Collaborative Testing Services, Inc.

Containerboard Interlaboratory Testing Program

Participant Summary Report #619 (D) - April 2021

Introduction to the Containerboard Program

Explanation of Tables and Definitions of Terms

Analysis	Sample	Analysis Name
201	BX15	Top to Bottom Box Compression Strength, Corrugated Boxes
202	EC13	Edgewise Compressive Strength, by T811, Corrugated Board
203	EC13	Edgewise Compressive Strength by T839, Corrugated Board
205	42F3	Bursting Strength (Mullen), 42 lb Linerboard
207	35E2	Bursting Strength (Mullen), 35 lb Linerboard
215	42F3	Ring Crush, 42 lb Linerboard
217	35E2	Ring Crush, 35 lb Linerboard
223	42F3	STFI, 42 lb Linerboard
225	35E2	STFI, 35 lb Linerboard
228	42F3	Roughness - Stylus Method, 42 lb Linerboard
229	42F3	Roughness - Sheffield Method, 42 lb Linerboard
231	42F	Internal Bond, 42 lb Linerboard
234	42F	COF Inclined Plane (Slide Angle), 42 lb Linerboard
237	42F	Air Resistance, 42 lb Linerboard
240	CM11	Flat Crush Strength (CMT), 26 lb Corrugating Medium
250	CM11	Fluted Edge Crush Strength (CFC), 26 lb Corrugating Medium
255	CM11	Ring Crush (RCT), 26 lb Corrugating Medium
261	CM11	STFI, 26 lb Corrugating Medium

Collaborative Testing Services, Inc.
CONTAINERBOARD INTERLABORATORY TESTING PROGRAM

INTRODUCTION

The Interlaboratory Testing Program for Containerboard is operated and maintained by Collaborative Testing Services, Inc. (CTS), with technical guidance provided by the Containerboard Group of the American Forest & Paper Association. The tests are conducted on a monthly basis.

For these tests samples of linerboard and corrugating medium, that each have been separately randomized from narrow rolls, are distributed for testing weekly. One weight of medium (26 lb.) is used for Concora Flat Crush Strength, Corrugated Fluted Crush Strength, Ring Crush Strength, and STFI Compression. Two weights of linerboard are tested each month for Mullen Burst, Ring Crush, and STFI Compression: 42 lb. - every month; 35 lb. and 56 lb. - alternate months. The participants return their test results for analysis and receive a monthly report.

Please refer to the section, "EXPLANATION OF TABLES", for definitions of terms and guidelines to interpreting the results.

USE OF AVERAGE MEAN AS A COLLABORATIVE REFERENCE VALUE

The samples of linerboard and corrugating medium, which have been randomized and placed in sealed packages for distribution in this program, may be used as collaborative reference materials. The values most representative of each material are the Cumulative Grand Means in the latest reports, given at the bottom right of each table. Comparisons can only be made within one lot of material; therefore check your measurements against the Cumulative Grand Means with the same lot code as on the packages being tested.

Material	Lot Code	Dates in Use
26 lb Corrugating Medium	CM11	January 2020-Current
35 lb Linerboard	35E2	June 2020-Current
	35E1	February 2020-April 2020
42 lb Linerboard	42F2	February 2020-Current
	42F1	January 2020-January 2020
56 lb Linerboard	56G1	January 2020-Current

ABOUT CTS

Founded in 1971, Collaborative Testing Services, Inc. (CTS) is a privately-owned company that specializes in interlaboratory tests for a wide variety of industries, including rubber, plastics, fasteners and metals, containerboard, paper, color, and wine, as well as proficiency tests for forensic laboratories. All of the tests are designed to assist organizations in achieving and maintaining quality control objectives. Labs from the U.S., as well as more than 80 countries, currently participate in the CTS programs.

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EXPLANATION OF TABLES

Each analysis is divided into three time spans. On the left side of the table are the individual laboratory results for each week of the month; in the center are each lab's statistical data for the month; and on the right are each lab's cumulative data for up to 16 weeks. At the bottom of the table are the consensus statistics for all the participants for each of the three time spans.

Definitions of Terms Used

Weekly Results

Laboratory Data

WebCode - A six character laboratory identifier used to maintain information on a confidential basis. The WebCode is unique for each cycle and will change for each report. Your WebCode can be found in your Individual Report (Current Month Performance Report) and your datasheet.

Weekly Means - The average of the test results obtained by the participant for each week that data were reported.

Consensus Data

Wk Mean - For each week, the average of the Means for all the participants, excluding those laboratories flagged with an 'X'.

Avg SD - For each week, the average of the within-laboratory standard deviations (SD's) for all the participants, excluding those laboratories flagged with an 'X'. The Avg SD is an indication of the variation of measurements within an average laboratory.

SD btwn Labs - For each week, the standard deviation of the laboratory Means about the Wk Mean, excluding those laboratories flagged with an 'X'. The SD LABS is an indication of the precision of measurement between the laboratories.

Labs Incld - The number of laboratory Means included in the Wk Mean for that week.

Labs Excld - The number of laboratory Means reported but excluded from the Wk Mean for that week because of outlying results ('X' following Mean).

Labs not rcvd - The number of laboratories failing to report for that week.

Monthly Results

Laboratory Data

Mean - For each laboratory, the average of all the weekly Means reported for this month.

CPV - Comparative Performance Value, an indication of how well a laboratory's Mean agrees with the other participants. The CPV is a ratio indicating the number of standard deviations from the consensus mean (Monthly Mean). The closer a laboratory's CPV is to zero, the more consistent its results are with the other participants' data.

SD - For each laboratory, the average of the weekly within-lab standard deviations (SD's) for all reported Weekly Means this month.

SD Wk - The standard deviation among the laboratory's weekly Means, including those Means flagged with an 'X'. The SD Wks is an indication of that laboratory's ability to obtain constant results from week to week.

Consensus Data

Month Mean - The average of the Means for all the participants, excluding those laboratories flagged with an 'X,' reporting data for this month.

Avg SD - For the current month, the average of the within-laboratory standard deviations (SD's) for all the participants, excluding those laboratories flagged with an 'X'.

SD btwn Labs - For the current month, the standard deviation of the laboratory Means about the Month Mean, excluding those laboratories flagged with an 'X'.

SD btwn Group - For the current month, the standard deviation of the laboratory Means within the group about the Month Mean, excluding those laboratories flagged with an 'X'.

SD btwn Wks - For the current month, the average of the laboratory between week standard deviations (SD Wks') for all the participants, excluding those laboratories flagged with an 'X'.

Cumulative Results

Laboratory Data

Mean	-	For each lab, the average of all the monthly Means reported for the weeks shown.
CPV	-	Comparative Performance Value, an indication of how well a laboratory's cumulative mean agrees with the other participants. The CPV is a ratio indicating the number of standard deviations from the consensus mean (Monthly Mean).
SDr	-	For each laboratory, the average of the weekly within-lab standard deviations (SD's) for the weeks shown.
SD Wk	-	The standard deviation among the laboratory's weekly Means for the weeks shown, including those Means flagged with an 'X'. The SD Wks is an indication of that laboratory's ability to obtain constant results from week to week.
Wks	-	The number of weeks included in the cumulative period.
Inst	-	The two letter instrument code. Codes are summarized at the bottom of the last analysis page.

Consensus Data

Grand Mean	-	The average of the Means for all the participants, excluding those laboratories flagged with an 'X,' reporting data for the number of weeks included in the cumulative period.
Avg SD	-	For the cumulative period, the average of the within-laboratory standard deviations (SD's) for all the participants, excluding those laboratories flagged with an 'X'.
SD btwn Labs	-	For the cumulative period, the standard deviation of the laboratory Means about the Month Mean, excluding those laboratories flagged with an 'X'.
SD btwn Wks	-	For the cumulative period, the average of the laboratory between week standard deviations for all the participants, excluding those laboratories flagged with an 'X'.
Labs Incld	-	The number of laboratory Means included in the Grand Mean.

Any laboratory that receives a 'flag' following a mean or standard deviation should refer to the chart below for an explanation of the data flag symbol:

Flag	Explanation

Data Flags " X " and " * " indicate a laboratory's performance on an average value differed from the consensus.
Data Flags " H " and " L " indicate a laboratory's performance on a standard deviation differed from the consensus.

Flags assigned to Weekly Means, Monthly Mean and Cumulative Mean:

X	Excluded from the weekly means, monthly means and/or the cumulative mean. Immediate review of data and/or testing procedure is recommended.
*	Included in the weekly means, monthly means and/or the cumulative mean; however, lab should review testing procedure and monitor future results.

Flags assigned to Weekly Means:

H	Indicates high within-laboratory standard deviation. The laboratory SD for each week is not shown, but laboratory average SD and consensus average SD values are shown.
L	Indicates low within-laboratory standard deviation. The laboratory SD for each week is not shown, but laboratory monthly average SD and consensus average SD values are shown.

Flags assigned to Monthly SD Wks and Cumulative SD Wks:

H	Indicates high variabilty between weekly means (high week-to-week variation).
L	Indicates low variabilty between weekly means (low week-to-week variation).

	Monthly Results				Cumulative Results				
WebCode	Mean	CPV	SD		Mean	CPV	SD Months	Months	Inst
2AHFD9	752.8	-1.13	67.07		771.1	-0.75	58.40	4	LL
4CJ34H	766.8	-0.88	44.46		779.6	-0.59	9.11	4	LG
64V2W4	777.6	-0.69	42.58		814.7	0.05	25.08	4	EX
7VKZFA	851.8	0.65	64.26		838.3	0.49	23.51	4	EX
8KF8JN	812.8	-0.05	49.18		794.8	-0.31	25.11	4	ES
9YWHRB	789.4	-0.47	90.41		811.9	0.00	25.20	4	LG
AE392U	747.7	-1.23	31.06		844.4	0.60	67.39	4	ER
AVPLG8	820.6	0.09	22.40		810.7	-0.02	29.67	4	LS
B7R7FT	810.2	-0.10	50.75		826.1	0.26	14.72	4	EX
CDLQYZ	891.4	1.36	40.25		876.8	1.19	56.12	4	LS
D9MY2M	721.9	-1.69	47.49		775.7	-0.66	68.61	4	LL
FJW9N4	830.8	0.27	90.79		779.9	-0.59	35.63	4	LG
GHH9XM	830.2	0.26	47.75		800.6	-0.21	28.38	4	LM
H6BKM4	797.6	-0.33	113.85 H		706.8	-1.93 *	126.98 H	4	EM
J4CUUU	839.2	0.42	60.52		865.5	0.99	19.32	4	LG
MZ3M6Y	861.8	0.83	35.03		821.9	0.19	36.18	4	LG
NWWMH8	821.2	0.10	41.92		822.4	0.19	5.04 L	4	ER
R7ULLP	908.8	1.67	83.24		890.7	1.45	12.42	4	ET
UD6PJ2	831.2	0.28	53.49		833.4	0.40	30.03	4	LM
V32QCD	871.6	1.01	39.61		841.4	0.54	42.72	2	LL
VQ8EXE	861.4	0.82	16.80		870.4	1.08	8.62	4	LG
WW6LWE	737.3	-1.41	81.41		673.7	-2.54 *	60.54	4	TB
XDAHNC	757.0	-1.06	60.94		782.5	-0.54	36.13	2	EX
XKTLXZ	885.6	1.26	83.77		881.2	1.28	12.67	4	LO
YGNFUD	913.0	1.75	26.49		883.5	1.32	27.39	4	LS
YZ2UC9	832.6	0.30	37.97		824.1	0.23	14.15	4	ER
ZHDYEC	703.9	-2.01 *	13.96		697.9	-2.10 *	35.23	4	LS
ZY62TU	815.6	0.00	39.45		811.6	0.00	24.56	4	ER

Consensus (All Labs) Results

Month Mean	815.78	Grand Mean	811.83
Avg SD	57.93	Avg SD Months	42.35
SD btwn Labs	55.56	SD btwn Labs	54.36
Labs Incld	28	Labs Incld	28

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Consensus By Method

Test Method	Group Mean	SD btwn Group	Difference from Grand Mean	Labs Included
Hot melt adhesive sealing	819.11	63.64	3.33	9
Water based adhesive sealing	797.60	0.00	18.18	1
Clip sealing	815.13	54.50	0.65	18

Key to Instrument Codes Reported by Participants

EM	Emerson 1200	ER	Emerson 6200 Series
ES	Emerson 8510	ET	Emerson 7200
EX	Emerson Apparatus (Model not specified)	LG	TLS / L.A.B. Validator Series
LL	Lansmont 76-5K	LM	Lansmont 122-15k
LO	Lansmont 152-30k	LS	Lansmont Squeezer
TB	TMI Monitor/Compression Tester, Model 17-70		

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Containerboard Interlaboratory Testing Program

Analysis 202

Edgewise Compressive Strength, by T811, Corrugated Board - EC13

TAPPI Official Test Method T811

	Monthly Results			Cumulative Results				
WebCode	Mean	CPV	SD	Mean	CPV	SD Months	Months	Inst
7VKZFA	45.6	0.67	1.56	44.5	0.47	0.84	4	LC
9YWHRB	43.8	0.07	2.56	42.5	-0.17	1.05	4	LE
AVPLG8	41.8	-0.61	2.31	41.0	-0.62	1.03	4	LD
H97CTF	42.8	-0.27	2.62	43.1	0.01	1.70	4	LD
M79JPY	42.5	-0.37	1.02	42.5	-0.17	0.00	1	XX
PECH9K	42.2	-0.47	1.79	45.1	0.64	2.91	3	LC
QWNKMJ	43.6	0.00	0.85	44.1	0.34	0.42	4	XX
RL8WAC	49.1	1.86 *	1.27	48.0	1.54	1.28	4	XX
UTEDXN	37.8	-1.94 *	0.79	37.5	-1.72	0.66	4	TF
VQ8EXE	45.9	0.79	1.42	45.9	0.88	0.31 L	4	EM
YGNFUD	41.1	-0.82	1.26	43.1	0.04	1.85	4	LC
ZHDYEC	32.5	-3.72 X	1.74	36.5	-2.02 *	4.40 H	4	EM
ZY62TU	46.9	1.11	2.22	45.6	0.79	1.69	4	EN

Consensus (All Labs) Results

Month Mean	43.57	Grand Mean	43.02
Avg SD	1.76	Avg SD Months	1.88
SD btwn Labs	2.97	SD btwn Labs	3.22
Labs Incld	12	Labs Incld	13

Key to Instrument Codes Reported by Participants

EM	Emerson 1200 Series	EN	Emerson 2200
LC	L&W Crush Tester 48	LD	L&W Crush Tester 248
LE	L&W Crush Tester 840	TF	TMI Digital Crush Tester, Model 17-19
XX	Instrument make/model not specified by lab		

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	Monthly Results				Cumulative Results				
WebCode	Mean	CPV	SD		Mean	CPV	SD Months	Months	Inst
2KWF4A	39.2	-2.62 *	1.36		38.4	-3.65 X	0.58	4	XX
4PK2M9	50.5	1.70	0.88		49.7	1.90	1.13	4	LD
64V2W4	44.4	-0.65	1.12		44.2	-0.82	0.63	4	CT
6HY4WZ	42.6	-1.33	1.81		43.2	-1.28	1.55	4	TK
7VKZFA	46.2	0.06	1.16		45.1	-0.38	0.84	4	LC
8KF8JN	46.9	0.30	1.40		46.9	0.54	0.89	4	LD
9YWHRB	46.3	0.07	1.70		45.5	-0.16	0.58	4	LY
AE392U	47.5	0.53	1.60		43.3	-1.25	3.33	4	LD
AVPLG8	43.3	-1.07	1.45		43.9	-0.92	1.14	4	LD
B7R7FT	48.9	1.07	2.63		44.5	-0.67	3.26	4	LD
CDLQYZ	51.0	1.88	1.56		51.2	2.62 *	1.56	4	TB
D9MY2M	44.9	-0.45	1.66		44.7	-0.54	2.23	4	LC
FJGYQW	42.1	-1.52	1.41		45.9	0.03	4.72 H	4	TD
GHH9XM	46.8	0.28	1.10		46.6	0.40	0.98	4	TG
H6BKM4	46.2	0.05	1.46		46.5	0.34	0.43	4	TH
H97CTF	46.7	0.23	1.11		46.5	0.33	0.40	4	LD
HWDV3T	49.7	1.37	2.17		42.5	-1.65	7.33 H	4	XX
J4CUUU	45.3	-0.30	3.22 H		45.8	0.00	2.21	4	TJ
KKDYWX	48.6	0.97	1.39		47.8	0.97	1.13	4	TD
LNQYUN	42.8	-1.27	1.71		42.8	-1.51	0.00	1	LD
M79JPY	46.6	0.21	1.18		46.6	0.39	0.00	1	XX
NWWMH8	45.9	-0.07	2.72		45.4	-0.19	1.61	4	LD
PECH9K	48.5	0.92	1.56		47.8	0.99	1.26	4	LC
R7ULLP	44.9	-0.46	1.44		45.4	-0.23	0.48	4	TD
RL8WAC	49.3	1.22	1.20		48.3	1.22	1.22	4	XX
UD6PJ2	44.7	-0.54	3.71 H		47.0	0.56	2.39	4	EM
UTEDXN	42.0	-1.56	0.94		42.2	-1.79	1.72	4	TD
V32QCD	47.0	0.34	1.38		47.4	0.79	0.40	3	BU
VXMD8K	47.8	0.65	0.92		47.6	0.86	0.96	4	EM
WB9VWG	48.4	0.89	0.87		47.0	0.58	1.72	4	TG
WW6LWE	48.1	0.76	0.85		47.2	0.69	1.04	4	LD
XDAHNC	46.7	0.24	1.63		45.9	0.04	0.82	4	TL
XKTLXZ	43.4	-1.02	1.82		44.3	-0.74	0.88	4	LD
YGNFUD	48.7	1.01	1.12		48.2	1.18	0.83	4	LC
YZ2UC9	44.1	-0.75	1.20		44.1	-0.87	0.47	4	EM
ZHDYEC	44.0	-0.78	1.85		43.7	-1.02	0.70	4	EM
ZY62TU	45.1	-0.38	3.85 H		45.0	-0.42	1.48	4	EN

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Consensus (All Labs) Results

Month Mean	46.08	Grand Mean	45.82
Avg SD	1.78	Avg SD Months	2.06
SD btwn Labs	2.62	SD btwn Labs	2.04
Labs Incld	37	Labs Incld	36

Key to Instrument Codes Reported by Participants

BU	Buchel Digital Crush Tester	CT	Con-Ten
EM	Emerson 1200 Series	EN	Emerson 2200
LC	L&W Crush Tester 48	LD	L&W Crush Tester 248
LY	L&W 830	TB	TMI Monitor/Compression Tester, Model 17-70
TD	TMI Digital Crush Tester, Model 17-09	TG	TMI Digital Crush Tester, 17-76
TH	TMI Monitor/Compression Tester, Model 17-76	TJ	TLS Compression Tester, Model CDM-5
TK	TLS Compression Tester, Model 5184	TL	Tech-Lab Systems Compression
XX	Instrument make/model not specified by lab		

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	Weekly Means				Monthly Results				Cumulative Results					
WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
2PVQ2V	108.2	111.2	107.8 H	108.5	108.9	-0.58	10.7	1.6	109.1	-0.53	10.3	2.9	16	LB
32JCHB_AL	117.9 *	118.4 *	114.5	116.6	116.9	1.89	6.0	1.7	116.2	1.88	6.8	3.7	16	AL
3C2W38	109.0	108.2	107.8 L	105.8	107.7	-0.96	4.7	1.4	107.8	-0.96	4.3	1.6	16	XX
3JYLLW_AL	111.1	111.3	108.8	106.7	109.5	-0.41	6.8	2.2	110.2	-0.15	6.7	3.1	16	AL
4PK2M9_AL	112.8	114.4	117.4	116.2	115.2	1.38	6.3	2.0	115.9	1.79	6.1	2.5	16	AK
64V2W4	110.0	112.0	111.0	108.5	110.4	-0.13	8.6	1.5	110.3	-0.10	9.0	2.4	16	XX
66U32B	103.6*H	105.1	108.3	104.5	105.4	-1.69	11.2	2.0	106.1	-1.54	9.5	2.6	16	LA
6HEMGX	109.4	111.9	109.2	111.2	110.4	-0.11	7.2	1.3	109.6	-0.34	7.8	1.8	16	LA
6PYKAQ_AL	113.6	110.8	114.5 H	110.2	112.3	0.46	11.6	2.1	110.1	-0.16	10.2	2.5	16	AL
7G429N	114.9	109.5	111.3	110.5	111.5	0.24	7.2	2.4	112.3	0.58	7.1	2.3	16	LA
7G429N_AL	108.8	109.9	111.0	110.7	110.1	-0.22	7.1	1.0	111.2	0.18	6.5	1.5	16	AL
8KF8JN	109.4	106.2	111.3	104.5	107.9	-0.92	10.2	3.1	109.4	-0.40	8.9	2.9	16	LA
8NH8HZ	111.4	107.6	109.4	110.4	109.7	-0.34	4.4	1.6	112.3	0.55	5.7	3.2	15	AX
8NH8HZ_AL	108.1	106.7	115.3	111.1	110.3	-0.15	7.7	3.8	109.4	-0.42	8.3	2.9	15	AL
9YWHRB	110.7	113.8	111.1	113.6	112.3	0.47	6.2	1.6	113.6	1.01	6.5	3.0	16	AH
A7CMVV	114.4	112.7	111.4	109.7	112.0	0.39	8.3	2.0	111.5	0.31	8.8	2.6	16	LC
AE392U	108.3	110.1	113.8	104.8	109.3	-0.48	8.6	3.7	108.9	-0.56	9.8	3.4	16	LZ
AVPLG8	108.5	106.6	103.1 *	105.3	105.9	-1.53	8.5	2.3	108.3	-0.78	8.4	2.3	16	LA
AZLDKX	108.2	109.8	108.3	104.6 H	107.7	-0.95	11.3	2.2	110.1	-0.18	9.3	3.1	16	LJ
B7R7FT	108.8	110.4	115.2	112.4	111.7	0.28	9.2	2.8	109.2	-0.50	8.8	3.4	16	AH
BFWFKX_AL	115.3	111.7	113.3	114.1	113.6	0.88	10.3	1.5	110.2	-0.14	8.7	3.1	14	AL
BTJMJJ	107.5	108.6	106.0	105.9	107.0	-1.19	9.3	1.3	107.4	-1.10	9.2	1.3	8	LC
C7KGN2_AL	111.1	108.1	113.3	107.8	110.1	-0.23	8.4	2.6	107.0	-1.24	8.7	3.3	16	AL
CALM6R	108.5	110.2	110.0	110.0	109.7	-0.35	8.0	0.8	112.8	0.74	9.4	2.9	16	LA
CTZ2MM	111.2	102.0 *	110.2	120.0 *L	110.9	0.02	6.5	7.4 H	109.3	-0.44	7.9	4.1	16	AH
CTZ2MM_AL	115.0	116.5	116.8	114.5	115.7	1.53	10.3	1.1	113.6	1.01	9.6	3.2	16	AL
DYHRLM	104.2 *	104.4	105.9	103.2	104.4	-1.98 *	9.6	1.1	103.2	-2.50 *	8.8	1.9	8	LA
FP4MNM_AL	111.3	111.5	109.6	110.8	110.8	0.00	7.8	0.9	112.2	0.53	8.4	2.0	16	AL
G6CV4G	109.7	119.7 *	No Data	No Data	114.7	1.22	9.5	7.1	111.3	0.24	9.1	3.7	14	LZ
GK7KYD_AL	111.4	109.4	108.1	112.8	110.4	-0.12	8.5	2.1	108.4	-0.75	9.4	2.3	16	XX
H97CTF	108.5	108.9	111.6	112.1	110.3	-0.16	6.0	1.8	109.3	-0.45	5.7	2.6	16	LA
HJU66C	112.8	116.2	114.8	107.0	112.7	0.60	6.8	4.0	114.1	1.18	5.7	2.7	15	AH
JKXH4P	112.4	112.8	112.9	113.3	112.9	0.64	4.5	0.4 L	113.0	0.81	4.9	0.5 L	16	LA
JU9KPQ	113.2	109.1	No Data	No Data	111.2	0.11	9.9	2.9	112.3	0.56	9.3	2.1	8	LC
K7XX3R	109.5	111.5	109.6	111.1	110.4	-0.11	7.1	1.0	110.6	-0.01	7.1	1.2	16	AH

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Containerboard Interlaboratory Testing Program

Analysis 205

Bursting Strength (Mullen), 42 lb Linerboard - 42F3

TAPPI Official Test Method T807

	Weekly Means				Monthly Results				Cumulative Results					
WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
KDFB4C	116.0	113.0	115.4	121.5 *H	116.5	1.77	10.0	3.6	117.2	2.21 *	9.7	6.4 H	15	TB
KL8RRF_AL	110.1	111.2	108.4	109.8	109.9	-0.29	5.7	1.2	109.1	-0.50	8.6	2.3	16	AL
LDWP7F	107.7	107.8	101.9 *	105.7	105.8	-1.56	7.0	2.8	107.1	-1.20	8.6	2.4	16	LC
LXV9W8	111.0 H	112.9	111.7	113.2	112.2	0.45	10.6	1.0	113.9	1.12	9.6	3.2	16	LA
M6AGXA	114.1	110.3	114.4	116.4	113.8	0.94	7.0	2.5	113.8	1.07	7.0	2.5	4	LA
MGP7WE	111.9 L	112.0	114.1	117.2	113.8	0.94	9.2	2.5	112.9	0.78	9.4	2.7	12	TB
MQV9YQ	98.9 X	108.3	102.1 *	106.6	104.0	-2.13 *	8.9	4.3	104.5	-2.07 *	8.1	3.4	16	LA
NGJDFH_AL	113.7	106.6	115.0	113.3	112.2	0.42	9.6	3.8	111.9	0.43	10.2	4.6	16	AL
NWWMH8	104.2 *	99.9 *	107.9	109.7	105.4	-1.67	7.2	4.3	104.5	-2.08 *	8.5	3.2	16	AH
QKU4XH	124.5 X	117.1	112.8 H	118.5	118.2	2.32 *	9.6	4.8	120.0	3.15 X	9.2	3.4	16	AX
RL8WAC	116.3 L	117.6	117.3	119.0 L	117.5	2.10 *	3.6	1.1	116.0	1.80	3.1	1.4	16	LC
RMF84U	108.5	109.8	109.1	112.4	110.0	-0.26	6.6	1.7	110.4	-0.09	7.6	2.1	16	AC
RUD4PC	113.2	114.3	114.6	108.5	112.7	0.59	8.8	2.8	108.6	-0.68	8.4	3.2	16	LA
U6ARUD	108.3	106.7 L	104.3 L	103.4 L	105.7	-1.60	2.6	2.2	107.2	-1.14	4.4	3.0	16	LA
UF8PKK_AL	109.2	103.1	116.2	104.5	108.2	-0.79	9.0	5.9 H	110.9	0.09	9.4	5.8	16	AK
UTEDXN	112.9	109.7	110.7	112.7 H	111.5	0.22	13.3	1.6	112.3	0.57	10.9	1.8	16	XX
WDG34G	108.7	110.4	111.4	109.9	110.1	-0.21	6.4	1.1	110.2	-0.12	6.9	1.4	16	TP
WXYCZ8	109.1	108.5	109.3	109.4	109.1	-0.53	9.1	0.4 L	109.3	-0.43	5.7	0.7 L	16	LA
X6EDXW_AL	112.7	113.8	111.6	112.4	112.6	0.57	6.9	0.9	115.5	1.66	8.5	7.6 H	16	AL
YGNFUD	113.2	110.6	111.0	110.0	111.2	0.13	8.8	1.4	110.2	-0.12	9.3	2.8	16	AH
Z7M8Q2_AL	107.6	115.6	112.6	109.9	111.4	0.20	9.4	3.4	112.1	0.51	9.6	2.2	16	AK
ZCR6Y7_AL	114.5	112.8	114.8	112.6	113.7	0.90	6.6	1.1	110.8	0.07	7.9	3.2	16	AL

Consensus (All Labs) Results

Wk Mean	110.75	110.51	111.08	110.63	Month Mean	110.79	Grand Mean	110.62
Avg SDr	7.85	8.11	8.07	9.07	Avg SD	8.33	Avg SD	8.25
SD btwn Labs	3.07	3.91	3.68	4.36	SD btwn Labs	3.21	SD btwn Labs	2.96
Labs Incld	55	57	55	55	SD btwn Wks	2.76	SD btwn Wks	3.04
Labs Excld	2	0	0	0	Labs Incld	57	Labs Incld	56
Labs not Rcvd	0	0	2	2				

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Key to Instrument Codes Reported by Participants

AC	Perkins Model C	AH	Perkins Model AH
AK	L & W Autoline 300	AL	L & W Autoline 400
AX	Perkins Mullen Tester (model not specified)	LA	L&W Bursting Strength Tester
LB	L&W Burst-O-Matic	LC	L&W Autoline (205 Enrollment)
LJ	L&W Bursting Strength Tester J-Type	LZ	L&W (model not specified)
TB	TMI Monitor/Burst 1000	TP	Technidyne PROFILE/Plus
XX	Instrument make/model not specified by lab		

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	Weekly Means				Monthly Results				Cumulative Results					
WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
2PVQ2V	89.2	89.4	92.2	90.6	90.3	-0.68	8.7	1.4	90.4	-0.65	7.1	1.8	12	LB
32JCHB_AL	101.9 *	102.2 *	99.9 *	100.1	101.0	2.69 *	7.7	1.2	97.9	2.04 *	6.9	3.7	12	AL
3C2W38	88.7	86.8	88.3	87.6 L	87.9	-1.46	4.3	0.8	88.9	-1.19	4.0	1.5	12	XX
3JYLLW_AL	94.2	90.6 L	92.3	93.8	92.7	0.08	6.2	1.6	92.5	0.10	6.3	1.7	12	XX
4PK2M9_AL	95.1	92.8	95.7	95.9	94.9	0.75	7.0	1.4	98.4	2.22 *	6.5	3.4	12	AK
64V2W4	88.0	94.0	88.5	96.5	91.8	-0.23	8.9	4.2	89.4	-1.01	8.8	4.0	12	XX
66U32B	95.4 H	85.4	88.4	91.7	90.2	-0.71	8.9	4.3	90.5	-0.63	12.1	4.2	12	LA
6HEMGX	92.0	93.3	90.7	89.7	91.4	-0.34	7.6	1.6	91.7	-0.19	7.1	1.6	8	LA
6PYKAQ_AL	97.1	93.3	97.4	97.0	96.2	1.17	7.8	1.9	103.0	3.91 X	8.4	10.7 H	12	AL
7G429N	91.6	88.1	91.4	94.8	91.5	-0.32	7.9	2.7	91.5	-0.25	6.6	2.4	12	LA
7G429N_AL	92.5	92.4	91.9	95.5	93.1	0.19	6.0	1.6	92.9	0.25	5.3	1.7	12	AL
8KF8JN	88.9	86.6	84.8 *	88.1	87.1	-1.70	9.9	1.8	89.5	-0.99	8.1	2.9	12	LA
8NH8HZ	95.8 L	93.2	89.0	94.0	93.0	0.16	3.8	2.9	95.9	1.34	4.3	3.9	8	AX
8NH8HZ_AL	92.5	92.7	97.6	93.6	94.1	0.51	7.3	2.4	93.6	0.48	7.3	2.1	8	AL
9YWHRB	95.5	95.4	95.7	95.5	95.5	0.96	7.5	0.1 L	95.3	1.12	6.3	1.3	12	AH
A7CMVV	95.4	92.5	96.2	97.3	95.3	0.89	6.6	2.0	93.5	0.46	7.8	2.9	12	LC
AE392U	96.5	90.7	95.5	91.1	93.5	0.31	8.6	3.0	89.9	-0.84	8.6	3.5	12	LA
AVPLG8	90.4	95.0	92.6	92.6	92.7	0.06	6.6	1.9	90.7	-0.57	7.2	2.4	12	LA
AZLDKX	95.6	88.2	87.0	92.7	90.9	-0.51	8.3	4.0	92.0	-0.06	9.3	2.7	12	LJ
B7R7FT	89.6	85.0 H	95.2	94.0	91.0	-0.48	15.9	4.6	89.2	-1.10	10.8	3.2	12	AH
BFWFKX_AL	97.8	96.1	93.8	91.8	94.9	0.75	8.1	2.6	93.3	0.38	7.1	3.2	12	AL
BTJMJJ	96.3	90.8	89.8	94.5	92.8	0.11	7.9	3.1	89.7	-0.93	7.1	4.6	8	LC
C7KGN2_AL	92.5	92.8	93.4	89.4	92.0	-0.15	7.0	1.8	90.9	-0.47	7.9	2.3	12	AL
CALM6R	93.4	96.3	96.2	97.3	95.8	1.04	8.3	1.7	95.3	1.13	9.9	3.0	12	LA
CTZ2MM	94.2	87.6	90.8	98.6	92.8	0.10	7.5	4.7	92.3	0.04	7.8	3.8	12	AH
CTZ2MM_AL	91.5	85.8	88.4	99.1	91.2	-0.41	6.4	5.8 H	91.0	-0.43	6.8	3.8	12	AL
DYHRLM	87.4	85.7	91.4	88.1	88.2	-1.37	8.2	2.4	88.2	-1.47	8.2	2.4	4	LA
FP4MNM_AL	90.7	94.6	94.5	91.8	92.9	0.13	9.0	2.0	92.3	0.04	8.4	2.4	12	AL
G6CV4G	93.3	96.2	No Data	No Data	94.7	0.71	7.6	2.1	92.9	0.26	8.0	2.0	10	LZ
GK7KYD_AL	85.2 *	90.6	92.0	90.7	89.6	-0.90	8.0	3.0	89.4	-1.02	8.7	2.3	8	XX
H97CTF	91.5	93.6	91.6	92.8	92.4	-0.04	5.0	1.0	90.3	-0.71	4.8	2.7	12	LA
HJU66C	95.2	101.0 *	95.6	95.4	96.8	1.36	5.0	2.8	96.9	1.68	5.5	3.4	12	AH
JKXH4P	93.6 L	94.1	94.2	94.3 L	94.1	0.49	3.2	0.3 L	93.6	0.48	3.1	0.5 L	12	LA
JU9KPQ	90.0	85.4	No Data	No Data	87.7	-1.51	9.0	3.3	91.5	-0.27	8.6	4.8	6	LC
K7XX3R	91.3	91.9	90.1	90.2	90.9	-0.51	6.2	0.9	91.1	-0.40	5.8	1.1	12	AH

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Containerboard Interlaboratory Testing Program

Analysis 207

Bursting Strength (Mullen), 35 lb Linerboard - 35E2

TAPPI Official Test Method T807

	Weekly Means				Monthly Results				Cumulative Results					
WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
KDFB4C	100.0 *	99.3	96.7	94.1	97.5	1.58	8.8	2.7	96.6	1.59	7.7	5.1	12	TB
KL8RRF_AL	92.0	107.7 XH	99.8 *	97.9	99.3	2.16 *	12.7	6.5 H	93.9	0.62	8.8	5.4	12	AL
LDWP7F	92.7	91.5	88.6	85.5	89.6	-0.92	7.1	3.2	89.1	-1.14	8.3	2.5	12	LA
LXV9W8	91.0	90.2	90.9	91.8	91.0	-0.47	8.0	0.6	92.5	0.09	8.9	2.7	12	LA
M6AGXA	100.8 *	96.8	92.8	100.7 *	97.8	1.66	7.9	3.8	97.8	2.01 *	7.9	3.8	4	LA
MGP7WE	94.0	98.9	98.3	98.6 H	97.4	1.55	9.4	2.3	97.6	1.93	9.0	2.3	8	TB
MQV9YQ	87.8	88.1	89.5	85.7	87.8	-1.48	9.3	1.6	89.0	-1.18	8.1	2.5	12	LA
NGJDFH_AL	90.7	92.0	94.5	99.4	94.1	0.52	8.5	3.8	92.6	0.14	9.0	4.2	11	AL
NWWMH8	86.2	86.4	86.7	84.7 *	86.0	-2.04 *	8.5	0.9	87.0	-1.87	8.2	4.2	12	AH
QKU4XH	98.2	95.2	95.5 H	91.1	95.0	0.79	8.6	2.9	94.0	0.65	9.1	2.2	12	AX
RMF84U	92.6	88.9	92.0	93.2	91.7	-0.26	5.6	1.9	90.8	-0.51	6.0	2.3	12	AC
RUD4PC	92.4	94.2	88.9	92.1	91.9	-0.19	8.0	2.2	90.2	-0.74	8.9	2.7	12	LA
U6ARUD	91.4 L	90.3 L	87.6 L	89.3 L	89.6	-0.90	2.9	1.6	89.4	-1.02	3.9	1.8	12	LA
UF8PKK_AL	91.6	89.4	88.6	88.4	89.5	-0.94	7.9	1.5	94.1	0.68	8.0	6.1	12	AK
UTEDXN	89.0	89.5	86.7 H	86.2	87.9	-1.46	9.0	1.6	88.5	-1.33	8.6	1.8	12	XX
WDG34G	91.1	92.6	90.5	94.4	92.2	-0.11	5.7	1.7	91.7	-0.17	6.2	1.5	12	TP
WXYCZ8	88.6	86.8	86.6	89.6	87.9	-1.44	7.1	1.4	89.6	-0.95	4.9	1.6	12	LA
X6EDXW_AL	94.8	95.1	92.4	92.1	93.6	0.35	5.8	1.6	96.4	1.51	7.6	4.7	12	AL
YGNFUD	96.4	88.9	90.6	89.8	91.4	-0.34	8.3	3.4	92.4	0.05	8.4	2.6	12	AH
Z7M8Q2_AL	92.5	94.5	92.4	93.3	93.2	0.21	8.4	1.0	93.4	0.41	7.4	1.6	8	AK
ZCR6Y7_AL	95.8	93.5	94.0	94.3	94.4	0.60	7.0	1.0	93.3	0.41	7.0	2.2	12	AL

Consensus (All Labs) Results

Wk Mean	92.84	91.86	92.14	92.93	Month Mean	92.49	Grand Mean	92.22
Avg SDr	7.83	8.31	7.58	7.30	Avg SD	7.88	Avg SD	7.64
SD btwn Labs	3.53	4.05	3.59	3.88	SD btwn Labs	3.18	SD btwn Labs	2.76
Labs Incld	56	55	54	54	SD btwn Wks	2.66	SD btwn Wks	3.08
Labs Excld	0	1	0	0	Labs Incld	56	Labs Incld	55
Labs not Rcvd	0	0	2	2				

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Key to Instrument Codes Reported by Participants

AC	Perkins Model C	AH	Perkins Model AH
AK	L & W Autoline 300	AL	L & W Autoline 400
AX	Perkins Mullen Tester (model not specified)	LA	L&W Bursting Strength Tester
LB	L&W Burst-O-Matic	LC	L&W Autoline (207 Enrollment)
LJ	L&W Bursting Strength Tester J-Type	LZ	L&W (model not specified)
TB	TMI Monitor/Burst 1000	TP	Technidyne PROFILE/Plus
XX	Instrument make/model not specified by lab		

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	Weekly Means				Monthly Results				Cumulative Results					
WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
2CMBT6	98.5 *	98.5 X	97.0	98.5	98.1	2.49 *	3.2	0.8	99.7	3.66 X	3.4	1.6	16	EX
2PVQ2V	93.3 L	94.0	90.4	92.6	92.6	0.27	2.6	1.6	91.1	-0.20	2.5	3.0	16	LC
37CC2C	88.8 L	89.3 L	89.0 L	89.2 L	89.1	-1.13	1.1	0.2 L	90.2	-0.58	2.0	1.0	16	RS
3C2W38	83.1 *H	80.8 XH	81.2 XH	79.0 X	81.0	-4.35 X	5.6	1.7	81.3	-4.55 X	4.2	2.9	16	LD
3JYLLW	92.9	91.8	92.7 H	94.5	93.0	0.43	4.2	1.1	91.2	-0.14	5.5	2.0	16	LZ
4PK2M9	94.8	93.4	95.0	95.3	94.6	1.09	2.9	0.8	94.5	1.34	2.7	2.2	16	LD
66U32B	89.8	89.6	93.6	91.4	91.1	-0.33	2.6	1.9	90.0	-0.69	2.8	2.2	16	LD
6HY4WZ	92.6	93.6 L	92.3	93.5	93.0	0.44	1.6	0.6	90.6	-0.43	1.6	3.3	12	MB
6PYKAQ	93.8 H	91.6 H	95.5	96.2	94.3	0.95	5.2	2.0	94.3	1.25	5.5	3.9	12	LC
7G429N	90.7 L	91.1	88.5	89.7	90.0	-0.76	2.2	1.2	90.3	-0.56	2.5	1.6	16	LD
9YWHRB	92.2	90.5	92.9	92.2	92.0	0.03	2.7	1.0	91.8	0.13	2.5	1.1	16	LG
A7CMVV	92.7	89.8	93.8	93.3	92.4	0.20	2.7	1.8	93.0	0.65	2.8	1.5	16	LD
AE392U	93.1	93.1	93.3	91.1	92.7	0.31	2.7	1.0	94.4	1.27	2.8	1.5	16	LD
AVPLG8	91.6	93.3	91.7	90.8	91.8	-0.02	2.4	1.0	92.2	0.29	2.5	1.3	16	LD
BTJMJJ	86.7 H	91.2	95.8	94.1	92.0	0.03	3.8	4.0	93.4	0.84	5.3	3.7	8	LD
C7KGN2	91.0	91.2	92.1	92.3	91.7	-0.09	3.0	0.6	92.4	0.41	2.9	1.1	16	LD
CALM6R	104.6 X	105.1 X	103.4 X	102.4 X	103.9	4.79 X	3.0	1.2	103.0	5.13 X	3.3	1.6	16	LD
CR79R4	92.0	93.4	93.5	93.6	93.1	0.49	2.2	0.7	92.4	0.41	2.5	4.0	16	LZ
DPTZYU	94.5	91.6	92.9	93.1	93.0	0.44	3.0	1.2	91.7	0.08	2.7	2.7	16	LD
DYHRLM	97.3	95.9	92.1	99.2 *	96.1	1.69	2.7	3.0	99.8	3.70 X	3.0	4.6	8	LD
FP4MNM	89.9	88.9	89.7	89.5	89.5	-0.95	2.2	0.4	90.2	-0.59	2.1	1.4	16	LD
G6CV4G	89.8	87.9	No Data	No Data	88.8	-1.23	2.4	1.3	90.4	-0.48	2.7	2.0	14	LC
H97CTF	89.8	88.3	89.9	89.3	89.3	-1.03	2.8	0.7	89.4	-0.94	2.6	0.9 L	16	LD
JKXH4P	93.2	92.9	93.5	93.7	93.3	0.57	2.9	0.4 L	93.4	0.84	2.5	0.3 L	16	LD
JU9KPQ	96.9	96.3 *	97.6 *	94.5 H	96.3	1.78	3.9	1.3	95.7	1.87	3.1	2.2	16	MB
KDFB4C	98.3 *	92.9	96.7	98.9 *	96.7	1.92	3.9	2.7	95.7	1.89	3.4	2.2	16	LX
KL8RRF	67.1 XH	63.5 XH	69.6 XH	67.8 XH	67.0	-9.97 X	8.4	2.6	86.1	-2.43 *	5.7	13.2 H	16	LC
KX2339	93.1	94.0 L	88.2	95.6	92.7	0.33	2.8	3.2	92.3	0.37	3.0	2.2	16	LD
LDWP7F	93.1	91.9	94.2	93.9	93.3	0.54	2.5	1.0	91.8	0.14	2.5	1.4	16	LD
LXV9W8	96.8	96.0	94.4	95.7	95.7	1.53	3.1	1.0	95.7	1.85	3.0	1.6	16	LZ
M6AGXA	90.9	91.0	92.7	92.4	91.8	-0.06	2.7	0.9	91.8	0.11	2.8	2.4	16	LC
MGP7WE	92.0	90.1	89.6	87.1	89.7	-0.88	4.5	2.0	92.0	0.22	4.0	2.8	12	LD
MNL79L	95.3	92.4	99.6 *	78.4 XH	91.4	-0.20	4.3	9.2 H	92.5	0.43	5.3	6.6	14	MB
NGJDFH	86.7	87.4	85.8 *	88.2	87.0	-1.95 *	3.7	1.0	89.9	-0.73	3.7	3.4	16	LC
NWWMH8	89.7	89.8	88.1	88.5	89.0	-1.16	2.6	0.8	88.1	-1.51	2.7	2.6	16	LD

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Containerboard Interlaboratory Testing Program

Analysis 215

Ring Crush, 42 lb Linerboard - 42F3

TAPPI Official Test Method T822

	Weekly Means				Monthly Results				Cumulative Results					
WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
PECH9K	88.7	91.0	90.6	90.4	90.2	-0.68	2.5	1.0	88.1	-1.53	2.9	1.6	16	LC
PFN8EH	87.9	88.2	88.3	88.6	88.2	-1.47	3.1	0.3 L	87.8	-1.66	3.5	1.3	16	TB
QKU4XH	90.6	93.7	90.1	90.6	91.2	-0.27	3.9	1.6	91.3	-0.09	4.0	1.8	16	LD
RUD4PC	71.2 XH	71.1 XH	72.5 XH	70.5 XH	71.3	-8.24 X	10.6	0.8	89.4	-0.93	6.1	11.0 H	16	LD
TR8ZCF	77.5 X	78.0 X	77.0 X	76.9 X	77.3	-5.83 X	3.9	0.5	74.6	-7.54 X	3.6	1.9	16	EM
U6ARUD	93.0	92.6	91.9	93.1	92.7	0.31	2.4	0.5	92.6	0.50	2.3	1.5	16	LZ
VXMD8K	87.7	88.4	88.2	88.5	88.2	-1.48	2.0	0.3 L	87.6	-1.73	2.4	1.3	16	EM
VY3FGD	85.1 *	90.5	88.0	89.5	88.3	-1.45	3.7	2.4	90.4	-0.50	2.9	7.6 H	16	LZ
WB9VWG	89.1	91.9	90.0	95.6 L	91.7	-0.10	2.5	2.9	92.9	0.63	2.9	2.0	16	TH
WDG34G	91.2	92.9	91.1	91.2	91.6	-0.12	3.4	0.9	91.3	-0.12	4.0	1.1	16	TJ
WXYCZ8	89.8	87.6 H	92.2	93.1	90.7	-0.49	4.4	2.5	90.5	-0.45	3.1	1.3	16	TU
XZN4MX	92.8	94.7	90.0 H	91.4 H	92.2	0.13	5.7	2.0	92.4	0.42	6.3	4.3	16	TU
YGNFUD	94.7	93.4	92.5	94.5	93.7	0.74	3.3	1.0	93.4	0.82	2.8	1.1	16	LC
Z7M8Q2	90.8	90.7	91.7	89.2	90.6	-0.52	3.3	1.1	88.9	-1.19	2.8	1.9	16	LD
Z9RWTB	91.3	94.1	92.6	100.7 *	94.7	1.11	3.6	4.2	94.9	1.51	3.5	3.2	12	TH
ZY62TU	87.8	90.4	87.4	87.7	88.3	-1.43	2.8	1.4	89.7	-0.82	2.9	1.8	16	EN

Consensus (All Labs) Results

Wk Mean	91.60	91.65	91.93	92.54	Month Mean	91.90	Grand Mean	91.51
Avg SDr	3.19	3.02	3.28	3.30	Avg SD	3.20	Avg SD	3.46
SD btwn Labs	3.29	2.28	2.96	3.25	SD btwn Labs	2.50	SD btwn Labs	2.24
Labs Incld	47	45	45	44	SD btwn Wks	2.15	SD btwn Wks	3.64
Labs Excld	4	6	5	6	Labs Incld	46	Labs Incld	46
Labs not Rcvd	0	0	1	1				

Key to Instrument Codes Reported by Participants

EM	Emerson 1200	EN	Emerson 2200
EX	Emerson (model not specified)	LC	L&W Crush Tester 48
LD	L&W Crush Tester 248	LG	L&W 753
LX	L&W 506	LZ	L&W Crush Tester (model not specified)
MB	Messmer Buchel K440	RS	Regmed Digital Crush Tester CT-2000
TB	TMI Monitor/Compression Tester, Model 17-70	TH	TMI Compression Tester, Model 17-76
TJ	TLS Compression Tester, Model CDM-5	TU	TMI Universal Crush Tester (TMI K440)

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	Weekly Means				Monthly Results				Cumulative Results					
WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
2CMBT6	90.8 *	86.7	89.1 *	90.5 *	89.3	2.35 *	4.5	1.9	88.1	2.60 *	4.1	2.4	12	EX
2PVQ2V	82.8	84.5	83.7	84.5	83.9	0.60	3.7	0.8	82.5	0.28	3.9	3.7	12	LC
37CC2C	78.6 L	79.3 L	79.3 L	79.2 L	79.1	-0.95	0.9	0.3 L	79.4	-1.03	1.0	0.4 L	12	RS
3C2W38	70.0 X	68.9 X	67.7 X	66.8 X	68.4	-4.43 X	3.8	1.4	70.8	-4.63 X	4.1	3.9	12	LD
3JYLLW	80.4	85.1	84.3	82.5	83.1	0.33	3.8	2.1	83.5	0.67	3.9	3.5	12	LZ
4PK2M9	82.8	82.6	83.8	83.6	83.2	0.38	3.3	0.6	83.5	0.67	3.0	1.9	12	LD
66U32B	82.1	78.6	81.9	79.3	80.5	-0.51	4.1	1.8	79.7	-0.92	3.7	2.1	12	LD
6HY4WZ	84.1 L	84.4 L	83.3 L	84.5 L	84.1	0.66	1.5	0.5	80.0	-0.79	1.5	3.1	12	MB
6PYKAQ	88.8	87.7	88.6 *	87.5	88.2	1.98 *	5.1	0.6	103.4	9.06 X	4.8	31.5 H	12	LC
7G429N	79.9	80.7	82.8	80.3	80.9	-0.36	4.1	1.3	79.9	-0.84	3.5	2.3	12	LD
9YWHRB	84.3	82.3	83.7	85.7	84.0	0.64	3.0	1.4	84.3	1.02	3.0	1.5	12	LG
A7CMVV	81.8	79.0	80.7	84.6	81.5	-0.16	3.7	2.4	82.9	0.41	3.7	2.2	12	LD
AE392U	82.6	82.5	82.7	84.9	83.2	0.37	3.1	1.2	84.2	0.96	3.3	3.3	12	LD
AVPLG8	80.7	80.6	81.4	83.1	81.4	-0.20	3.2	1.2	81.8	-0.04	3.4	1.1	12	LD
BTJMJJ	83.7	86.1	82.7 H	82.5	83.8	0.56	4.1	1.7	84.3	1.03	4.1	3.1	8	LD
C7KGN2	84.0	83.3	85.0	83.2	83.9	0.59	3.9	0.8	83.0	0.47	3.6	1.4	12	LD
CALM6R	91.2 *	92.4 X	92.9 X	90.7 *H	91.8	3.17 X	4.9	1.0	91.9	4.21 X	4.3	1.3	12	LD
CR79R4	80.4	82.7	82.0	82.3	81.8	-0.06	3.6	1.0	83.6	0.74	3.3	1.9	12	LZ
DPTZYU	78.3	88.4	78.4	83.3	82.1	0.02	4.1	4.8 H	81.8	-0.03	3.7	3.3	12	LD
DYHRLM	86.7	83.0	84.7	87.8	85.6	1.14	2.5	2.1	85.6	1.55	2.5	2.1	4	LD
FP4MNM	79.2	79.4	78.7	78.5 L	79.0	-1.00	2.8	0.4	80.2	-0.70	2.8	1.4	12	LD
G6CV4G	79.5	79.7	No Data	No Data	79.6	-0.80	3.5	0.1	79.5	-1.00	3.6	1.9	10	LC
H97CTF	81.5	78.7	79.9	79.5	79.9	-0.69	3.0	1.1	79.9	-0.85	3.0	3.0	12	LD
JKXH4P	83.2	83.1	83.6	83.5	83.4	0.42	2.7	0.2 L	83.4	0.63	2.6	0.5 L	12	LD
JU9KPQ	85.9	89.4 *	88.2	90.5 *	88.5	2.09 *	4.1	2.0	86.7	2.01 *	4.1	5.3	12	MB
KDFB4C	88.4	77.0	81.0	89.3	83.9	0.61	4.7	5.9 H	84.3	1.04	4.2	4.0	12	LX
KL8RRF	62.5 XH	58.8 XH	64.0 XH	63.1 XH	62.1	-6.45 X	10.2	2.3	78.0	-1.64	6.6	11.8 H	12	LC
KX2339	82.6	83.4	80.4	83.6	82.5	0.15	3.3	1.5	80.8	-0.44	2.9	2.4	12	LD
LDWP7F	82.6	83.0	83.2	83.2	83.0	0.30	2.7	0.3 L	82.5	0.25	2.7	0.9 L	12	LD
LXV9W8	86.5	84.9	85.9	84.1	85.3	1.07	3.0	1.1	86.3	1.86	3.6	1.7	12	LZ
M6AGXA	77.9	76.1	79.2	82.3	78.9	-1.02	4.0	2.6	79.7	-0.89	3.4	2.9	12	LC
MGP7WE	80.3	82.1 H	88.7 *	80.6 H	82.9	0.29	5.8	3.9	81.0	-0.36	6.2	3.7	8	LC
MNL79L	78.2	84.9	79.0 H	73.7 *H	79.0	-0.99	5.8	4.6 H	79.3	-1.07	6.0	5.6	12	MB
NGJDFH	74.9 *	72.4 *	73.6 *	75.1 *	74.0	-2.60 *	3.2	1.3	79.2	-1.13	4.3	4.4	12	LC
NWWMH8	78.5	79.9	77.1	79.3	78.7	-1.08	2.7	1.2	78.4	-1.46	2.8	1.4	12	LD

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Containerboard Interlaboratory Testing Program

Analysis 217

Ring Crush, 35 lb Linerboard - 35E2

TAPPI Official Test Method T822

WebCode	Weekly Means Week 1	Week 2	Week 3	Week 4	Monthly Results Mean	CPV	SD	SD Wks	Cumulative Results Mean	CPV	SD	SD Wks	Wks	Inst
PECH9K	80.0	81.3	82.5	81.7	81.3	-0.23	3.3	1.0	80.6	-0.52	3.2	1.2	12	LC
PFN8EH	80.4	77.7	77.8	81.2	79.3	-0.90	3.9	1.8	79.6	-0.95	3.7	1.5	12	TB
QKU4XH	81.5	83.3	80.7	81.3	81.7	-0.11	3.9	1.1	82.6	0.31	4.1	1.4	12	LD
RUD4PC	68.1 XH	68.4 XH	65.4 XH	64.8 XH	66.7	-4.97 X	11.4	1.8	80.3	-0.68	7.5	10.2 H	12	LC
TR8ZCF	67.8 X	67.0 X	68.2 X	67.9 X	67.7	-4.63 X	4.8	0.5	67.2	-6.15 X	4.4	1.1	12	EM
U6ARUD	82.4	83.0	82.5	82.5	82.6	0.19	4.4	0.3 L	82.9	0.43	3.7	0.7 L	12	LZ
VXMD8K	82.3	80.5	80.9	82.7	81.6	-0.14	3.1	1.1	81.0	-0.35	3.4	1.6	12	EM
VY3FGD	70.7 X	77.0	73.9 *	73.5 *	73.8	-2.68 *	5.2	2.6	80.8	-0.44	4.0	5.7	12	LZ
WB9VWG	83.4	82.7	83.5	83.4	83.3	0.39	3.4	0.4 L	83.5	0.68	3.1	0.6 L	12	TH
WDG34G	78.1	80.9	80.0	81.8	80.2	-0.60	4.1	1.6	80.1	-0.75	4.0	1.6	12	TJ
WXYCZ8	80.6	78.8	82.9	81.2	80.9	-0.38	3.9	1.7	81.4	-0.18	2.9	1.1	12	TU
XZN4MX	86.3 H	78.0 H	No Data	No Data	82.1	0.03	9.6	5.8	81.1	-0.33	6.9	3.7	10	TU
YGNFUD	85.0	85.7	83.1	84.3	84.5	0.81	3.0	1.1	84.5	1.11	3.3	1.2	12	LC
Z7M8Q2	77.3	76.3	78.5	77.4	77.4	-1.51	2.6	0.9	77.1	-2.02 *	3.4	0.8 L	12	LD
Z9RWTB	82.2	84.9	80.3 H	89.5	84.2	0.71	4.6	4.0	83.1	0.51	4.7	3.3	8	TH
ZY62TU	82.6	84.1	82.4	82.8	83.0	0.30	4.0	0.8	82.3	0.18	3.3	1.4	12	EN

Consensus (All Labs) Results

Wk Mean	82.28	81.87	81.94	82.81	Month Mean	82.04	Grand Mean	81.87
Avg SDr	3.93	4.10	3.73	3.72	Avg SD	3.96	Avg SD	3.92
SD btwn Labs	3.49	3.53	3.39	3.97	SD btwn Labs	3.09	SD btwn Labs	2.38
Labs Incld	46	46	44	45	SD btwn Wks	2.18	SD btwn Wks	3.47
Labs Excld	5	5	5	4	Labs Incld	46	Labs Incld	47
Labs not Rcvd	0	0	2	2				

Key to Instrument Codes Reported by Participants

EM	Emerson 1200	EN	Emerson 2200
EX	Emerson (model not specified)	LC	L&W Crush Tester 48
LD	L&W Crush Tester 248	LG	L&W 753
LX	L&W 506	LZ	L&W Crush Tester (model not specified)
MB	Messmer Buchel K440	RS	Regmed Digital Crush Tester CT-2000
TB	TMI Monitor Compression Tester, Model 17-70	TH	TMI Compression Tester, Model 17-76
TJ	TLS Compression Tester, Model CDM-5	TU	TMI Universal Crush Tester (TMI K440)

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Containerboard Interlaboratory Testing Program

Analysis 223

STFI, 42 lb Linerboard - 42F3

TAPPI Official Test Method T826

	Weekly Means				Monthly Results				Cumulative Results					
WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
2CMBT6	31.1 XL	31.0 XL	31.9 XL	31.4 XL	31.3	6.07 X	0.0	0.4	31.8	7.08 X	0.0	2.9 H	16	TT
2KWF4A	24.6	24.3	25.3	24.3	24.6	0.67	2.1	0.5	21.2	-2.21 *	3.5	4.4 H	16	XX
2PVQ2V	22.6	22.3	22.6	22.6	22.5	-1.02	1.4	0.2	22.7	-0.88	1.4	0.5	16	LW
32JCHB_AL	24.1	24.0	23.6	23.5	23.8	0.02	1.7	0.3	23.6	-0.12	1.8	0.5	16	AL
3JYLLW_AL	24.0	24.0	21.4 L	23.7	23.3	-0.42	1.7	1.3	23.2	-0.44	1.7	1.2	16	AL
4PK2M9_AL	24.5	23.2	23.8	23.7	23.8	0.01	1.5	0.5	23.9	0.18	1.5	0.6	16	AK
6HEMGX	23.7	24.0	24.5 H	23.7	24.0	0.14	1.9	0.4	23.9	0.13	1.7	0.5	16	LY
6PYKAQ_AL	26.7 *L	27.2 XL	26.8 L	26.7 *L	26.9	2.47 *	0.1	0.2	25.8	1.85	1.5	1.6	16	AL
7G429N_AL	23.9	22.7	23.0	23.7 H	23.3	-0.37	2.0	0.6	23.1	-0.55	1.7	0.6	16	AL
8NH8HZ	25.3	26.0 *	24.9	24.9	25.3	1.21	1.8	0.5	24.9	1.05	1.7	0.7	14	LU
8NH8HZ_AL	24.4	24.9	24.3	24.6	24.6	0.63	1.8	0.3	24.0	0.26	1.5	0.7	15	AL
9YWHRB	23.0	22.8	22.3	22.4	22.7	-0.91	1.8	0.3	22.8	-0.79	1.8	0.6	16	LU
A7CMVV	23.4	22.6	22.6	23.5	23.0	-0.63	1.7	0.5	23.3	-0.42	1.5	0.5	16	LA
AE392U	24.2	23.9	23.7	24.2	24.0	0.19	1.7	0.3	23.8	0.01	1.7	0.5	16	LY
AVPLG8	23.0	23.1	24.1	22.6	23.2	-0.47	1.6	0.7	23.0	-0.64	1.8	0.5	16	LZ
AZLDKX	26.8 *	27.1 XL	26.8 L	26.3	26.7	2.38 *	1.8	0.3	26.3	2.23 *	2.1	1.1	16	LH
B7R7FT	22.4	22.9	23.2	23.6	23.0	-0.61	1.8	0.5	23.4	-0.30	1.6	0.5	16	XX
BTJMJJ	24.0	24.0 H	26.8	26.2	25.2	1.16	1.9	1.5	25.3	1.39	1.8	1.1	8	LA
C7KGN2_AL	23.7	25.6	24.4	25.0	24.7	0.72	2.0	0.8	24.6	0.79	1.9	0.7	16	AL
CR79R4	22.2 H	22.0	22.1	22.7	22.3	-1.22	2.0	0.3	22.6	-0.99	1.9	0.7	16	LA
CTZ2MM	22.6	24.8	23.2	24.0	23.6	-0.12	1.5	1.0	23.1	-0.59	1.7	0.9	16	LH
CTZ2MM_AL	24.2 H	23.0	26.9 *	23.2	24.3	0.43	1.9	1.8 H	25.1	1.16	1.7	1.7	16	AL
DPTZYU	24.3 H	23.8	25.7	25.5	24.8	0.83	2.1	0.9	24.9	1.03	1.8	1.0	16	LH
FP4MNM_AL	23.5	23.7 L	22.8	21.6	22.9	-0.69	1.1	0.9	23.0	-0.62	1.6	0.6	16	AL
G6CV4G	24.1	23.3	No Data	No Data	23.7	-0.07	2.0	0.6	24.3	0.51	1.6	0.4	14	LY
GK7KYD	22.4	24.0	21.4	21.9	22.4	-1.10	1.8	1.1	23.0	-0.62	1.9	0.9	16	LY
GK7KYD_AL	44.2 XH	45.1 XH	45.5 X	40.1 XH	43.7	16.06 X	2.8	2.5 H	95.7	63.13 X	6.8	93.0 H	16	XX
H6BKM4	24.1	23.6	24.0	24.6	24.1	0.24	1.9	0.4	24.2	0.39	1.9	0.5	16	TT
H97CTF	23.2	23.7	22.8	23.8	23.4	-0.34	1.3	0.5	22.9	-0.69	1.8	0.5	16	BK
HJU66C	25.5 H	25.5	26.5	26.4	25.9	1.74	1.9	0.6	25.8	1.80	1.9	0.6	15	LU
HUCLXJ	21.9	22.6	22.1	22.5	22.3	-1.22	1.6	0.3	22.6	-1.04	1.6	0.4	16	LW
JKXH4P	23.7	23.8	23.8	23.8	23.8	-0.01	1.9	0.1 L	23.7	-0.07	1.9	0.1 L	16	LA
JU9KPQ	25.4	24.1	24.6	24.5	24.6	0.68	1.8	0.5	24.8	0.94	1.9	1.3	16	LA
K7XX3R	23.6	23.3	23.0	23.8 L	23.4	-0.30	1.2	0.3	23.4	-0.30	1.3	0.4	16	TT
KL8RRF_AL	22.8 L	22.4 L	22.5 L	22.5 L	22.6	-0.98	0.3	0.2	23.1	-0.53	1.3	0.6	16	AL

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Containerboard Interlaboratory Testing Program

Analysis 223

STFI, 42 lb Linerboard - 42F3

TAPPI Official Test Method T826

	Weekly Means				Monthly Results				Cumulative Results					
WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
LDWP7F	21.7	22.5	22.4	22.0	22.2	-1.31	1.4	0.4	22.6	-0.99	1.6	0.5	16	LA
LXV9W8	22.2	22.4	22.1	21.5	22.0	-1.41	1.9	0.4	22.7	-0.88	1.8	0.5	16	LW
M6AGXA	24.7	24.8	24.5	25.3	24.8	0.84	1.7	0.3	24.7	0.85	1.5	0.9	16	LA
MGP7WE	23.9	23.5	23.7	22.2	23.3	-0.37	1.8	0.8	23.9	0.12	1.9	0.8	12	LW
MNL79L	23.5	23.8	23.1	24.4	23.7	-0.07	1.7	0.5	23.7	-0.03	1.8	0.7	14	LA
MQV9YQ	24.6	23.3	26.3	24.9	24.8	0.80	2.2	1.3	24.9	0.99	2.0	1.0	16	LH
NGJDFH	24.9	24.3	21.3	25.8	24.1	0.24	1.4	1.9 H	25.5	1.55	1.8	4.4 H	16	LU
NWWMH8	22.5	23.3	22.5	23.1	22.8	-0.76	1.4	0.4	22.8	-0.81	1.8	0.7	16	LU
PFN8EH	22.6 H	21.3 *L	21.6	21.0	21.6	-1.75	1.8	0.7	21.2	-2.25 *	1.7	1.0	16	LH
Q6KEHW	24.0	24.0	23.9	23.3	23.8	0.03	1.8	0.3	23.2	-0.46	1.5	1.1	16	LU
QKU4XH	23.6	24.6	24.8	24.1	24.3	0.39	1.6	0.5	24.0	0.25	1.6	0.6	16	LH
RL8WAC	27.1 *	25.0 H	24.1 H	24.7 H	25.2	1.15	2.3	1.3	25.4	1.48	1.5	0.9	16	LA
RMF84U	21.8 L	22.9	22.2	22.2	22.3	-1.21	1.2	0.5	22.2	-1.32	1.3	0.6	16	LH
UF8PKK_AL	24.9	23.4	24.3	26.6	24.8	0.82	1.7	1.4	24.6	0.76	1.6	1.0	16	AK
VY3FGD	24.1	26.6 *	27.2 *	25.9	26.0	1.75	2.0	1.4	23.6	-0.09	1.0	1.6	16	XX
WDG34G	23.8	23.6	23.6	23.7	23.7	-0.08	1.4	0.1 L	23.5	-0.20	1.5	0.3	16	TT
X6EDXW_AL	21.7	21.8	21.8	22.1	21.8	-1.56	1.8	0.1	22.3	-1.22	1.5	0.9	16	AL
XZN4MX	23.1	24.6	24.7	24.9	24.3	0.44	1.7	0.8	24.6	0.75	1.8	1.0	16	LA
YGNFUD	22.7	23.1	23.1	22.9	22.9	-0.68	1.6	0.2	23.1	-0.55	1.6	0.5	16	LU
YJTXWF	26.0	25.7	26.7	26.5	26.2	1.95 *	1.5	0.4	25.9	1.89	1.5	0.5	16	LH
Z7M8Q2_AL	23.0	22.8	23.5	23.1	23.1	-0.55	1.6	0.3	22.9	-0.71	1.7	0.5	16	AK
Z9RWTB	42.9 XH	39.8 XH	41.1 X	40.4 XH	41.0	13.90 X	3.0	1.3	41.6	15.72 X	2.9	1.3	12	TT
ZCR6Y7	25.4	23.7 H	23.7	22.3	23.8	0.01	1.9	1.3	23.9	0.13	2.0	0.9	16	LU
ZY62TU	21.7	22.1	21.7	21.4	21.7	-1.66	1.6	0.3	22.4	-1.20	1.7	0.7	16	LY

Consensus (All Labs) Results

Wk Mean	23.78	23.64	23.78	23.81	Month Mean	23.78	Grand Mean	23.73
Avg SDr	1.71	1.75	1.71	1.67	Avg SD	1.71	Avg SD	1.74
SD btwn Labs	1.28	1.10	1.61	1.48	SD btwn Labs	1.24	SD btwn Labs	1.14
Labs Incld	56	54	55	55	SD btwn Wks	0.76	SD btwn Wks	1.16
Labs Excld	3	5	3	3	Labs Incld	56	Labs Incld	56
Labs not Rcvd	0	0	1	1				

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Key to Instrument Codes Reported by Participants

AK	L & W Autoline 300	AL	L & W Autoline 400
BK	Buchel Strip Compression Tester BK-155	LA	L&W Autoline (223 Enrollment)
LH	L&W 282	LU	L&W 52 without moisture correction(was 53)
LW	L&W 53 with moisture correction (was 53M)	LY	L&W 152 without moisture correction
LZ	L&W (model not specified)	TT	TMI Short Span Compression, 17-34 (MB K455)
XX	Instrument make/model not specified by lab		

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Containerboard Interlaboratory Testing Program

Analysis 225

STFI, 35 lb Linerboard - 35E2

TAPPI Official Test Method T826

	Weekly Means				Monthly Results				Cumulative Results					
WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
2CMBT6	28.5 XL	30.3 XL	31.2 XL	31.4 XL	30.3	6.31 X	0.0	1.3 H	30.0	6.14 X	0.0	1.0	12	TT
2KWF4A	22.6	21.9	22.4	22.1	22.2	-0.86	1.3	0.3	23.1	-0.16	1.6	0.9	12	XX
2PVQ2V	21.9	22.3	22.3	22.0	22.1	-0.96	1.6	0.2	22.2	-1.03	1.6	0.6	12	LW
32JCHB_AL	23.9	23.2	24.3	23.6	23.8	0.48	1.5	0.4	26.2	2.68 *	2.0	9.3 H	12	AL
3JYLLW_AL	21.9	23.2	21.0 L	21.9	22.0	-1.06	1.4	0.9	22.6	-0.64	1.7	1.3	12	XX
4PK2M9_AL	23.5	22.3	23.0	23.5	23.1	-0.12	1.8	0.6	23.2	-0.04	1.7	0.5	12	AK
6HEMGX	24.2	23.5	22.9	22.0	23.1	-0.06	1.3	0.9	23.4	0.13	1.4	0.7	8	LU
6PYKAQ_AL	24.4 L	25.2 L	24.9 L	25.1 L	24.9	1.49	0.1	0.4	23.9	0.55	1.3	0.9	12	AL
7G429N_AL	23.4	23.1	22.7	22.9	23.0	-0.19	1.8	0.3	22.7	-0.53	1.6	0.5	12	AL
8NH8HZ	25.2	24.5	23.8	24.3 H	24.5	1.11	2.3	0.6	24.4	1.00	2.2	0.5	8	LU
8NH8HZ_AL	22.5	24.3	23.0	24.2	23.5	0.25	1.6	0.9	23.3	0.05	1.5	0.7	8	AL
9YWHRB	20.9	21.8	22.7	22.0	21.8	-1.23	1.6	0.8	21.6	-1.51	1.7	2.8	12	LW
A7CMVV	22.1	22.7	22.6	22.3	22.4	-0.70	1.8	0.3	22.4	-0.85	1.6	0.4 L	12	LA
AE392U	22.7	22.2	23.8	22.8 L	22.9	-0.27	1.5	0.7	23.1	-0.21	1.7	0.4	12	LY
AVPLG8	22.6	22.1	21.9	21.9	22.1	-0.97	1.7	0.3	22.2	-0.96	1.7	0.4 L	12	LZ
AZLDKX	27.0 XH	27.0 XL	26.9 *	27.7 XH	27.1	3.47 X	2.2	0.4	25.7	2.23 *	2.1	1.9	12	LH
B7R7FT	22.8	22.1	22.8	22.8	22.6	-0.53	1.5	0.4	23.0	-0.25	1.6	0.5	12	XX
BTJMJJ	23.5	23.7	24.1	24.8	24.0	0.71	1.7	0.6	24.0	0.64	1.9	0.9	8	LA
C7KGN2_AL	22.3 L	24.5	24.6	24.4 H	24.0	0.65	2.1	1.1	24.2	0.81	1.9	0.9	12	AL
CR79R4	22.3	24.2	23.1	24.1	23.4	0.20	1.6	0.9	22.6	-0.59	1.6	1.0	12	LA
CTZ2MM	21.7	23.4	23.2	22.6	22.7	-0.43	1.8	0.7	23.3	-0.01	1.7	1.2	12	LH
CTZ2MM_AL	24.7	23.0	26.9 *	24.4	24.7	1.35	1.7	1.6 H	25.3	1.89	1.8	1.5	12	AL
DPTZYU	25.1	24.1	25.4	23.9	24.6	1.27	2.1	0.7	24.5	1.16	1.8	1.0	12	LH
FP4MNM_AL	22.1	23.9	22.2	23.2 H	22.8	-0.32	2.1	0.9	23.0	-0.31	1.9	0.7	12	AL
G6CV4G	23.2	23.1	No Data	No Data	23.2	-0.05	1.3	0.1	24.0	0.62	1.7	0.5	10	LZ
GK7KYD	22.2	23.2	22.1 H	21.7	22.3	-0.81	1.8	0.6	22.4	-0.79	1.8	0.5	12	LY
GK7KYD_AL	35.7 XL	38.4 X	37.8 X	37.1 XH	37.3	12.43 X	2.1	1.2	38.9	14.34 X	2.3	1.9	8	XX
H6BKM4	24.9	25.5	25.5 H	23.5	24.8	1.45	1.9	0.9	24.8	1.38	2.0	0.7	12	TT
H97CTF	22.0	21.6 L	22.9	22.8 L	22.3	-0.79	1.1	0.6	22.1	-1.05	1.1	0.6	12	BK
HJU66C	25.4	24.6	25.5	27.0 X	25.6	2.15 *	1.8	1.0	24.6	1.20	1.9	1.0	12	LU
HUCLXJ	21.7	22.5	22.1	22.0	22.1	-1.00	1.7	0.3	22.2	-0.96	1.7	0.4	12	LW
JKXH4P	23.1	23.2	23.2	23.1	23.1	-0.06	1.9	0.1 L	23.1	-0.20	1.9	0.1 L	12	LA
JU9KPQ	24.9	25.5	24.9 H	23.5	24.7	1.33	1.8	0.8	24.5	1.12	1.4	0.9	12	LA
K7XX3R	22.6	22.8	22.7	22.1	22.6	-0.55	1.3	0.3	22.7	-0.51	1.3	0.2 L	12	TT
KL8RRF_AL	22.7 L	22.7 L	22.6 L	22.2 L	22.5	-0.62	0.2	0.2	22.2	-0.97	1.1	0.7	12	AL

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Containerboard Interlaboratory Testing Program

Analysis 225

STFI, 35 lb Linerboard - 35E2

TAPPI Official Test Method T826

	Weekly Means				Monthly Results				Cumulative Results					
WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
LDWP7F	22.4	21.9	22.4	22.5	22.3	-0.80	1.6	0.3	22.5	-0.70	1.6	0.4 L	12	LW
LXV9W8	22.5	22.2	21.9	21.5	22.0	-1.05	2.0	0.4	22.8	-0.47	1.8	0.7	12	LW
M6AGXA	24.6	23.1	23.5	22.7	23.5	0.23	1.5	0.8	24.3	0.90	1.2	0.9	12	LA
MGP7WE	22.6	21.5	23.1	22.2	22.4	-0.76	1.7	0.7	23.0	-0.29	1.9	0.8	8	LW
MNL79L	22.3	22.0	22.6	No Data	22.3	-0.78	1.5	0.3	22.5	-0.71	1.7	0.4 L	11	LA
MQV9YQ	24.7	23.7	25.3	24.9	24.7	1.28	2.0	0.7	24.3	0.91	2.0	0.7	12	LH
NGJDFH	23.3 H	23.4	23.1	24.4	23.6	0.30	2.1	0.5	24.3	0.97	1.9	0.9	12	LU
NWWMH8	21.5	22.2	22.3 H	21.8	21.9	-1.13	2.0	0.4	22.6	-0.59	1.9	0.7	12	LU
PFN8EH	22.7 H	22.7	22.1	21.5	22.2	-0.86	1.8	0.6	22.0	-1.21	1.7	0.8	12	LH
Q6KEHW	23.1	22.9	23.5	22.8	23.1	-0.12	1.8	0.3	21.1	-2.04 *	1.5	2.2	8	LU
QKU4XH	23.6	23.9	24.0	24.3	24.0	0.66	1.8	0.3	23.6	0.33	1.7	0.6	12	LH
RL8WAC	24.8	22.2 H	22.3	21.8	22.8	-0.40	1.8	1.4 H	23.4	0.10	1.7	1.0	12	LA
RMF84U	22.0	22.6	21.9	22.8	22.3	-0.78	1.1	0.4	22.4	-0.79	1.3	0.4 L	12	LH
UF8PKK_AL	23.9 L	23.3	25.2	23.6	24.0	0.70	1.9	0.8	24.4	0.99	1.9	0.7	12	AK
VY3FGD	26.0 *	26.3 *	26.6 *	25.8 *	26.2	2.61 *	1.7	0.3	24.3	0.95	1.4	1.9	12	XX
WDG34G	23.0	22.7	22.9	23.0	22.9	-0.27	1.5	0.1	22.9	-0.35	1.5	0.2 L	12	TT
X6EDXW_AL	21.4	22.1	22.9	22.4	22.2	-0.90	1.4	0.6	21.9	-1.27	1.5	0.6	12	XX
XZN4MX	25.5 L	26.0 *L	24.6 L	24.0	25.0	1.62	1.6	0.9	24.4	1.03	1.8	1.0	12	LA
YGNFUD	21.9	21.8	22.5	23.1	22.3	-0.79	1.7	0.6	22.5	-0.73	1.7	0.4	12	LU
YJTXWF	25.4	25.6 *	26.7 *	25.6 *	25.8	2.31 *	1.3	0.6	24.8	1.38	1.6	1.5	12	LH
Z7M8Q2_AL	22.2 L	21.8	22.3	22.4	22.1	-0.95	1.6	0.3	22.2	-1.00	1.6	0.4 L	12	AK
Z9RWTB	35.0 XH	34.0 X	33.4 XH	34.1 X	34.1	9.66 X	2.6	0.7	33.7	9.55 X	2.5	1.2	8	TT
ZCR6Y7	24.3	24.3 H	23.3	23.2 L	23.8	0.48	1.9	0.6	23.4	0.06	2.0	0.5	12	LU
ZY62TU	21.7	22.1	21.6	20.9	21.6	-1.46	1.6	0.5	21.8	-1.33	1.7	0.5	12	LY

Consensus (All Labs) Results

Wk Mean	23.17	23.20	23.43	23.06	Month Mean	23.21	Grand Mean	23.29
Avg SDr	1.63	1.73	1.62	1.71	Avg SD	1.67	Avg SD	1.70
SD btwn Labs	1.28	1.20	1.43	1.13	SD btwn Labs	1.13	SD btwn Labs	1.09
Labs Incld	55	55	55	52	SD btwn Wks	0.66	SD btwn Wks	1.55
Labs Excld	4	4	3	5	Labs Incld	55	Labs Incld	56
Labs not Rcvd	0	0	1	2				

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Key to Instrument Codes Reported by Participants

AK	L & W Autoline 300	AL	L & W Autoline 400
BK	Buchel Strip Compression Tester BK-155	LA	L&W Autoline (223 Enrollment)
LH	L&W 282	LU	L&W 52 without moisture correction (was 53)
LW	L&W 53 with moisture correction (was 53M)	LY	L&W 152 (was 52M)
LZ	L&W (model not specified)	TT	TMI Short Span Compression, 17-34 (MB K455)
XX	Instrument make/model not specified by lab		

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	Monthly Results				Cumulative Results				
WebCode	Mean	CPV	SD		Mean	CPV	SD Months	Months	Inst
32JCHB_AL	123.0	-1.02	11.73		126.8	-0.71	10.53	4	AL
3JYLLW_AL	128.1	-0.59	22.36		126.2	-0.76	3.02	4	XX
3VT3BX	139.1	0.36	17.53		134.6	-0.08	6.26	4	LS
4PK2M9	145.5	0.91	9.26		140.2	0.37	6.69	4	EV
6PYKAQ_AL	151.1	1.39	17.75		142.4	0.55	10.14	3	AL
8NH8HZ_AL	120.7	-1.22	19.81		123.7	-0.96	3.61	4	AL
AE392U	142.0	0.61	14.64		149.5	1.12	10.57	2	EV
AZLDKX	294.9	13.74 X	105.05 H		216.8	6.54 X	57.12 H	4	LS
BTJMJJ	130.8	-0.35	4.73 L		129.1	-0.52	2.40	2	LA
CALM6R	118.0	-1.45	15.76		129.7	-0.48	26.75	4	EV
CTZ2MM_AL	131.7	-0.28	17.59		127.9	-0.62	7.84	4	AL
G6CV4G	134.2	-0.06	9.80		134.3	-0.11	0.53 L	4	LS
GK7KYD_AL	135.9	0.08	12.46		161.2	2.06 *	53.10 H	4	XX
JKXH4P	135.4	0.04	14.32		139.2	0.29	2.91	4	LS
JU9KPQ	125.7	-0.79	11.06		137.1	0.13	8.64	4	LA
KL8RRF_AL	159.8	2.13 *	15.01		149.5	1.12	7.88	4	AL
LDWP7F	141.5	0.56	22.37		139.1	0.28	5.86	4	LA
LXV9W8	137.6	0.23	19.92		139.2	0.29	3.08	4	EV
M6AGXA	117.7	-1.48	7.89		113.7	-1.76	2.70	4	EV
MGP7WE	122.5	-1.07	15.81		116.6	-1.53	4.86	4	XX
MNL79L	142.9	0.69	23.30		135.4	-0.01	11.78	4	LA
MQV9YQ	138.9	0.34	16.66		134.9	-0.05	7.43	4	EV
NGJDFH	116.1	-1.62	15.02		165.6	2.42 *	49.37 H	4	EV
NWWMH8	152.2	1.49	9.08		153.5	1.44	2.82	4	EV
UF8PKK_AL	135.5	0.05	11.19		124.8	-0.86	8.60	4	AK
X6EDXW_AL	134.5	-0.04	19.15		126.9	-0.70	7.01	4	AL
XZN4MX	140.0	0.43	17.01		140.1	0.36	1.80 L	4	LA
Z7M8Q2	125.7	-0.79	13.35		120.8	-1.19	3.32	4	LS
Z7M8Q2_AL	119.9	-1.29	10.31		119.9	-1.26	0.00	1	AK
ZCR6Y7	151.5	1.42	10.18		138.2	0.21	11.68	4	EV
ZY62TU	150.2	1.31	13.31		147.0	0.92	6.61	4	EV

Consensus (All Labs) Results

Month Mean	134.93	Grand Mean	135.58
Avg SD	15.30	Avg SD Months	15.77
SD btwn Labs	11.64	SD btwn Labs	12.41
Labs Incld	30	Labs Incld	30

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Key to Instrument Codes Reported by Participants			
AK	L & W Autoline 300	AL	L & W Autoline 400
EV	Emveco Microgage Model 210-R	LA	L&W Autoline (228 Enrollment)
LS	L&W 263	XX	Instrument make/model not specified by lab

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Containerboard Interlaboratory Testing Program

Analysis 229

Roughness - Sheffield Method, 42 lb Linerboard - 42F3

TAPPI Official Test Method T538

	Monthly Results				Cumulative Results				
WebCode	Mean	CPV	SD		Mean	CPV	SD Months	Months	Inst
32JCHB_AL	355.6	-0.33	5.15		350.0	-1.09	4.26	4	AL
4PK2M9	354.6	-0.44	12.68	H	356.4	-0.22	1.63	4	LA
4PK2M9_AL	349.3	-1.04	9.45		354.5	-0.48	4.65	4	AK
7G429N_AL	356.4	-0.24	4.65		357.9	-0.03	1.80	4	AL
AVPLG8	361.9	0.38	6.45		357.1	-0.13	3.27	4	XX
C7KGN2	372.2	1.54	6.73		360.2	0.29	8.12	4	PP
CTZ2MM_AL	348.2	-1.16	8.02		347.6	-1.42	3.09	4	AL
FP4MNM_AL	367.5	1.01	4.93		372.7	1.98 *	7.86	4	AL
GK7KYD_AL	346.8	-1.32	4.18		240.9	-15.80 X	140.05 H	4	XX
RL8WAC	365.6	0.80	4.58		366.5	1.13	1.48	4	XX
TR8ZCF	412.7	6.11 X	6.94		405.8	6.45 X	8.45	4	TS
UF8PKK_AL	353.3	-0.59	4.85		352.1	-0.80	2.44	4	AK
YGNFUD	370.8	1.39	1.40	L	363.8	0.77	5.89	4	XX

Consensus (All Labs) Results

Month Mean	358.52	Grand Mean	358.06
Avg SD	6.69	Avg SD Months	4.64
SD btwn Labs	8.87	SD btwn Labs	7.41
Labs Incld	12	Labs Incld	11

Key to Instrument Codes Reported by Participants

AK	L & W Autoline 300	AL	L & W Autoline 400
LA	L & W Autoline (229 Enrollment)	PP	Technidyne Profile/Plus
TS	TMI Monitor/Smoothness	XX	Instrument make/model not specified by lab

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Containerboard Interlaboratory Testing Program

Analysis 231

Internal Bond, 42 lb Linerboard - 42F

TAPPI Official Test Method T569

Report #619 (D)
April 2021

	Monthly Results				Cumulative Results				
WebCode	Mean	CPV	SD		Mean	CPV	SD Months	Months	Inst
3JYLLW	128.4	3.33 X	4.04		112.9	1.29	12.34	4	TM
3VT3BX	98.6	0.45	4.04		98.8	0.19	2.44 L	4	HY
4PK2M9	81.2	-1.24	2.59		81.8	-1.13	2.51 L	4	TM
6PYKAQ	103.0	0.87	8.37		110.3	1.08	7.14	4	SC
7G429N	100.7	0.65	2.28		96.1	-0.02	5.01	4	TM
A7CMVV	105.2	1.08	5.26		100.4	0.32	3.79	4	HZ
AE392U	83.3	-1.04	3.99		87.0	-0.72	5.82	4	XX
AZLDKX	80.4	-1.32	8.11		82.3	-1.09	2.55 L	4	TM
C7KGN2	106.6	1.22	1.14		106.0	0.75	2.86 L	4	HY
CALM6R	91.8	-0.21	7.46		95.4	-0.07	3.65	4	HY
DYHRLM	100.8	0.66	4.82		100.9	0.36	0.11	2	HY
FEMXPG	247.5	14.86 X	69.91 H		126.8	2.37 *	80.65 H	4	SC
FP4MNM	40.0	-5.23 X	0.50 L		40.8	-4.31 X	1.52 L	4	LZ
KL8RRF	181.4	8.46 X	5.41		173.7	6.01 X	31.17	4	SC
LDWP7F	113.8	1.92 *	5.12		117.9	1.67	18.62	4	HY
M6AGXA	86.6	-0.72	3.05		87.1	-0.72	1.60 L	4	TM
MQV9YQ	102.6	0.84	4.64		103.9	0.59	6.17	4	SC
NGJDFH	86.2	-0.75	6.06		81.6	-1.14	4.91	4	TM
NWWMH8	90.6	-0.33	5.22		88.0	-0.65	4.11	4	TM
RL8WAC	88.8	-0.50	2.86		87.0	-0.73	2.20 L	4	SC
UF8PKK	79.6	-1.39	2.07		84.6	-0.91	7.14	4	TM
YGNFUD	108.4	1.39	4.94		106.9	0.82	3.06	4	HY
Z7M8Q2	90.2	-0.37	5.13		90.4	-0.46	4.29	4	TM
ZCR6Y7	82.2	-1.14	2.17		78.7	-1.37	5.35	4	TM
ZZD9Y9	93.4	-0.06	4.09		90.2	-0.48	3.03 L	3	TM

Consensus (All Labs) Results

Month Mean	94.00	Grand Mean	96.29
Avg SD	4.85	Avg SD Months	17.90
SD btwn Labs	10.33	SD btwn Labs	12.88
Labs Incld	21	Labs Incld	23

Consensus By Method

Test Method	Group Mean	SD btwn Group	Difference from Grand Mean	Labs Included
Scott Bond Type	92.51	9.21	1.49	18
Modified Scott Bond Mechanics	111.09	3.84	17.08	2

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Analysis Notes

FP4MNM - Method used is not covered in this test. Data excluded from consensus calculation.

Key to Instrument Codes Reported by Participants

HY	Huygen Digitized Scott Internal Bond Tester	HZ	Huygen Internal Bond Tester with AccuPress
LZ	L&W (model not specified)	SC	Scott Internal Bond Tester (Manual)
TM	TMI Monitor/Internal Bond Tester	XX	Instrument make/model not specified by lab

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	Monthly Results				Cumulative Results				
WebCode	Mean	CPV	SD		Mean	CPV	SD Months		Months
32JCHB	28.3	-0.04	3.94		29.0	0.44	1.04		4
3JYLLW	30.7	0.71	7.13	H	28.8	0.34	1.71		4
4PK2M9	28.0	-0.14	4.38		28.6	0.26	1.24		4
66U32B	31.2	0.86	1.30		32.0	1.67	0.57		4
6PYKAQ	28.0	-0.15	0.71	L	24.4	-1.51	2.44		4
72RL8D	25.2	-1.03	2.95		24.8	-1.32	0.82		4
AE392U	23.2	-1.66	2.86		25.1	-1.21	3.44		4
AVPLG8	26.6	-0.59	4.04		30.5	1.06	2.77		4
AZLDKX	23.2	-1.66	1.64		23.6	-1.84	1.20		4
BFWFKX	33.6	1.61	2.07		31.6	1.49	2.16		4
C7KGN2	31.8	1.05	4.01		30.7	1.13	0.87		4
DYHRLM	23.0	-1.72	5.15		25.6	-0.99	3.68		2
FP4MNM	30.0	0.48	0.71	L	26.9	-0.47	3.42		4
G6CV4G	27.8	-0.20	6.54		29.2	0.49	0.91		4
JKXH4P	27.2	-0.40	0.84		27.0	-0.43	0.19	L	4
JU9KPQ	27.5	-0.31	3.84		24.3	-1.55	2.17		4
KL8RRF	33.4	1.55	1.14		33.2	2.15	* 0.60		4
LDWP7F	31.4	0.92	3.65		29.5	0.63	1.94		4
LXV9W8	26.0	-0.78	1.22		24.7	-1.39	2.44		4
MGP7WE	23.6	-1.53	6.11		25.8	-0.93	1.56		4
MQV9YQ	28.7	0.07	4.83		28.1	0.06	1.48		4
NGJDFH	34.0	1.74	2.00		28.9	0.38	4.55	H	4
NWWMH8	31.0	0.79	1.22		29.2	0.52	2.37		4
QKU4XH	27.2	-0.40	2.22		28.1	0.04	1.36		4
RL8WAC	28.8	0.10	0.84		28.6	0.26	0.37	L	4
RUD4PC	33.6	1.61	4.04		28.3	0.13	4.88	H	4
UF8PKK	29.0	0.17	5.05		29.6	0.66	1.87		4
X6EDXW	28.6	0.04	2.41		26.2	-0.74	1.82		4
YGNFUD	23.6	-1.52	3.34		27.2	-0.32	3.11		4
Z7M8Q2	27.2	-0.40	4.09		27.3	-0.27	0.95		4
ZCR6Y7	28.8	0.10	2.17		29.7	0.72	0.68		4
ZY62TU	30.8	0.74	0.93		29.3	0.54	1.25		4

Consensus (All Labs) Results

Month Mean	28.47	Grand Mean	27.98
Avg SD	3.53	Avg SD Months	2.21
SD btwn Labs	3.18	SD btwn Labs	2.40
Labs Incld	32	Labs Incld	32

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Key to Instrument Codes Reported by Participants

ZZ Instruments No Longer Tracked

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	Monthly Results				Cumulative Results				
WebCode	Mean	CPV	SD		Mean	CPV	SD Months	Months	Inst
32JCHB_AL	20.0	-2.27 *	0.94	L	20.7	-1.79	0.50	4	AL
3C2W38	22.6	0.06	4.40	H	23.6	0.96	1.87	4	GG
3JYLLW_AL	24.5	1.79	1.28		23.6	1.00	1.01	4	XX
3VT3BX	22.3	-0.18	0.75	L	22.5	-0.10	0.82	4	LP
4PK2M9_AL	22.4	-0.14	2.19		22.1	-0.45	0.95	4	AK
66U32B	20.8	-1.58	1.24		17.6	-4.75 X	7.54 H	4	LA
6PYKAQ_AL	25.0	2.21 *	1.63		21.1	-1.42	3.48 H	4	AL
7G429N_AL	21.8	-0.68	2.04		22.1	-0.42	0.50	4	AL
8NH8HZ	22.9	0.33	1.97		22.0	-0.50	0.85	3	LA
8NH8HZ_AL	23.1	0.50	2.85		22.3	-0.22	0.55	4	AL
8X8Y6R	22.6	0.08	2.39		22.1	-0.48	0.45	4	LP
AE392U	23.7	1.01	2.21		23.1	0.54	0.52	4	LP
AVPLG8	23.0	0.42	1.76		23.6	1.00	1.48	4	GA
AZLDKX	17.7	-4.30 X	2.49		24.4	1.75	5.54 H	4	TD
BFWFKX_AL	22.9	0.29	2.76		22.7	0.14	0.42	4	AL
BTJMJJ	24.1	1.38	0.87	L	23.7	1.09	0.55	2	LA
C7KGN2	24.8	1.98 *	5.79	H	23.4	0.84	1.52	4	TP
CTZ2MM_AL	22.9	0.35	1.93		23.0	0.46	0.08 L	4	AL
DDD9BK	23.4	0.79	1.42		24.1	1.48	0.77	4	LP
DPTZYU	21.8	-0.66	1.03		21.8	-0.72	0.00	1	TN
FP4MNM_AL	23.1	0.49	0.92	L	23.9	1.33	1.18	4	AL
G6CV4G	21.8	-0.70	1.28		22.0	-0.52	0.64	4	XX
GK7KYD_AL	22.7	0.11	1.58		22.5	-0.07	0.29	4	XX
JKXH4P	21.8	-0.66	1.48		21.7	-0.84	0.13 L	4	LA
JU9KPQ	22.0	-0.53	1.98		21.4	-1.12	0.66	4	LA
KL8RRF_AL	22.4	-0.10	2.09		18.7	-3.66 X	8.53 H	4	AL
LDWP7F	22.1	-0.39	1.73		22.5	-0.07	0.52	4	LP
LXV9W8	17.0	-4.92 X	1.13		18.2	-4.20 X	0.92	4	XX
MGP7WE	21.4	-1.02	2.41		22.1	-0.41	0.80	4	LP
MNL79L	21.3	-1.11	1.60		21.3	-1.21	0.00	1	LA
MQV9YQ	23.2	0.62	3.11		22.7	0.14	0.59	4	LP
NGJDFH_AL	24.3	1.57	1.70		23.2	0.67	0.75	4	AL
NWWMH8	26.1	3.19 X	3.48		25.0	2.34 *	1.79	4	GA
TN7UXA	21.3	-1.14	3.71	H	20.7	-1.77	2.15	4	GA
U6ARUD	20.9	-1.47	4.12	H	21.0	-1.54	1.19	4	XX
UF8PKK_AL	17.0	-4.98 X	1.85		18.7	-3.67 X	1.20	4	AK
X6EDXW_AL	21.7	-0.71	1.41		22.4	-0.15	0.83	4	AL
XZN4MX	22.5	-0.02	0.94	L	23.7	1.06	1.08	4	LA
YGNFUD	22.0	-0.50	2.10		22.5	-0.09	0.36	4	TP

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	Monthly Results			Cumulative Results				
WebCode	Mean	CPV	SD	Mean	CPV	SD Months	Months	Inst
Z7M8Q2_AL	22.2	-0.33	1.89	21.8	-0.69	0.35	3	AK
ZCR6Y7_AL	22.8	0.20	1.66	22.4	-0.19	0.40	4	AL

Consensus (All Labs) Results

Month Mean	22.54	Grand Mean	22.55
Avg SD	2.29	Avg SD Months	1.44
SD btwn Labs	1.12	SD btwn Labs	1.04
Labs Incld	37	Labs Incld	37

Key to Instrument Codes Reported by Participants

AK	L & W Autoline 300	AL	L & W Autoline 400
GA	Gurley Precision #4340 Automatic Densometer	GG	Gurley Precision #4320 Densometer
LA	L&W Autoline (237 Enrollment)	LP	L&W Air Permeance Tester SE 166
TD	TMI Gurley Densometer	TN	Teledyne Gurley S-P-S Tester #4190
TP	Technidyne Profile/ plus Roughness & Porosity	XX	Instrument make/model not specified by lab

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	Weekly Means				Monthly Results				Cumulative Results					
WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
2CMBT6	59.5	57.9	60.8	58.1	59.0	0.53	4.0	1.3	58.1	0.04	3.6	1.3	16	EM
2KWF4A	59.6 L	61.3 L	59.4 L	59.1 L	59.8	0.86	0.8	1.0	60.7	1.15	1.2	1.3	16	XX
2PVQ2V	58.0	58.7	61.6	59.8	59.5	0.72	3.5	1.6	59.3	0.56	3.5	1.2	16	LD
3VT3BX	No Data	No Data	No Data	54.4	54.4	-1.39	4.1	0.0	57.8	-0.11	5.1	6.1 H	4	LD
6HEMGX	60.1	58.9	56.9	57.7	58.4	0.26	4.1	1.4	58.7	0.30	4.1	1.2	16	LD
6HY4WZ	60.6 L	59.8 L	59.4	59.2	59.7	0.82	1.7	0.6	60.0	0.87	1.6	0.7	12	MB
72RL8D	55.2	56.2	53.9	55.5	55.2	-1.07	3.7	1.0	56.4	-0.70	3.9	2.1	16	LZ
7VKZB4	58.1 L	58.3	58.7	57.7 L	58.2	0.18	2.1	0.4	58.5	0.22	2.3	1.0	16	LC
8NH8HZ	61.5	61.9	62.7 *	62.2	62.1	1.79	3.4	0.5	62.6	2.00 *	3.0	1.4	12	LZ
8X8Y6R	59.6	59.7	61.0	58.1	59.6	0.77	3.6	1.2	59.8	0.77	3.7	2.0	16	LD
9YWHRB	58.4	58.4	57.7	57.3	57.9	0.07	2.9	0.5	58.7	0.27	3.3	1.4	16	LZ
A7CMVV	57.7	55.2	56.2	55.1	56.1	-0.72	3.2	1.2	55.8	-0.98	3.3	1.7	16	LD
AE392U	57.9	54.9	57.7	57.8	57.1	-0.30	2.7	1.5	58.1	0.04	3.9	1.2	16	LZ
AVPLG8	58.1	55.2	56.4	57.1	56.7	-0.45	3.1	1.2	57.2	-0.35	3.1	1.4	16	LZ
B8E69G	58.5	59.0	58.2	57.9	58.4	0.26	3.8	0.5	57.8	-0.10	3.8	0.6 L	16	LD
C7KGN2	62.1	62.1	61.1	59.5	61.2	1.42	3.5	1.2	58.9	0.37	3.8	1.8	16	LD
CBEF6G	59.1	58.3	57.8	58.9	58.5	0.31	3.6	0.6	57.8	-0.10	3.7	0.7 L	16	LC
DDD9BK	58.1	59.3	59.3	58.1	58.7	0.37	2.8	0.7	58.0	-0.02	3.0	1.0	16	LD
DJ6FUU	46.9 X	46.1 XH	46.6 X	45.4 X	46.3	-4.79 X	4.6	0.7	46.3	-5.16 X	4.6	0.7 L	4	TC
DPTZYU	53.3 *	55.0	58.7	57.6	56.1	-0.68	4.0	2.5	53.9	-1.83	3.6	2.4	16	LD
FEMXPG	50.9 X	49.4 X	53.6	53.5	51.9	-2.46 *	3.1	2.1	53.4	-2.05 *	3.1	1.4	16	LC
FP4MNM	55.3	53.8	53.6	53.8	54.1	-1.51	2.3	0.8	54.9	-1.36	2.8	1.0	16	LD
FYBGKZ	56.2	55.2	56.1	55.4	55.7	-0.86	3.2	0.5	56.0	-0.90	3.3	0.8	16	TH
GH6GCW	59.6	63.7 *	64.3 *	64.3 *	63.0	2.18 *	4.1	2.3	65.0	3.05 X	4.4	2.2	16	TH
GK7KYD	56.7 H	56.3	55.6	55.2	55.9	-0.78	4.5	0.7	57.1	-0.43	4.0	1.9	16	LD
JKXH4P	58.7 L	58.8	59.0	58.8	58.8	0.44	1.8	0.1 L	58.4	0.17	1.9	0.5 L	16	LD
JPA6ZF	57.7	57.8	57.9	58.1	57.9	0.03	1.6	0.1 L	57.8	-0.13	1.6	0.2 L	16	LD
JU9KPQ	50.5 X	50.3 X	55.0 H	53.5	52.3	-2.28 *	6.3	2.3	53.8	-1.85	5.1	2.3	16	MB
K4QKGK	58.9	57.4	59.1	58.6	58.5	0.30	4.1	0.8	62.3	1.84	4.5	4.1	8	LD
K7XX3R	58.2	57.2	57.6 H	57.0 H	57.5	-0.12	5.5	0.6	57.3	-0.34	5.2	1.3	16	TG
KDFB4C	60.9	57.8	58.0	59.8	59.1	0.56	3.7	1.5	60.8	1.19	4.2	2.0	16	LD
LDWP7F	57.5	56.7	57.6	56.1	57.0	-0.34	2.6	0.7	55.7	-1.01	3.4	1.5	12	LD
M6AGXA	60.2	59.7	58.3	58.2	59.1	0.55	3.3	1.0	61.7	1.60	3.3	2.3	16	LC
MGP7WE	61.5	58.2	57.6	66.7 X	61.0	1.34	4.0	4.2 H	60.7	1.17	3.7	2.5	12	LD
MNL79L	55.5	55.6	55.8	56.4	55.8	-0.81	3.3	0.4	55.8	-0.98	3.3	1.3	16	MB

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Containerboard Interlaboratory Testing Program

Analysis 240

Flat Crush Strength (CMT), 26 lb Corrugating Medium - CM11

TAPPI Official Test Method T809

	Weekly Means				Monthly Results				Cumulative Results					
WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
NGJDFH	57.8	60.4	56.6	55.8	57.7	-0.05	4.2	2.0	57.3	-0.33	3.8	1.8	16	LC
NWWMH8	55.1	57.3	55.2	56.8	56.1	-0.70	3.3	1.1	57.9	-0.07	3.6	1.9	16	LD
PFN8EH	52.4 *	54.6	54.1	51.0 *	53.0	-1.99 *	3.6	1.6	56.3	-0.75	3.8	2.4	16	TB
QKU4XH	58.0	59.8 H	58.2	59.6	58.9	0.46	4.2	0.9	58.3	0.10	3.7	1.7	16	LD
RMF84U	59.4 L	57.2	57.8	57.7	58.0	0.10	2.0	0.9	58.6	0.22	2.3	0.8	16	EN
TN7UXA	60.4	61.3	57.4	56.9	59.0	0.52	4.4	2.1	59.3	0.57	4.8	2.2	16	LD
UF8PKK	58.2	56.8	55.5	59.5	57.5	-0.11	4.6	1.7	55.9	-0.93	4.7	2.4	16	LD
W4QHXH	59.6 L	59.4	59.5	59.6 L	59.5	0.72	1.8	0.1 L	59.3	0.57	2.1	0.2 L	16	LD
WDG34G	58.3	58.4	59.6	57.6	58.5	0.29	4.5	0.8	57.9	-0.05	4.5	1.1	16	TJ
WXYCZ8	57.1	56.1	54.1	54.7	55.5	-0.95	3.4	1.4	53.9	-1.82	2.4	7.6 H	16	TU
X6EDXW	57.4	57.1	58.1	54.4	56.7	-0.43	3.3	1.6	56.6	-0.63	3.3	1.8	16	LZ
XKTLXZ	57.8	57.9	59.4	57.8	58.2	0.19	4.2	0.8	59.9	0.81	3.8	1.6	16	LD
XZN4MX	62.8	58.3	57.0	58.2	59.1	0.54	4.2	2.5	60.0	0.84	4.3	1.8	16	TU
Y78QV9	63.3 *H	62.3	64.0 *	63.3 *	63.2	2.26 *	4.4	0.7	63.6	2.44 *	4.2	2.1	12	LC
YGNFUD	54.2	59.4 H	58.7	55.9	57.1	-0.30	4.7	2.4	56.9	-0.48	3.9	2.1	16	LC
YJTXWF	56.5	55.0	54.8	53.0	54.8	-1.23	3.0	1.5	55.1	-1.30	3.3	1.9	16	LD
YQRP24	93.9 XH	54.8	59.0	52.5	65.0	3.02 X	62.9	19.4 H	60.1	0.90	31.6	9.2 H	16	LD
ZY62TU	60.7	57.6	59.1	60.5	59.4	0.69	3.7	1.4	59.3	0.57	4.0	1.5	16	EN

Consensus (All Labs) Results

Wk Mean	58.35	57.99	57.93	57.34	Month Mean	57.77	Grand Mean	58.05
Avg SDr	3.90	3.37	3.56	3.53	Avg SD	3.62	Avg SD	5.69
SD btwn Labs	2.30	2.26	2.45	2.61	SD btwn Labs	2.40	SD btwn Labs	2.28
Labs Incld	48	49	51	51	SD btwn Wks	1.43	SD btwn Wks	2.50
Labs Excld	4	3	1	2	Labs Incld	51	Labs Incld	51
Labs not Rcvd	1	1	1	0				

Key to Instrument Codes Reported by Participants

EM	Emerson 1200 Series	EN	Emerson 2200 Series
LC	L&W Crush Tester 48	LD	L&W Crush Tester 248
LZ	L&W Crush Tester (model not specified)	MB	Messmer Buchel K440
TB	TMI Monitor/Compression Tester, 17-70	TC	TMI Monitor/Compression Tester, 17-37
TG	TMI Compression Tester, Model 17-10	TH	TMI Compression Tester, Model 17-76
TJ	TLS Compression Tester, Model CDM-5	TU	TMI Universal Crush Tester (TMI K440)
XX	Instrument make/model not specified by lab		

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	Weekly Means				Monthly Results				Cumulative Results					
WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
2KWF4A	70.5 L	70.3 L	72.3 L	72.2 L	71.3	1.07	0.8	1.1	71.1	1.53	1.1	1.2	16	XX
2PVQ2V	71.4	70.1	73.5	74.0	72.3	1.57	3.7	1.8	71.4	1.67	3.2	2.2	16	LD
3VT3BX	No Data	No Data	No Data	72.6	72.6	1.73	2.9	0.0	68.0	-0.62	3.4	7.2 H	4	LD
6HY4WZ	68.3	68.4 L	68.2	68.4	68.3	-0.49	1.6	0.1 L	67.7	-0.84	1.6	1.2	12	MB
8X8Y6R	69.6	69.6	71.4	70.3	70.2	0.51	3.3	0.9	68.6	-0.21	3.8	2.4	16	LD
9YWHRB	71.4	67.9	68.6	67.7	68.9	-0.21	3.0	1.7	68.2	-0.51	3.1	1.5	16	LZ
C7KGN2	68.7	68.6	66.1	67.0	67.6	-0.89	3.7	1.3	69.4	0.31	3.8	1.9	16	LD
CBEF6G	68.0	68.6	67.8	69.2	68.4	-0.47	4.8	0.6	68.2	-0.48	4.1	0.8	16	LC
DDD9BK	68.4	69.5 L	70.5	68.5	69.2	-0.03	3.2	1.0	69.0	0.07	3.8	1.2	16	LD
FP4MNM	69.0	69.1	69.7	69.6	69.3	0.03	4.2	0.4	67.2	-1.19	3.6	1.9	16	LD
H97CTF	66.8	68.4	68.2	68.2	67.9	-0.72	2.5	0.7	67.5	-0.95	3.0	1.3	16	LD
JKXH4P	69.2	69.3 L	68.9 L	69.1	69.1	-0.08	1.6	0.2 L	68.9	0.03	1.9	0.4 L	16	LD
JPA6ZF	68.7 L	68.8	68.7 L	68.8 L	68.7	-0.29	1.5	0.1 L	68.7	-0.13	1.7	0.2 L	16	LD
LDWP7F	71.4	72.6 *	73.8	72.8	72.6	1.78	2.5	1.0	72.3	2.32 *	2.7	1.4	12	LD
MGP7WE	69.7	69.7 H	67.7	60.3 *	66.8	-1.30	5.2	4.5 H	69.0	0.08	4.4	3.0	12	LD
NGJDFH	68.7	71.3	68.5	66.0	68.6	-0.35	3.7	2.2	68.5	-0.27	4.3	4.0	16	LC
PFN8EH	57.9 X	55.5 X	56.7 X	63.3	58.3	-5.78 X	3.2	3.4 H	58.2	-7.25 X	3.2	1.9	16	TB
U6ARUD	67.4	67.2	68.0 H	65.1	66.9	-1.25	5.0	1.3	68.2	-0.49	3.3	1.1	16	LZ
UF8PKK	69.1	66.6 *	65.0	65.4	66.5	-1.45	3.2	1.8	67.0	-1.28	3.7	2.4	16	LD
X6EDXW	66.7	68.4	68.5	66.6	67.5	-0.92	2.8	1.1	67.5	-0.94	3.6	1.7	16	LZ
YGNFUD	69.3	70.6	70.4	71.1	70.4	0.57	3.3	0.7	71.2	1.58	2.9	1.6	16	LC
ZY62TU	71.8	69.2	73.4	71.8	71.5	1.19	3.4	1.7	69.4	0.32	3.8	2.9	16	EN

Consensus (All Labs) Results

Wk Mean	69.20	69.21	69.46	68.53	Month Mean	69.28	Grand Mean	68.90
Avg SDr	3.55	3.25	3.44	3.17	Avg SD	3.34	Avg SD	3.31
SD btwn Labs	1.49	1.37	2.42	3.31	SD btwn Labs	1.89	SD btwn Labs	1.47
Labs Incld	20	20	20	22	SD btwn Wks	1.53	SD btwn Wks	2.45
Labs Excld	1	1	1	0	Labs Incld	21	Labs Incld	21
Labs not Rcvd	1	1	1	0				

Key to Instrument Codes Reported by Participants

EN	Emerson 2200 Series	LC	L&W Crush Tester 48
LD	L&W Crush Tester 248	LZ	L&W Crush Tester (model not specified)
MB	Messmer Buchel K440	TB	TMI Monitor/Compression Tester, 17-70
XX	Instrument make/model not specified by lab		

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Containerboard Interlaboratory Testing Program

Analysis 255

Ring Crush (RCT), 26 lb Corrugating Medium - CM11

TAPPI Official Test Method T822

Report #619 (D)
April 2021

	Weekly Means				Monthly Results				Cumulative Results					
WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
2CMBT6	45.7	44.4	48.0	46.1	46.0	0.74	4.3	1.5	46.9	1.56	4.0	1.4	16	EM
6HY4WZ	45.5 L	45.4 L	44.9	44.6	45.1	0.41	1.5	0.4	43.3	-1.07	1.5	1.3	12	MB
7VKZB4	47.9 L	47.1 L	47.4 L	47.8 L	47.5	1.27	1.3	0.4	47.6	2.03 *	1.5	0.4 L	16	LC
8X8Y6R	45.7	48.7	46.2	45.7	46.6	0.93	2.7	1.4	44.8	0.01	3.1	1.9	16	LD
A7CMVV	45.1	44.7	45.1	45.8	45.2	0.44	2.8	0.4	44.9	0.07	2.9	1.7	16	LD
AVPLG8	44.3	42.6	44.4	44.2	43.9	-0.01	2.6	0.8	44.1	-0.53	3.2	1.7	16	LD
C7KGN2	46.5	44.3 H	45.8	46.6	45.8	0.65	4.3	1.1	46.2	1.00	4.3	1.5	16	LD
CR79R4	43.9	47.0	45.7	44.0	45.1	0.43	4.1	1.5	44.7	-0.04	3.7	1.6	16	LZ
DDD9BK	46.4	43.3	42.6	42.8	43.8	-0.05	3.5	1.8	43.4	-0.98	3.8	1.4	16	LD
DJ6FUU	37.0 *H	37.7 *H	36.1 *	37.2 *	37.0	-2.41 *	5.9	0.7	37.0	-5.68 X	5.9	0.7	4	TC
FP4MNM	41.9	41.5	40.3 L	42.1	41.5	-0.85	2.6	0.8	42.9	-1.40	3.1	1.1	16	LD
FYBGKZ	36.7 *	34.9 X	37.3 *	36.7 *	36.4	-2.63 *	2.2	1.0	36.0	-6.42 X	2.3	1.5	16	TH
GH6GCW	45.0	47.6	44.7	40.7	44.5	0.20	3.6	2.9 H	45.3	0.40	4.0	2.0	16	LZ
JKXH4P	44.9	45.4	44.8	45.4	45.1	0.42	2.9	0.3	44.6	-0.16	2.9	0.6 L	16	LD
JU9KPQ	45.1	47.7	43.5	45.3	45.4	0.52	3.8	1.7	45.6	0.59	3.4	1.6	16	MB
K4QKGK	44.6	43.5	41.7	43.9	43.4	-0.16	3.4	1.3	44.6	-0.10	3.7	1.8	8	EM
KDFB4C	45.7	45.9	47.0	47.1	46.4	0.88	3.5	0.7	46.3	1.09	4.1	1.2	16	LZ
LDWP7F	47.6	44.8	45.9	44.7	45.7	0.64	3.0	1.3	45.1	0.21	3.3	1.6	12	XX
LNQYUN	42.7	41.4	39.8	44.7	42.1	-0.62	2.2	2.1	42.7	-1.50	2.6	1.7	16	LZ
PFN8EH	43.6	41.4	41.9	42.2	42.3	-0.57	3.4	1.0	42.5	-1.65	3.3	1.8	16	TB
QGUURM	44.5	43.2	44.5	45.6	44.4	0.17	3.4	1.0	43.6	-0.87	4.4	2.8	16	XX
TN7UXA	46.1	45.3	45.9	43.2	45.1	0.42	3.8	1.3	43.3	-1.09	4.3	4.7	16	LD
W4QHXH	44.9 L	44.6 L	44.6 L	44.7 L	44.7	0.28	1.0	0.1 L	44.4	-0.26	1.5	0.3 L	16	LD
WB9VWG	43.6	45.7	43.5	44.2	44.3	0.12	2.3	1.0	44.0	-0.59	2.3	1.0	16	TH
WXYCZ8	40.8	39.1	40.9	40.5	40.3	-1.25	3.3	0.8	46.4	1.17	2.3	8.4 H	16	TU
XKTLXZ	45.8	45.7	45.0	45.3	45.4	0.54	4.0	0.4	46.7	1.38	3.4	1.5	16	LD
Y78QV9	37.4 *	37.2 *	37.4 *	39.1	37.8	-2.14 *	2.7	0.9	37.3	-5.44 X	4.3	2.3	12	XX
YGNFUD	46.0	42.5	47.4	47.1	45.7	0.64	2.9	2.2	46.0	0.85	2.8	1.9	16	LC
YQRP24	47.5	43.2	50.4 *	46.0	46.8	1.00	2.9	3.0 H	44.6	-0.11	2.7	2.1	16	LC

Consensus (All Labs) Results

Wk Mean	44.22	43.96	43.88	43.90	Month Mean	43.91	Grand Mean	44.79
Avg SDr	3.23	3.38	3.01	3.41	Avg SD	3.25	Avg SD	3.26
SD btwn Labs	2.94	2.85	3.35	2.80	SD btwn Labs	2.86	SD btwn Labs	1.37
Labs Incld	29	28	29	29	SD btwn Wks	1.37	SD btwn Wks	2.43
Labs Excld	0	1	0	0	Labs Incld	29	Labs Incld	26
Labs not Rcvd	0	0	0	0				

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Key to Instrument Codes Reported by Participants			
EM	Emerson 1200 Series	LC	L&W Crush Tester 48
LD	L&W Crush Tester 248	LZ	L&W Crush Tester (model not specified)
MB	Messmer Buchel K440	TB	TMI Monitor/Compression Tester, 17-70
TC	TMI Monitor/Compression Tester, 17-37	TH	TMI Compression Tester, Model 17-76
TU	TMI Universal Crush Tester (TMI K440)	XX	Instrument make/model not specified by lab

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Containerboard Interlaboratory Testing Program

Analysis 261

STFI, 26 lb Corrugating Medium - CM11

TAPPI Official Test Method T826

Report #619 (D)
April 2021

	Weekly Means				Monthly Results				Cumulative Results					
WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
2KWF4A	14.1	14.6	13.8	14.3	14.2	0.57	1.0	0.3	16.0	4.42 X	1.3	4.4 H	16	XX
AVPLG8	13.4	13.1	13.7	14.0	13.5	-0.74	1.1	0.4	13.5	-0.86	1.1	0.3	16	LZ
B8E69G	13.5	13.7	14.1	14.2	13.9	-0.08	0.8	0.3	13.8	-0.31	0.9	0.4	16	LB
C7KGN2	12.9	13.7	13.6	13.9	13.5	-0.78	1.2	0.4	13.5	-0.97	1.1	0.4	16	LB
CBEF6G	14.2	13.7	14.0	13.1 L	13.8	-0.28	0.8	0.5	13.8	-0.28	0.9	0.3	16	LB
CR79R4	13.1	13.9	13.7	13.8	13.6	-0.59	1.2	0.4	13.6	-0.69	1.0	0.5	16	LA
DJ6FUU	13.3	12.9	13.6	13.6	13.3	-1.16	1.2	0.3	13.3	-1.22	1.2	0.3	4	TS
FP4MNM	14.7	14.3	14.5	14.3	14.4	1.05	1.0	0.2	14.2	0.66	1.0	0.2	16	LA
JKXH4P	13.8	13.9	13.7	13.8	13.8	-0.18	1.2	0.1	13.8	-0.13	1.2	0.1 L	16	LB
JPA6ZF	13.7 L	13.8 L	13.7 L	13.8 L	13.8	-0.30	0.4	0.1 L	13.8	-0.18	0.5	0.1 L	16	LA
JU9KPQ	14.2	15.0	14.4	14.3	14.5	1.11	1.1	0.3	14.7	1.63	2.3	0.8	16	LA
LNQYUN	14.0	15.3 *	14.8	14.3	14.6	1.31	1.4	0.6	14.9	2.05 *	1.4	0.6	16	LA
MNL79L	13.2	13.0	13.2	14.5	13.5	-0.91	1.1	0.7	13.5	-0.93	1.1	0.4	14	LA
NWWMH8	13.5	13.3	13.7	14.0	13.6	-0.62	1.2	0.3	13.7	-0.34	1.2	0.4	16	LU
PFN8EH	13.1	13.1	13.0	13.2 H	13.1	-1.64	1.1	0.1	13.0	-1.91 *	1.1	0.5	16	LH
Q6KEHW	14.4	14.4	14.8	14.4	14.5	1.22	1.1	0.2	14.2	0.65	0.9	0.6	16	LU
QKU4XH	14.0	14.5	14.8	14.5	14.5	1.11	1.1	0.3	14.2	0.63	1.0	0.5	16	LH
RMF84U	13.0	13.7	14.2	13.8 L	13.7	-0.48	0.9	0.5	13.6	-0.70	0.9	0.5	16	LH
TN7UXA	13.4	13.7	14.4	14.8	14.1	0.32	1.2	0.6	14.4	1.13	1.2	0.7	16	LA
UF8PKK	14.8	15.0	15.5 *	14.7	15.0	2.18 *	1.2	0.4	14.7	1.75	1.1	0.5	16	LA
WDG34G	13.8	13.9	13.1	14.0	13.7	-0.44	1.1	0.4	13.9	-0.01	1.1	0.3	16	TT
XZN4MX	14.0	13.6	14.2	NO DATA	13.9	0.05	1.1	0.3	13.9	0.06	1.2	0.4	11	LA
YGNFUD	14.0	13.5	14.4	14.2	14.0	0.15	1.1	0.4	14.0	0.12	1.0	0.3	16	LU
YQRP24	14.7	14.9	14.2	14.6	14.6	1.33	1.2	0.3	14.4	1.11	1.1	0.3	16	LH
Z7M8Q2	13.2	13.9	14.1	13.9	13.8	-0.27	1.1	0.4	13.8	-0.15	1.0	0.4	16	LA
ZY62TU	13.0	12.6	13.3	12.9 *	13.0	-1.93 *	0.9	0.3	13.4	-1.12	1.0	0.3	16	LB

Consensus (All Labs) Results

Wk Mean	13.72	13.88	14.01	14.03	Month Mean	13.91	Grand Mean	13.91
Avg SDr	1.10	1.04	1.08	1.10	Avg SD	1.08	Avg SD	1.14
SD btwn Labs	0.55	0.69	0.59	0.48	SD btwn Labs	0.49	SD btwn Labs	0.47
Labs Incld	26	26	26	25	SD btwn Wks	0.38	SD btwn Wks	0.44
Labs Excld	0	0	0	0	Labs Incld	26	Labs Incld	25
Labs not Rcvd	0	0	0	1				

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Key to Instrument Codes Reported by Participants

LA	L&W Autoline	LB	L&W Model 152
LH	L&W 282	LU	L&W 52 without moisture correction (was 53)
LZ	L&W (model not specified)	TS	TMI Monitor/STFI Compression Tester, 17-33
TT	TMI Short Span Compression, 17-34 (MB K455)	XX	Instrument make/model not specified by lab

End of Report

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