.20	.	*3.04	4.21	0.72