Collaborative Testing Services, Inc.

Containerboard Interlaboratory Testing Program

Participant Summary Report #633 (F) - June 2022

Introduction to the Containerboard Program

Explanation of Tables and Definitions of Terms

Analysis	Sample	Analysis Name
201	BX16	Top to Bottom Box Compression Strength, Corrugated Boxes
202	EC14	Edgewise Compressive Strength, by T811, Corrugated Board
203	EC14	Edgewise Compressive Strength by T839, Corrugated Board
205	42H1	Bursting Strength (Mullen), 42 lb Linerboard
207	35E3	Bursting Strength (Mullen), 35 lb Linerboard
215	42H1	Ring Crush, 42 lb Linerboard
217	35E3	Ring Crush, 35 lb Linerboard
223	42H1	STFI, 42 lb Linerboard
225	35E3	STFI, 35 lb Linerboard
228	42H	Roughness - Stylus Method, 42 lb Linerboard
229	42H1	Roughness - Sheffield Method, 42 lb Linerboard
231	42H	Internal Bond, 42 lb Linerboard
234	42H1	COF Inclined Plane (Slide Angle), 42 lb Linerboard
237	42H	Air Resistance, 42 lb Linerboard
240	CM12	Flat Crush Strength (CMT), 26 lb Corrugating Medium
250	CM12	Fluted Edge Crush Strength (CFC), 26 lb Corrugating Medium
255	CM12	Ring Crush (RCT), 26 lb Corrugating Medium
261	CM12	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# Corrugating Medium	CM12	July 2021 - Current
	CM11	April 2019 - June 2021
35# Corrugating Medium	35E3	June 2022 - Current
	35E2	June 2020 - April 2022
42# Corrugating Medium	42H1	April 2022 - Current
	42F4	August 2021 - March 2022
56# Corrugating Medium	56G2	May 2021 - Current
	56G1	January 2020 - March 2021

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
2HLBV6	803.0	5.50 X	74.70		858.9	8.59 X	38.32	4	EM
6MMJWH	668.0	0.53	13.44		680.6	0.76	44.26	4	LG
99YHRM	677.2	0.87	59.02		664.9	0.07	16.58	4	LG
CGWGTJ	631.8	-0.80	27.34		628.6	-1.52	27.74	4	LG
ER7ZYJ	653.9	0.01	38.51		674.5	0.49	38.77	4	TE
ET38NQ	475.0	-6.58 X	22.56		536.4	-5.57 X	47.55	4	LL
KAQF4B	634.7	-0.70	6.62	L	691.0	1.22	38.13	4	ET
KCBPVN	645.8	-0.29	21.66		647.4	-0.70	38.06	4	ES
KG6JWV	657.7	0.15	30.32		658.2	-0.22	7.17	4	EX
LTX8JH	684.5	1.14	27.36		652.5	-0.48	38.61	4	LS
M3YA2K	606.0	-1.75	35.41		638.9	-1.07	26.34	4	ER
MDUCFM	611.1	-1.57	114.43	H	609.6	-2.36 *	26.21	4	LL
NLR96X	687.3	1.24	49.35		685.2	0.96	3.00	2	EX
NYQJ8B	746.6	3.42 X	15.37		777.4	5.01 X	23.44	4	LS
P7BRDL	638.6	-0.55	32.96		657.4	-0.26	51.86	4	ER
PB8JLJ	652.6	-0.04	53.95		638.8	-1.08	49.09	4	EX
PJGK8J	648.1	-0.20	74.85		665.3	0.09	11.69	4	ER
QVM6ZB	623.5	-1.11	39.17		663.5	0.01	30.81	4	LG
UHAYG9	662.6	0.33	22.77		654.0	-0.41	16.36	4	LM
UZ9CUF	636.8	-0.62	35.80		659.5	-0.17	68.26	4	LM
WA6YYH	685.6	1.18	32.29		739.9	3.37 X	75.11	4	EX
WKQA43	669.1	0.57	40.61		656.8	-0.29	16.27	4	LL
Y4R8D9	606.2	-1.74	19.46		685.0	0.95	96.44 H	3	LS
Y4UPKK	664.9	0.42	52.61		689.2	1.14	25.44	4	TB
YVHHZB	687.8	1.26	29.94		690.4	1.19	53.45	4	EX
Z7BEG3	698.9	1.67	38.86		701.7	1.69	7.62	4	LO

Consensus (All Labs) Results

Month Mean	653.59	Grand Mean	663.31
Avg SD	44.74	Avg SD Months	39.65
SD btwn Labs	27.16	SD btwn Labs	22.76
Labs Incld	23	Labs Incld	22

Consensus By Method

Test Method	Group Mean	SD btwn Group	Difference from Grand Mean	Labs Included
Hot melt adhesive sealing	654.04	34.83	0.44	7
Clip sealing	653.40	24.42	0.19	16

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	TE	Testometric M500 - 25 KN

Containerboard Interlaboratory Testing Program

Analysis 202

Edgewise Compressive Strength, by T811, Corrugated Board - EC14

TAPPI Official Test Method T811

	Monthly Results				Cumulative Results				
WebCode	Mean	CPV	SD		Mean	CPV	SD Months	Months	Inst
2XCDDU	40.9	0.75	3.52	H	37.9	-0.53	4.18	2	XX
99YHRM	36.1	-1.37	1.31		38.3	-0.37	1.52	4	LE
A9QT62	42.0	1.26	1.43		44.6	2.11 *	2.86	4	XX
K9U3GH	37.7	-0.67	0.66	L	36.7	-1.03	0.77	4	TD
KG6JWV	41.9	1.20	0.85	L	41.1	0.74	0.68	4	LC
LTX8JH	37.0	-0.97	2.19		37.5	-0.68	1.03	4	LD
V4N777	39.6	0.16	2.54		39.1	-0.08	0.39	4	LD
W4H9E8	145.6	47.61 X	4.30	H	148.3	43.07 X	2.63	3	LD
YVHHZB	38.4	-0.36	1.16		38.8	-0.17	1.27	4	LC

Consensus (All Labs) Results

Month Mean	39.20	Grand Mean	39.26
Avg SD	1.93	Avg SD Months	1.99
SD btwn Labs	2.24	SD btwn Labs	2.53
Labs Incld	8	Labs Incld	8

Key to Instrument Codes Reported by Participants

LC	L&W Crush Tester 48	LD	L&W Crush Tester 248
LE	L&W Crush Tester 840	TD	TMI Digital Crush Tester, Model 17-09
XX	Instrument make/model not specified by lab		

	Monthly Results				Cumulative Results				
WebCode	Mean	CPV	SD		Mean	CPV	SD Months	Months	Inst
2HLBV6	43.8	1.07	2.03		41.3	-0.27	1.99	4	TH
6MMJWH	42.1	0.23	1.32		41.6	-0.13	0.60	4	EM
99YHRM	42.1	0.24	2.57		40.8	-0.53	3.05 H	4	LY
A9QT62	42.5	0.43	1.32		43.9	1.01	2.38	4	XX
BJKKVY	44.7	1.54	1.95		43.7	0.90	1.50	4	TS
E4MJZ4	38.0	-1.81	3.54	H	38.6	-1.59	0.67	3	XX
EG8X33	37.9	-1.87	1.86		34.5	-3.54 X	3.54 H	4	TD
ET38NQ	40.2	-0.69	1.27		41.1	-0.34	1.56	4	LC
EYP7VQ	43.9	1.13	2.11		44.2	1.16	0.67	4	TU
G4BTM2	41.3	-0.15	1.50		36.8	-2.42 *	3.74 H	4	TK
JH7X6X	41.0	-0.33	0.82		42.1	0.14	1.07	4	LC
K9U3GH	40.6	-0.52	0.71	L	40.3	-0.76	0.77	4	BU
KAQF4B	43.2	0.77	1.53		44.1	1.07	0.75	4	TD
KCBPVN	41.4	-0.11	1.18		41.7	-0.05	0.69	4	LD
KG6JWV	43.7	1.04	1.36		43.7	0.91	0.53	4	LC
KUEZ4Z	42.8	0.56	0.60	L	43.5	0.80	0.85	4	LC
KURV3D	38.5	-1.53	1.20		39.6	-1.11	0.70	4	EM
LTX8JH	43.5	0.91	1.16		42.0	0.07	1.08	4	LD
M3YA2K	41.8	0.11	1.47		41.2	-0.34	0.75	4	LD
NLR96X	41.2	-0.22	1.98		42.1	0.15	1.32	3	TL
NYQJ8B	48.3	3.31 X	1.49		48.7	3.32 X	0.29	4	EM
P7BRDL	41.8	0.10	1.14		41.3	-0.25	0.47	3	EM
PB8JLJ	40.2	-0.72	2.01		39.4	-1.17	1.37	4	LD
PJGK8J	39.4	-1.09	3.22	H	40.9	-0.45	1.38	4	LD
PXWVPE	43.3	0.81	1.58		44.0	1.03	1.01	2	EM
PYT9C8	41.6	0.00	1.49		42.8	0.44	0.82	4	LD
QP26QQ	41.4	-0.13	1.75		42.8	0.47	1.13	4	LD
QVM6ZB	46.9	2.62 *	0.95		46.6	2.32 *	1.11	4	MK
UHAYG9	37.8	-1.91	1.44		40.4	-0.72	2.58	4	EM
UZ9CUF	42.8	0.59	1.04		42.8	0.46	1.05	4	TG
WA6YYH	42.1	0.26	1.61		42.8	0.47	0.91	4	CT
WKQA43	40.5	-0.54	0.89		41.5	-0.16	0.67	4	BU
WY9T6J	42.7	0.54	1.49		43.1	0.61	1.00	4	TG
XTUTUC	38.3	-1.63	2.29		37.6	-2.06 *	0.76	4	BU
Y4UPKK	43.0	0.68	0.53	L	45.1	1.56	2.15	4	LD
YVHHZB	41.1	-0.27	1.27		41.2	-0.34	1.08	4	LC
Z7BEG3	41.5	-0.07	1.33		40.1	-0.85	1.06	4	LD

Consensus (All Labs) Results

Month Mean	41.62	Grand Mean	41.85
Avg SD	1.67	Avg SD Months	1.44
SD btwn Labs	2.02	SD btwn Labs	2.06
Labs Incld	36	Labs Incld	35

Key to Instrument Codes Reported by Participants

BU	Buchel Digital Crush Tester	CT	Con-Ten
EM	Emerson 1200 Series	LC	L&W Crush Tester 48
LD	L&W Crush Tester 248	LY	L&W 830
MK	Mark-10 ESM303	TD	TMI Digital Crush Tester, Model 17-09
TG	TMI Digital Crush Tester, 17-76	TH	TMI Monitor/Compression Tester, Model 17-76
TK	TLS Compression Tester, Model 5184	TL	Tech-Lab Systems Compression
TS	TMI Digital Crush Tester, Model 17-56	TU	TMI Universal Crush Tester (TMI K440)
XX	Instrument make/model not specified by lab		

Containerboard Interlaboratory Testing Program

Analysis 205

Bursting Strength (Mullen), 42 lb Linerboard - 42H1

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
2ATVED	112.3	113.1	113.6	110.6	112.4	-0.95	8.4	1.3	114.5	-0.55	6.8	2.0	12	XX
2DQEC7	122.4	122.2	118.0	120.8	120.9	0.97	6.3	2.0	120.7	0.95	6.2	3.0	12	AH
2EMRYX	117.0	118.0	118.5	116.8	117.6	0.23	8.0	0.8	118.2	0.35	8.5	3.6	12	LA
2EMRYX_AL	113.8	114.2	110.3 H	118.6	114.2	-0.53	10.2	3.4	116.5	-0.05	7.8	3.0	12	AL
2UGCH8_AL	117.6	126.7	108.8	115.3	117.1	0.11	8.6	7.4 H	118.5	0.43	8.0	4.9	12	AL
2UVV97	111.1	109.4 L	112.3	110.3	110.8	-1.32	4.7	1.2	109.5	-1.77	5.6	3.6	12	XX
34FG28	102.5 *	110.5	107.9	104.2 *	106.3	-2.34 *	9.8	3.6	109.2	-1.84	10.3	3.2	12	LC
3PKBRC_AL	118.3	124.9	119.6	115.9	119.7	0.70	8.2	3.8	120.5	0.91	8.7	3.7	12	AL
4BVF9R	120.4	112.3	115.7	107.8	114.1	-0.57	8.6	5.3	114.7	-0.49	9.2	4.0	12	LC
4HWPJQ	116.9	123.9	122.2	125.1	122.0	1.24	6.3	3.6	119.0	0.55	6.6	3.4	12	LA
634CMA_AL	115.8	114.6	116.1	115.2	115.4	-0.27	8.9	0.7	115.4	-0.33	8.9	0.7 L	4	AL
6ECELC	116.7	117.0	116.8	115.7	116.6	0.00	5.4	0.6	114.4	-0.57	5.4	2.9	12	LJ
7JLVU2	115.0	No Data	No Data	No Data	115.0	-0.36	10.2	0.0	119.6	0.69	9.5	5.2	8	AH
7ZQ6V2	110.7	108.8	112.9	113.1	111.4	-1.18	9.5	2.0	111.9	-1.17	10.1	2.2	12	LC
84PZXZ_AL	118.6	120.0	114.6	121.6	118.7	0.48	7.9	3.0	117.5	0.18	8.7	3.3	12	AL
99YHRM	121.6	115.2	125.9	124.8	121.9	1.20	8.4	4.8	119.2	0.60	7.2	3.9	12	AH
A9QT62	116.1	113.1	115.6	114.5	114.8	-0.40	5.6	1.3	115.4	-0.34	6.1	1.2	10	LC
ARFEEQ	108.3	108.4	103.9 *	108.4	107.3	-2.12 *	10.2	2.2	109.7	-1.70	10.4	3.0	12	LA
B9NQNV_AL	128.5*H	129.9 *	134.5 XH	137.4 XH	132.5	3.63 X	18.2	4.1	130.7	3.37	X17.8	6.6 H	10	AL
BM287X_AL	113.0	117.0	109.4	113.6	113.3	-0.76	8.5	3.1	112.9	-0.92	8.0	3.4	12	AL
BY2RXP_AL	117.1	118.9	121.2	122.6	119.9	0.76	7.2	2.4	119.5	0.66	7.2	2.3	12	AL
CE96RT	112.2	115.5	113.0	115.7	114.1	-0.56	9.1	1.8	113.7	-0.73	9.1	2.9	12	LA
F7M9JN	118.0	116.0	116.6	116.6	116.8	0.05	6.6	0.9	115.0	-0.43	7.6	2.4	8	TP
F7M9JN_AL	109.7	104.8 *	114.5	113.8	110.7	-1.33	6.9	4.5	111.2	-1.34	6.2	3.4	8	XX
GY3DCR	106.5	113.4	110.3	113.1	110.8	-1.31	7.6	3.2	109.6	-1.72	7.6	4.3	12	LC
H7XU7U_AL	120.2	120.2	117.4	115.4	118.3	0.39	9.6	2.3	116.9	0.03	9.6	2.3	11	AL
JH2HPC	116.4	117.2	116.5 L	117.0 L	116.8	0.04	4.0	0.4 L	115.6	-0.27	4.0	1.2	12	LA
JRUQGU_AL	No Data	118.6	114.4	117.9	117.0	0.08	9.5	2.2	117.0	0.05	9.6	2.7	11	AL
K9U3GH	112.1	112.4 H	111.0	111.7	111.8	-1.09	12.6	0.6	113.4	-0.82	11.8	3.3	12	XX
KCBPVN	112.3	113.3	109.0	115.6	112.6	-0.92	10.0	2.7	113.5	-0.78	8.6	3.3	12	LA
KG6JWV	109.9	107.0	111.7	116.0	111.2	-1.23	11.4	3.8	111.5	-1.27	10.1	4.4	12	AH
LRZWNF_AL	122.5	122.4	118.1	124.1	121.8	1.18	10.4	2.6	123.8	1.71	10.6	4.5	12	AK
LTX8JH	116.0	117.5	116.2	117.8	116.9	0.07	10.3	0.9	118.1	0.31	10.0	2.9	12	LA
M3YA2K	124.3	119.9	121.2	116.2	120.4	0.87	9.8	3.4	120.2	0.83	10.0	2.9	8	AH
M6MGQN	125.3	123.1	125.8	127.3 *	125.4	2.00 *	10.3	1.7	122.3	1.35	9.8	4.1	8	LA

Containerboard Interlaboratory Testing Program

Analysis 205

Bursting Strength (Mullen), 42 lb Linerboard - 42H1

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
MZTMNF	No Data	114.3	109.3	111.1	111.6	-1.14	8.2	2.5	110.7	-1.48	9.4	2.3	11	ME
N9HPAN	117.7	123.8	120.2	122.4	121.0	1.01	9.9	2.7	120.4	0.88	11.2	4.0	12	RE
P84MZV	114.8	114.4	115.2	116.6	115.3	-0.30	7.6	1.0	113.0	-0.91	7.5	2.3	12	AH
PB8JLJ	117.6	118.0	116.8	119.2	117.9	0.30	8.6	1.0	118.5	0.41	8.8	1.5	12	AH
PFEWJG	120.4 L	124.2	128.8 *	127.4 *	125.2	1.96 *	7.8	3.7	126.0	2.23 *	8.5	3.3	12	XX
PJGK8J	107.2	108.6	101.3 *	112.4	107.4	-2.09 *	9.5	4.6	110.4	-1.53	10.0	4.6	12	LZ
QLXEE4	131.2*L	131.4 *L	130.4 *L	131.3 *L	131.1	3.29 X	3.4	0.5 L	132.0	3.70 X	3.0	3.5	12	AH
QP26QQ_AL	120.1	115.1	119.1	119.3	118.4	0.41	6.5	2.2	120.6	0.92	7.0	2.5	12	AK
REGDEL_AL	118.6	117.8	116.5	113.6	116.6	0.01	9.3	2.2	117.7	0.22	7.9	2.0	12	AL
RRPY3K	126.1	119.5	123.1	119.7 H	122.1	1.25	14.7	3.1	121.5	1.15	14.8	4.2	12	LJ
TF79CE	118.1	119.3	No Data	115.9 H	117.8	0.27	12.4	1.7	119.7	0.72	10.5	2.9	11	TB
TJ6HMF	119.2	120.6	123.9 H	123.1	121.7	1.16	12.3	2.2	123.3	1.59	12.2	3.6	12	LC
TKY77B	120.0	117.2	117.2 L	115.4	117.5	0.20	4.8	1.9	117.6	0.20	5.2	2.3	11	AX
TKY77B_AL	116.9	118.3	117.2	115.0	116.9	0.06	8.6	1.4	117.1	0.07	8.3	3.9	11	AL
TQMQAR	115.2	117.7	113.9	117.4	116.1	-0.12	7.2	1.8	112.7	-0.98	7.3	2.9	12	TP
TRV3N8	120.4	126.3	121.0	121.0	122.2	1.27	8.7	2.8	120.9	1.01	9.9	2.5	12	LA
UGGBYC_AL	119.7	117.4	118.2	113.1	117.1	0.12	6.5	2.8	114.7	-0.51	6.7	3.1	12	XX
ULM26P	121.1	119.0	121.4	116.8	119.6	0.68	10.5	2.1	120.5	0.90	10.1	2.7	8	LC
ULM26P_AL	121.1	115.8	121.4	121.0	119.8	0.74	12.6	2.7	120.2	0.83	11.1	3.3	8	AL
V4N777	114.4	109.0	106.6	106.6	109.2	-1.69	8.4	3.7	110.8	-1.46	6.6	2.7	12	LA
W4H9E8	105.7 *	97.6 X	103.4 *	107.6	103.6	-2.96 X	9.2	4.3	104.1	-3.06 X	9.1	3.1	12	LA
WA6YYH	123.0	117.5	120.5	122.5	120.9	0.98	10.6	2.5	119.1	0.56	9.2	3.3	12	XX
WCW6B2	125.8	126.0	124.8	123.7	125.1	1.93	8.8	1.1	126.1	2.26 *	7.5	2.0	12	AX
X6684P_AL	114.0	118.3	113.1	117.6	115.7	-0.19	9.2	2.6	115.6	-0.29	10.7	2.7	12	AL
YZRVH9	117.5	120.3	115.7	121.9	118.9	0.52	7.2	2.8	118.5	0.42	6.9	2.6	11	AC
Z66R7J	115.8 L	116.5 L	116.2 L	115.9 L	116.1	-0.11	1.6	0.3 L	119.4	0.64	2.4	2.7	12	LA
Z6GQY8_AL	112.2	119.5	118.9	112.2	115.7	-0.20	9.6	4.0	115.7	-0.25	10.2	3.4	12	AL
ZVRZEZ	112.8	119.0	115.4	116.6	116.0	-0.14	8.5	2.5	116.1	-0.16	10.5	2.7	12	LZ

Consensus (All Labs) Results

Wk Mean	116.81	117.44	116.14	116.88	Month Mean	116.58	Grand Mean	116.76
Avg SDr	8.66	9.24	8.59	9.08	Avg SD	8.94	Avg SD	8.82
SD btwn Labs	5.53	5.44	5.91	5.33	SD btwn Labs	4.40	SD btwn Labs	4.13
Labs Incld	61	61	60	61	SD btwn Wks	2.80	SD btwn Wks	3.17
Labs Excld	0	1	1	1	Labs Incld	60	Labs Incld	60
Labs not Rcvd	2	1	2	1				

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
LC	L&W Autoline (205 Enrollment)	LJ	L&W Bursting Strength Tester J-Type
LZ	L&W (model not specified)	ME	Messmer Automatic Burst Tester ME-06
RE	Regmed/Mullen Tester	TB	TMI Monitor/Burst 1000
TP	Technidyne PROFILE/Plus	XX	Instrument make/model not specified by lab

	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
2ATVED	94.4	91.2	87.7	83.5	89.2	-0.87	7.8	4.7	89.2	-0.87	7.8	4.7	4	XX
2DQEC7	97.4	95.0	96.6	96.6	96.4	1.21	6.2	1.0	96.4	1.21	6.2	1.0	4	AH
2EMRYX	95.9	93.6	93.7	90.5	93.4	0.35	8.0	2.2	93.4	0.35	8.0	2.2	4	LA
2EMRYX_AL	93.8	91.2	89.4	92.2	91.7	-0.16	5.4	1.9	91.7	-0.16	5.4	1.9	4	AL
2UGCH8_AL	95.1	91.4	92.3	96.2	93.8	0.45	7.0	2.3	93.8	0.45	7.0	2.3	4	XX
2UVV97	87.3 L	87.0 L	88.9	90.6	88.4	-1.09	3.8	1.6	88.4	-1.09	3.8	1.6	4	XX
34FG28	84.3	82.2 *	84.5 *	85.4	84.1	-2.34 *	6.9	1.4	84.1	-2.34 *	6.9	1.4	4	LA
3PKBRC_AL	96.2	84.6	96.5	93.5	92.7	0.14	10.5	5.6	92.7	0.14	10.5	5.6	4	AL
4BVF9R	88.9	89.5	84.7 *	91.6	88.7	-1.02	6.0	2.9	88.7	-1.02	6.0	2.9	4	LC
4HWPJQ	90.4	97.4	93.7	94.8	94.1	0.54	5.7	2.9	94.1	0.54	5.7	2.9	4	LC
634CMA_AL	89.3	85.9	89.3	88.0	88.1	-1.19	8.2	1.6	88.1	-1.19	8.2	1.6	4	AL
6ECELC	93.0	93.4	92.6	92.9	93.0	0.22	4.9	0.3 L	93.0	0.22	4.9	0.3 L	4	LJ
7JLVU2	99.4	No Data	No Data	No Data	99.4	2.07 *	5.3	0.0	99.4	2.07 *	5.3	0.0	1	AH
7ZQ6V2	80.3 *	88.4	94.1	89.4	88.1	-1.21	7.6	5.7 H	88.1	-1.21	7.6	5.7 H	4	LA
84PZXZ_AL	88.7	86.0	89.3	88.4	88.1	-1.19	7.5	1.4	88.1	-1.19	7.5	1.4	4	AL
99YHRM	92.8	95.7	95.7	96.3	95.1	0.84	8.4	1.6	95.1	0.84	8.4	1.6	4	AH
ARFEEQ	86.7	88.9	91.4	90.6	89.4	-0.82	8.1	2.1	89.4	-0.82	8.1	2.1	4	LA
B9NQNV_AL	96.3	96.8	102.9 XH	106.8 XH	100.7	2.45 *	15.6	5.0	100.7	2.45 *	15.6	5.0	4	AL
BM287X_AL	92.8	89.8	91.9	88.3	90.7	-0.44	5.7	2.0	90.7	-0.44	5.7	2.0	4	AL
BY2RXP_AL	91.4	94.1	96.5	94.7	94.2	0.56	6.7	2.1	94.2	0.56	6.7	2.1	4	AL
CE96RT	92.3	86.9	91.3	90.6	90.3	-0.56	6.5	2.4	90.3	-0.56	6.5	2.4	4	LA
F7M9JN	94.6	91.4	90.3	93.7	92.5	0.08	8.1	2.0	92.5	0.08	8.1	2.0	4	TP
F7M9JN_AL	87.1	89.2	89.5	89.8	88.9	-0.97	5.2	1.2	88.9	-0.97	5.2	1.2	4	XX
GY3DCR	84.3	90.4	91.2	90.6	89.1	-0.90	7.0	3.2	89.1	-0.90	7.0	3.2	4	LC
H7XU7U_AL	92.5	96.7	88.8	100.7 *	94.7	0.71	8.4	5.2	94.7	0.71	8.4	5.2	4	AL
JH2HPC	91.5 L	92.1 L	91.8 L	91.5 L	91.7	-0.14	1.8	0.3 L	91.7	-0.14	1.8	0.3 L	4	LA
JRUQGU_AL	92.2	94.6	94.5	93.4	93.7	0.42	6.9	1.2	93.7	0.42	6.9	1.2	4	AL
K9U3GH	86.6	88.7	86.8	86.0	87.0	-1.50	7.1	1.2	87.0	-1.50	7.1	1.2	4	XX
KCBPVN	87.0	88.5	87.3	89.3	88.0	-1.21	8.8	1.1	88.0	-1.21	8.8	1.1	4	LA
KG6JWV	87.1	91.7	84.6 *	87.0	87.6	-1.34	10.3	3.0	87.6	-1.34	10.3	3.0	4	AH
LRZWNF_AL	99.4	94.7	94.9	87.8	94.2	0.57	11.1	4.8	94.2	0.57	11.1	4.8	4	AK
LTX8JH	99.3	94.5	91.0	95.3	95.0	0.81	6.7	3.4	95.0	0.81	6.7	3.4	4	LA
M3YA2K	99.6	93.4	94.3	99.3	96.7	1.28	5.7	3.3	96.7	1.28	5.7	3.3	4	AH
M6MGQN	100.1	95.5	96.1	98.2	97.5	1.51	9.8	2.1	97.5	1.51	9.8	2.1	4	LA
MZTMNF	No Data	91.1	87.1	85.2	87.8	-1.27	8.8	3.0	87.8	-1.27	8.8	3.0	3	ME

Containerboard Interlaboratory Testing Program

Analysis 207

Bursting Strength (Mullen), 35 lb Linerboard - 35E3

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
N9HPAN	98.0	93.0	90.4	90.9 H	93.1	0.25	10.5	3.5	93.1	0.25	10.5	3.5	4	RE
P84MZV	92.4	89.5	92.4	85.7	90.0	-0.64	7.3	3.2	90.0	-0.64	7.3	3.2	4	AH
PB8JLJ	96.8	95.7	92.0	87.2 H	92.9	0.20	9.9	4.3	92.9	0.20	9.9	4.3	4	AH
PFEWJG	97.8	101.4 *	103.4 X	94.6	99.3	2.05 *	8.7	3.9	99.3	2.05 *	8.7	3.9	4	XX
PJGK8J	87.6	88.5	87.3	86.9	87.6	-1.35	5.3	0.6	87.6	-1.35	5.3	0.6	4	LA
QLXEE4	104.7 *	104.2 X	104.4 X	103.8 X	104.3	3.48 X	4.3	0.4 L	104.3	3.48 X	4.3	0.4 L	4	AH
QP26QQ_AL	96.2	97.0	95.5	92.5	95.3	0.89	6.5	2.0	95.3	0.89	6.5	2.0	4	AK
REGDEL_AL	88.2	92.6	90.3	87.8	89.8	-0.71	6.9	2.2	89.8	-0.71	6.9	2.2	4	AL
RRPY3K	95.4 H	97.2 H	91.8	98.2	95.6	0.99	10.9	2.8	95.6	0.99	10.9	2.8	4	LJ
TF79CE	92.8	93.7	No Data	92.2	92.9	0.20	8.9	0.8	92.9	0.20	8.9	0.8	3	TB
TJ6HMF	86.1	97.9	92.2	91.2	91.8	-0.11	8.5	4.8	91.8	-0.11	8.5	4.8	4	LC
TKY77B	93.8	99.0	99.6 *	98.8	97.8	1.61	5.3	2.7	97.8	1.61	5.3	2.7	4	AX
TKY77B_AL	89.5	91.8	91.0	90.7	90.8	-0.43	6.1	1.0	90.8	-0.43	6.1	1.0	4	AL
TQMQAR	92.7	90.8	88.7	92.2	91.1	-0.32	6.2	1.8	91.1	-0.32	6.2	1.8	4	TP
TRV3N8	98.7	92.9	91.2	96.5	94.8	0.76	9.5	3.4	94.8	0.76	9.5	3.4	4	LA
UGGBYC_AL	91.1	91.2	89.8	91.7	90.9	-0.37	5.3	0.8	90.9	-0.37	5.3	0.8	4	XX
ULM26P	98.1	93.0	92.3	95.0	94.6	0.68	9.9	2.6	94.6	0.68	9.9	2.6	4	LC
ULM26P_AL	98.0	95.8	92.3	90.2	94.1	0.54	9.1	3.5	94.1	0.54	9.1	3.5	4	XX
V4N777	89.9	87.3	89.5	90.2	89.2	-0.86	6.6	1.3	89.2	-0.86	6.6	1.3	4	LA
W4H9E8	80.4 *	81.8 *	80.8 X	81.0 *	81.0	-3.24 X	6.6	0.6	81.0	-3.24 X	6.6	0.6	4	LA
WA6YYH	94.5	95.5	89.0	94.0	93.3	0.30	9.0	2.9	93.3	0.30	9.0	2.9	4	XX
WCW6B2	99.3	97.0	92.2	88.5	94.3	0.59	9.6	4.8	94.3	0.59	9.6	4.8	4	AX
X6684P_AL	94.0	93.4	94.1	89.7	92.8	0.17	7.2	2.1	92.8	0.17	7.2	2.1	4	AL
YZRVH9	116.9 X	125.2 X	119.4 X	106.4 X	117.0	7.15 X	9.4	7.9 H	117.0	7.15 X	9.4	7.9 H	4	AC
Z66R7J	95.6 L	95.6 L	94.8 L	95.3 L	95.3	0.90	1.1	0.4 L	95.3	0.90	1.1	0.4 L	4	LA
Z6GQY8_AL	88.7	92.0	93.8	87.5	90.5	-0.50	8.5	2.9	90.5	-0.50	8.5	2.9	4	AK
ZVRZEZ	90.1	89.8	89.3	88.9	89.5	-0.78	8.2	0.5	89.5	-0.78	8.2	0.5	4	LZ

Consensus (All Labs) Results

Wk Mean	92.64	92.12	91.41	91.37	Month Mean	92.22	Grand Mean	92.22
Avg SDr	7.63	7.79	7.76	7.54	Avg SD	7.84	Avg SD	7.84
SD btwn Labs	5.08	4.04	3.24	4.12	SD btwn Labs	3.46	SD btwn Labs	3.46
Labs Incld	60	59	55	58	SD btwn Wks	2.86	SD btwn Wks	2.86
Labs Excld	1	2	5	3	Labs Incld	59	Labs Incld	59
Labs not Rcvd	1	1	2	1				

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
LC	L&W Autoline (207 Enrollment)	LJ	L&W Bursting Strength Tester J-Type
LZ	L&W (model not specified)	ME	Messmer Automatic Burst Tester ME-06
RE	Regmed/Mullen Tester	TB	TMI Monitor/Burst 1000
TP	Technidyne PROFILE/Plus	XX	Instrument make/model not specified by lab

	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
2ATVED	86.6 *	89.9	92.9 H	91.0	90.1	-1.36	6.5	2.6	93.4	-0.46	5.1	4.2	12	LD
2EMRYX	92.2	92.9	95.7 L	95.1	94.0	-0.38	2.7	1.7	92.7	-0.63	2.7	1.8	12	LD
2UGCH8	96.1	95.9	95.6	95.1	95.7	0.06	2.7	0.4 L	94.4	-0.20	3.8	2.1	12	LZ
2UVV97	97.8	95.9	99.3	97.3	97.6	0.54	3.1	1.4	102.0	1.73	3.2	4.0	12	TU
34FG28	94.4	95.6	93.3	91.3	93.6	-0.46	4.0	1.8	95.4	0.04	3.4	2.8	12	LZ
3CTQ6U	97.0	95.3	95.6	93.6	95.4	-0.02	2.2	1.4	95.1	-0.03	3.5	2.3	8	LZ
4BVF9R	100.5	102.7	102.5	102.6 *	102.1	1.69	3.2	1.1	98.5	0.84	3.1	4.2	12	MB
4HWPJQ	93.0	96.7	95.8	95.3	95.2	-0.06	2.4	1.6	93.5	-0.44	2.8	1.9	12	LC
634CMA	92.4	92.8	92.7	91.8	92.4	-0.78	3.2	0.4 L	92.4	-0.72	3.2	0.4 L	4	LD
6ECELC	96.1	95.0 L	95.4	95.0	95.4	-0.02	2.2	0.5	94.7	-0.13	2.5	1.2	12	LD
7ZQ6V2	96.5	94.5	94.5 L	93.5	94.8	-0.18	2.5	1.2	94.2	-0.26	2.6	1.2	12	LD
84PZXZ	97.7	98.2	97.7 L	98.3	98.0	0.65	2.4	0.3 L	95.8	0.16	2.2	2.0	12	LD
94GFM3	102.6	101.9	104.4 *L	103.1 *	103.0	1.93	2.5	1.1	101.3	1.54	2.8	2.1	12	LD
99YHRM	93.6	92.8	96.1	95.6	94.5	-0.23	2.6	1.6	95.0	-0.06	2.6	2.1	12	LG
B9NQNV	97.4	97.9	96.2	72.2 XH	90.9	-1.15	5.0	12.5 H	84.8	-2.64 *	5.9	12.8 H	10	LC
F7M9JN	97.3	94.3	96.2	96.2	96.0	0.14	3.1	1.3	96.1	0.23	2.9	1.3	8	LD
FZW2UN	99.1	108.7 XH	104.0 *	107.7 X	104.9	2.40 *	4.7	4.4	102.7	1.90	4.0	3.6	12	TU
G4BTM2	93.3 L	94.0 L	93.3 L	93.9 L	93.6	-0.47	1.9	0.4 L	93.6	-0.41	1.7	1.0	12	MB
GGKAU8	98.5	101.4	101.0	99.0	100.0	1.15	2.9	1.4	101.8	1.67	3.0	2.9	12	MB
GHQ2FT	92.7	93.6	94.9 L	92.1 L	93.3	-0.54	2.0	1.2	92.6	-0.67	1.9	1.1	12	RS
GNFCVH	93.8	90.4	92.1	94.4	92.7	-0.71	2.8	1.8	91.0	-1.06	3.1	2.1	12	LD
GY3DCR	94.5	95.8	95.4	94.8	95.1	-0.08	3.9	0.6	95.5	0.07	3.4	1.4	12	LD
H7XU7U	103.9 *	102.5	106.8 X	102.5	103.9	2.16 *	4.1	2.0	102.8	1.93 *	3.9	2.6	12	LC
JH2HPC	95.8	95.8	96.1	95.5	95.8	0.09	2.7	0.2 L	95.3	0.03	2.6	0.8 L	12	LD
KG6JWV	97.9	96.1 L	97.8	98.9	97.7	0.56	3.1	1.2	97.4	0.55	2.6	0.9	12	LC
KUEZ4Z	90.6	90.7	89.9	91.6	90.7	-1.21	2.7	0.7	93.2	-0.52	2.7	3.0	12	LC
LRKX7B	96.5 L	95.9 L	95.5	99.9	96.9	0.38	2.3	2.0	96.5	0.34	2.3	1.9	12	TH
LTX8JH	97.6	96.1	97.3	95.1 L	96.5	0.27	2.5	1.2	93.4	-0.46	2.4	3.1	12	LD
M3YA2K	98.0	96.5	96.8 L	97.2	97.1	0.42	2.7	0.7	94.8	-0.11	2.7	2.0	12	LD
M6MGQN	103.7 *	105.7 *	105.2 *	105.0 *	104.9	2.41 *	4.4	0.8	107.2	3.06 X	3.8	2.7	8	LD
MZTMNF	95.7	98.5	98.9	84.2 XH	94.3	-0.28	7.0	6.9 H	99.8	1.18	5.0	6.0	12	LX
N9HPAN	104.6 *	104.9 *	101.7	104.9 *	104.0	2.19 *	3.2	1.6	104.4	2.33 *	3.1	2.9	12	EX
P3AQDP	86.3 *	82.5 X	89.2	95.1	88.3	-1.83	4.5	5.3 H	86.2	-2.30 *	3.9	3.8	12	EM
PJGK8J	97.3	94.8	93.7	92.2	94.5	-0.24	3.4	2.1	95.5	0.07	3.2	1.8	12	LD
PXWVPE	97.3	95.6	94.8	93.8	95.4	-0.02	3.1	1.5	95.5	0.07	3.1	1.9	8	EM

Containerboard Interlaboratory Testing Program

Analysis 215

Ring Crush, 42 lb Linerboard - 42H1

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
QLXEE4	91.5	91.8	92.5	91.5	91.8	-0.93	3.8	0.5	91.9	-0.85	3.1	2.0	12	LD
QP26QQ	96.0	93.8	94.1	91.9	94.0	-0.38	3.3	1.7	96.6	0.36	2.6	2.5	12	LD
TF79CE	97.6	93.6	95.2	97.3	95.9	0.12	2.6	1.9	93.3	-0.48	3.4	6.9 H	12	LD
TJ6HMF	93.7	92.5	93.4	95.0	93.6	-0.46	2.8	1.1	94.3	-0.22	2.6	1.4	12	LD
TQMQAR	96.1	95.2	97.0	97.5	96.5	0.26	4.1	1.1	95.2	0.00	3.7	2.9	12	TJ
TRV3N8	96.0	94.8	97.6	97.6	96.5	0.26	3.3	1.3	98.7	0.88	3.6	2.5	12	LZ
U9ZWR2	95.1 L	95.7	96.4	95.6	95.7	0.06	2.4	0.6	95.8	0.15	3.1	2.4	12	TH
ULM26P	86.1 *	85.3 *	90.4	92.4	88.6	-1.76	2.7	3.4	90.2	-1.27	3.2	3.3	8	LD
V4N777	92.7	94.3	91.9	92.8	92.9	-0.64	2.9	1.0	93.2	-0.52	2.7	1.2	12	LD
W4H9E8	94.7 H	91.3 H	93.3 H	93.4 H	93.2	-0.58	21.6	1.4	91.6	-0.93	18.8	4.2	12	LB
WCW6B2	90.7	94.2	91.9	91.6	92.1	-0.85	4.1	1.5	92.2	-0.77	4.0	1.7	12	LD
WY9T6J	95.6	96.4	96.4	94.9	95.8	0.09	3.7	0.7	97.0	0.45	3.2	1.7	12	TH
X6684P	75.1 X	73.7 XH	74.9 XH	76.0 XH	74.9	-5.24 X	8.2	0.9	80.0	-3.88 X	7.1	9.6 H	12	LD
Z66R7J	95.3 L	95.5 L	95.4 L	95.3 L	95.4	-0.02	0.9	0.1 L	100.1	1.25	1.7	3.6	12	TU
Z6GQY8	91.7	91.6	90.9	92.2	91.6	-0.98	3.5	0.5	92.7	-0.64	3.3	1.9	12	LD
ZVRZEZ	89.7	91.9	90.7 L	90.3	90.6	-1.23	2.9	0.9	91.2	-1.03	3.2	2.3	12	LC

Consensus (All Labs) Results

Wk Mean	95.41	95.38	95.68	95.53	Month Mean	95.44	Grand Mean	95.21
Avg SDr	4.45	4.50	4.63	4.05	Avg SD	4.54	Avg SD	4.19
SD btwn Labs	4.02	3.83	3.66	3.65	SD btwn Labs	3.92	SD btwn Labs	3.93
Labs Incld	50	48	49	47	SD btwn Wks	2.60	SD btwn Wks	3.27
Labs Excld	1	3	2	4	Labs Incld	50	Labs Incld	49
Labs not Rcvd	0	0	0	0				

Key to Instrument Codes Reported by Participants

EM	Emerson 1200	EX	Emerson (model not specified)
LB	L&W Crush Tester 240	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
TH	TMI Compression Tester, Model 17-76	TJ	TLS Compression Tester, Model CDM-5
TU	TMI Universal Crush Tester (TMI K440)		

	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
2ATVED	67.6 X	70.8 XH	70.7 *	67.9 X	69.3	-4.06 X	4.7	1.7	69.3	-4.06 X	4.7	1.7	4	LD
2EMRYX	81.5	82.3	80.6	80.9	81.4	0.04	3.4	0.7	81.4	0.04	3.4	0.7	4	LD
2UGCH8	77.3	80.8	78.1 H	79.8 H	79.0	-0.76	5.7	1.6	79.0	-0.76	5.7	1.6	4	LZ
2UVV97	78.5	76.1	82.0	76.4	78.3	-1.01	2.5	2.7	78.3	-1.01	2.5	2.7	4	TU
34FG28	77.8	81.6	81.5	78.5	79.9	-0.47	3.3	2.0	79.9	-0.47	3.3	2.0	4	LZ
3CTQ6U	75.6 *	74.4 *	74.5	76.0	75.1	-2.07 *	2.4	0.8	75.1	-2.07 *	2.4	0.8	4	LZ
4BVF9R	89.4 *	89.5 *	83.7	80.6	85.8	1.56	3.6	4.4	85.8	1.56	3.6	4.4	4	MB
4HWPJQ	81.0	79.8	77.4	78.6	79.2	-0.69	2.9	1.5	79.2	-0.69	2.9	1.5	4	LC
634CMA	82.5	76.0	73.8	77.6	77.5	-1.27	3.0	3.7	77.5	-1.27	3.0	3.7	4	LD
6ECELC	82.1	82.1	82.9	81.9	82.3	0.35	2.2	0.4	82.3	0.35	2.2	0.4	4	LD
7ZQ6V2	82.4	83.9	81.6	82.8	82.7	0.49	2.8	0.9	82.7	0.49	2.8	0.9	4	LD
84PZXZ	82.6	83.2	83.1	84.3	83.3	0.70	3.5	0.7	83.3	0.70	3.5	0.7	4	LD
94GFM3	86.0	88.2	84.2	88.0 *	86.6	1.82	3.4	1.9	86.6	1.82	3.4	1.9	4	LD
99YHRM	84.0	81.4	80.5	83.1	82.3	0.35	3.6	1.6	82.3	0.35	3.6	1.6	4	LG
B9NQNV	83.3	82.9	82.3	62.4 XH	77.7	-1.19	5.4	10.2 H	77.7	-1.19	5.4	10.2 H	4	LC
F7M9JN	83.5	82.1	82.8	83.2	82.9	0.57	2.9	0.6	82.9	0.57	2.9	0.6	4	LD
FZW2UN	82.0	86.0	80.7	83.6	83.0	0.61	4.9	2.3	83.0	0.61	4.9	2.3	4	TU
G4BTM2	83.3 L	83.3 L	83.5	83.8	83.5	0.76	1.4	0.2 L	83.5	0.76	1.4	0.2 L	4	MB
GGKAU8	81.8	84.3	81.7	81.1	82.2	0.34	2.8	1.5	82.2	0.34	2.8	1.5	4	MB
GHQ2FT	77.6	77.7 L	77.7 L	78.4 L	77.9	-1.14	1.4	0.4	77.9	-1.14	1.4	0.4	4	RS
GNFCVH	79.4	81.5	79.6	78.9	79.9	-0.46	3.0	1.1	79.9	-0.46	3.0	1.1	4	LD
GY3DCR	82.6	83.4	81.9	78.4	81.6	0.11	4.0	2.2	81.6	0.11	4.0	2.2	4	LD
H7XU7U	84.2	83.9	86.1	83.5	84.4	1.08	4.2	1.2	84.4	1.08	4.2	1.2	4	LC
JH2HPC	81.1	81.7	82.0	81.9	81.7	0.15	2.3	0.4	81.7	0.15	2.3	0.4	4	LD
KG6JWV	83.1	84.7	83.6	85.7	84.3	1.03	4.1	1.2	84.3	1.03	4.1	1.2	4	LC
KUEZ4Z	79.6	78.8	77.4	78.7	78.6	-0.89	3.7	0.9	78.6	-0.89	3.7	0.9	4	LC
LRKX7B	80.3	80.3	80.0	78.5	79.8	-0.49	2.8	0.9	79.8	-0.49	2.8	0.9	4	TH
LTX8JH	81.1	81.3	81.4	81.7	81.4	0.05	3.2	0.3 L	81.4	0.05	3.2	0.3 L	4	LD
M3YA2K	82.3	82.0	82.1	82.9	82.3	0.38	3.5	0.4	82.3	0.38	3.5	0.4	4	LD
M6MGQN	88.8 *	87.2	89.2 *	88.6 *	88.4	2.44 *	5.0	0.9	88.4	2.44 *	5.0	0.9	4	LD
MZTMNF	84.9	82.1 H	87.3 H	87.9 *	85.5	1.46	5.0	2.6	85.5	1.46	5.0	2.6	4	LX
N9HPAN	86.0	89.7 *	86.3	86.0	87.0	1.95 *	4.0	1.8	87.0	1.95 *	4.0	1.8	4	EX
P3AQDP	70.3 X	63.1 XH	70.8 *	75.1	69.8	-3.86 X	4.9	5.0 H	69.8	-3.86 X	4.9	5.0 H	4	EM
PJGK8J	81.1	82.5	82.8	82.5	82.2	0.34	3.7	0.7	82.2	0.34	3.7	0.7	4	LD
PXWVPE	79.9	82.5	81.7 L	82.2	81.6	0.11	3.2	1.2	81.6	0.11	3.2	1.2	4	EM

Containerboard Interlaboratory Testing Program

Analysis 217

Ring Crush, 35 lb Linerboard - 35E3

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
QLXEE4	79.7	79.8	79.6	79.3 L	79.6	-0.55	2.3	0.2 L	79.6	-0.55	2.3	0.2 L	4	LD
QP26QQ	81.4	80.6	81.6	79.6	80.8	-0.15	2.9	0.9	80.8	-0.15	2.9	0.9	4	LD
TF79CE	84.6	78.0	78.6	79.9	80.3	-0.32	4.5	3.0	80.3	-0.32	4.5	3.0	4	LC
TJ6HMF	81.3	81.4	79.0	80.0	80.4	-0.28	3.3	1.1	80.4	-0.28	3.3	1.1	4	LD
TQMQAR	79.5	83.4	81.0	82.3	81.5	0.10	3.9	1.7	81.5	0.10	3.9	1.7	4	TJ
TRV3N8	82.9	84.1	83.4	85.1	83.9	0.89	2.8	1.0	83.9	0.89	2.8	1.0	4	LZ
U9ZWR2	80.2	80.0	79.4 L	79.3	79.7	-0.50	2.6	0.4	79.7	-0.50	2.6	0.4	4	XX
ULM26P	79.5	75.6	76.6	78.5	77.6	-1.25	3.6	1.8	77.6	-1.25	3.6	1.8	4	LD
V4N777	82.3	81.7	80.5	81.2	81.4	0.06	2.9	0.8	81.4	0.06	2.9	0.8	4	LD
W4H9E8	64.1 XH	69.2 XH	67.1 XH	65.1 XH	66.4	-5.03 X	13.9	2.3	66.4	-5.03 X	13.9	2.3	4	LB
WCW6B2	80.3	81.6	81.0	82.2	81.3	0.01	4.2	0.8	81.3	0.01	4.2	0.8	4	LD
WY9T6J	81.2	80.9	80.7	80.9	80.9	-0.11	2.8	0.2 L	80.9	-0.11	2.8	0.2 L	4	TH
X6684P	58.8 XH	59.2 XH	64.2 XH	60.4 XH	60.6	-6.97 X	8.5	2.5	60.6	-6.97 X	8.5	2.5	4	LD
Z66R7J	74.9 *L	75.1 L	74.6 L	74.3 *L	74.7	-2.20 *	0.7	0.3 L	74.7	-2.20 *	0.7	0.3 L	4	TU
Z6GQY8	81.5	82.7	77.5	81.4	80.8	-0.16	4.1	2.3	80.8	-0.16	4.1	2.3	4	LD
ZVRZEZ	76.1	74.1 *	73.1	80.2	75.9	-1.82	3.3	3.1	75.9	-1.82	3.3	3.1	4	LC

Consensus (All Labs) Results

Wk Mean	81.53	81.62	80.45	81.18	Month Mean	81.23	Grand Mean	81.23
Avg SDr	3.42	3.20	3.54	3.62	Avg SD	3.48	Avg SD	3.48
SD btwn Labs	2.96	3.52	3.84	3.20	SD btwn Labs	2.95	SD btwn Labs	2.95
Labs Incld	47	47	49	47	SD btwn Wks	2.21	SD btwn Wks	2.21
Labs Excld	4	4	2	4	Labs Incld	47	Labs Incld	47
Labs not Rcvd	0	0	0	0				

Key to Instrument Codes Reported by Participants

EM	Emerson 1200	EX	Emerson (model not specified)
LB	L&W Crush Tester 240	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
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

Containerboard Interlaboratory Testing Program

Analysis 223

STFI, 42 lb Linerboard - 42H1

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
2DQEC7	26.0	26.2	26.8 *	25.6	26.1	1.90	2.1	0.5	26.2	2.14 *	2.0	0.6	12	LU
2EMRYX_AL	23.7	23.1	23.9	23.6	23.6	-0.22	1.4	0.3	23.3	-0.40	1.6	0.4	12	AL
2UGCH8_AL	22.0	21.8	21.1	24.2	22.3	-1.28	1.5	1.4	22.3	-1.32	1.7	0.8	12	AL
2UVV97	24.9	24.7	24.8	25.1	24.9	0.84	1.8	0.2	25.3	1.34	2.1	0.5	12	TT
34FG28	22.1	24.1 L	21.6	23.0	22.7	-0.94	1.3	1.1	22.9	-0.80	1.8	1.0	12	LA
3CTQ6U	25.0	24.8	24.8	26.3	25.2	1.15	1.5	0.7	25.5	1.56	1.7	0.9	8	XX
3PKBRC_AL	25.4	24.4	25.8	25.8	25.4	1.26	1.9	0.7	25.6	1.67	1.9	1.1	12	AL
4BVF9R	25.2	26.5	26.0	25.5	25.8	1.63	1.9	0.6	25.5	1.58	2.1	0.7	12	LA
4HWPJQ	23.4	25.8	23.3	25.7	24.6	0.59	1.6	1.4	23.9	0.13	1.6	0.9	12	LA
4PGRK2	24.2	24.0	23.6	24.9	24.2	0.28	1.5	0.5	24.3	0.45	1.6	0.6	12	LH
634CMA_AL	25.0	25.7 H	25.2	25.3	25.3	1.21	2.2	0.3	25.3	1.36	2.2	0.3	4	AL
7H98B2	24.4	22.6	23.2	23.0	23.3	-0.42	1.6	0.8	23.5	-0.27	1.5	0.8	12	LA
7JLVU2	21.8	No Data	No Data	No Data	21.8	-1.69	1.6	0.0	23.3	-0.41	1.9	0.8	7	LY
7ZQ6V2	23.6 H	25.6	23.4 L	24.7	24.3	0.39	1.9	1.0	23.8	-0.01	1.6	0.9	12	LA
84PZXZ_AL	23.5	24.0 L	23.3 L	24.5	23.8	0.00	1.2	0.5	23.5	-0.24	1.5	0.5	12	AL
94GFM3	26.7 *	25.5	26.2	26.3	26.2	1.91	2.0	0.5	25.7	1.69	1.8	0.6	12	LH
99YHRM	23.1	22.6	22.4	22.7	22.7	-0.94	1.8	0.3	22.6	-1.06	1.6	0.5	12	LU
A9QT62	26.6 *	27.8 *H	27.4 *H	25.0	26.7	2.36 *	2.7	1.2	26.4	2.35 *	2.4	1.2	12	LA
ARFEEQ	25.4	23.2	26.5	25.8 H	25.2	1.14	2.5	1.4	25.2	1.23	2.4	1.1	12	LH
B9NQNV_AL	22.9 L	23.9 L	23.0 L	24.0 L	23.4	-0.32	0.9	0.6	23.5	-0.29	1.9	0.4	10	AL
BJKKVY	22.5	22.2	23.4 L	22.8	22.7	-0.92	1.5	0.5	23.1	-0.56	1.2	1.0	12	LH
BM287X_AL	22.1	23.6	24.1	24.8	23.7	-0.13	1.6	1.2	24.3	0.42	2.0	0.8	12	AL
BY2RXP_AL	24.2	24.6	24.2	24.6 H	24.4	0.48	2.1	0.2	24.3	0.44	2.0	0.6	12	AL
CE96RT	24.0	23.5	22.2	23.7	23.4	-0.39	1.7	0.8	22.5	-1.12	1.6	0.9	12	LY
E4MJZ4	19.5 X	20.3 *	20.9	20.1 X	20.2	-2.97 X	1.8	0.6	22.2	-1.42	2.0	1.6	12	XX
F7M9JN_AL	23.3	22.0	22.4	23.5	22.8	-0.86	1.8	0.7	23.4	-0.37	1.9	0.8	8	XX
FZW2UN	24.1	23.5	24.8	23.5	24.0	0.12	2.2	0.6	24.2	0.34	2.1	1.2	12	LA
GGKAU8	25.2	24.2	24.7 L	24.7	24.7	0.70	2.0	0.4	24.9	1.02	2.0	0.8	12	LA
GY3DCR	24.3	23.2 H	23.2	24.9 H	23.9	0.07	3.1	0.9	24.5	0.64	2.4	0.8	12	LA
H7XU7U	No Data	24.0	23.8	24.1 H	24.0	0.11	2.1	0.2	24.1	0.25	1.8	0.7	10	LU
JH2HPC	23.5	23.6	23.4	23.5	23.5	-0.27	2.0	0.1 L	23.3	-0.44	1.9	0.5	12	LA
KG6JWV	23.1	24.3	22.9	22.7	23.2	-0.48	1.9	0.7	23.5	-0.23	1.7	0.5	12	LU
LRKX7B	22.9	22.9	23.2	23.0	23.0	-0.68	1.7	0.1	22.8	-0.84	1.9	0.3	12	LZ
LRZWNF_AL	24.3	24.6	24.2 H	23.8	24.2	0.31	2.2	0.3	24.3	0.43	2.1	0.6	12	AK
LTX8JH	22.6	23.5	23.5	23.0	23.1	-0.58	1.7	0.4	22.4	-1.22	1.5	1.0	12	LZ

Containerboard Interlaboratory Testing Program

Analysis 223

STFI, 42 lb Linerboard - 42H1

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
M3YA2K	23.3	22.8	23.4	22.8	23.1	-0.64	1.6	0.3	22.7	-0.97	1.8	0.4	12	LU
MZTMNF	21.0 *H	26.9 *	24.9	22.5 H	23.8	-0.03	2.8	2.6 H	23.8	0.06	2.6	1.7 H	11	LZ
P84MZV	24.0	23.8	23.8	24.2	23.9	0.09	1.5	0.2	24.2	0.34	1.5	0.3	12	TT
PJGK8J	23.1	22.0	22.8	23.3	22.8	-0.84	1.7	0.6	22.6	-1.04	1.7	0.6	12	LY
PKQWKE	24.0	22.9	23.9	24.4	23.8	-0.06	1.7	0.6	23.2	-0.53	1.6	0.6	12	LW
QP26QQ_AL	23.9	23.7 L	24.4	24.2	24.1	0.18	1.5	0.3	24.4	0.56	1.7	0.9	12	AK
REGDEL	24.2	24.2	23.3	No Data	23.9	0.05	1.8	0.5	23.9	0.10	2.0	0.9	10	LU
RRPY3K	28.8 XL	27.6 *L	26.3 L	25.9 L	27.1	2.72 *	0.6	1.3	27.2	3.03 X	1.7	1.3	12	LH
TF79CE	23.6	23.2	23.2	24.7	23.7	-0.14	2.0	0.7	23.7	-0.08	2.0	1.0	12	LW
TJ6HMF	23.6	23.3	22.7	22.7	23.1	-0.64	1.6	0.5	23.4	-0.34	1.7	0.5	12	LA
TKY77B	25.1	24.2	24.9	24.3	24.6	0.65	1.8	0.4	24.7	0.82	1.9	0.9	11	LU
TKY77B_AL	23.0 L	23.1	23.2	22.2 L	22.9	-0.78	1.3	0.5	23.4	-0.30	1.2	1.0	11	AL
TQMQAR	23.2	23.3	23.2	23.8	23.3	-0.41	1.5	0.3	23.8	0.06	1.5	0.5	12	TT
TRV3N8	22.1	22.1	22.8	22.3	22.3	-1.25	1.6	0.3	22.3	-1.30	1.7	0.4	12	LU
U7FPRD	25.9	25.6	26.2	25.5	25.8	1.60	1.4	0.3	25.4	1.44	1.6	0.9	12	LH
U9ZWR2	22.9	21.8	23.0	23.2	22.7	-0.91	1.5	0.6	22.7	-0.97	1.6	0.4	12	LZ
UGGBYC	21.1 *	23.4	22.2	21.3 *	22.0	-1.52	1.6	1.0	22.2	-1.44	1.7	0.7	12	LY
UGGBYC_AL	23.5 L	24.0	21.4	22.9	23.0	-0.71	1.7	1.1	23.3	-0.43	1.4	0.8	12	XX
ULM26P	17.1 X	20.5 *	17.1 XL	21.8	19.1	-3.87 X	1.5	2.4 H	18.0	-5.12 X	1.9	3.1 H	8	LZ
ULM26P_AL	43.2 XL	41.7 XL	40.6 XL	44.8 XL	42.6	15.42 X	0.0	1.8 H	43.4	17.51 X	0.0	1.7 H	8	AL
V4N777	23.9 L	23.6	22.6 L	22.5 L	23.1	-0.57	1.1	0.7	23.2	-0.50	1.0	0.6	12	BK
WCW6B2	25.1 L	24.4	25.7	25.3 L	25.1	1.05	1.1	0.5	24.6	0.75	0.9	0.6	12	LH
X6684P	22.8	22.7	21.7	22.6	22.5	-1.14	2.1	0.5	22.7	-0.94	2.0	0.5	12	LY
X6684P_AL	23.2	23.7	23.7	23.7	23.6	-0.21	1.7	0.3	23.7	-0.08	1.7	0.3	12	AL
YZRVH9	22.9	23.2	23.7	22.3	23.0	-0.66	1.7	0.6	22.4	-1.19	1.5	0.7	12	LH
Z6GQY8_AL	23.0	24.3	23.3	24.1	23.7	-0.13	1.8	0.6	23.7	-0.08	1.8	0.5	12	AL
Z7BEG3	24.2	23.0	24.7	24.6	24.1	0.24	1.8	0.8	24.4	0.54	1.7	0.8	12	LH
ZVRZEZ	21.0 *	20.2 *	21.1	22.0	21.1	-2.26 *	1.9	0.7	20.9	-2.55 *	1.8	0.5	12	LY

Consensus (All Labs) Results

Wk Mean	23.69	23.76	23.75	23.94	Month Mean	23.83	Grand Mean	23.77
Avg SDr	1.71	1.92	1.76	1.81	Avg SD	1.80	Avg SD	1.80
SD btwn Labs	1.28	1.54	1.46	1.23	SD btwn Labs	1.22	SD btwn Labs	1.12
Labs Incld	58	61	60	59	SD btwn Wks	0.77	SD btwn Wks	0.79
Labs Excld	4	1	2	2	Labs Incld	60	Labs Incld	60
Labs not Rcvd	1	1	1	2				

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		

	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
2DQEC7	23.8	24.2	24.6	24.6	24.3	1.01	1.8	0.4	24.3	1.01	1.8	0.4	4	LU
2EMRYX_AL	22.3	23.1	22.9	23.4	22.9	-0.38	1.5	0.5	22.9	-0.38	1.5	0.5	4	AL
2UGCH8_AL	21.5	21.8	22.3	21.8	21.9	-1.48	1.7	0.3	21.9	-1.48	1.7	0.3	4	XX
2UVV97	23.6	23.4	24.4	23.8 H	23.8	0.50	3.1	0.4	23.8	0.50	3.1	0.4	4	TT
34FG28	22.7	24.0	23.5	25.2 H	23.8	0.52	2.2	1.0	23.8	0.52	2.2	1.0	4	LA
3CTQ6U	25.4 *L	24.9 H	24.7	26.0 *	25.3	1.99 *	1.8	0.6	25.3	1.99 *	1.8	0.6	4	LZ
3PKBRC_AL	24.5	24.6 H	25.4 *	25.0	24.9	1.61	1.9	0.4	24.9	1.61	1.9	0.4	4	AL
4BVF9R	25.1 L	24.3	22.8	No Data	24.1	0.81	1.8	1.2	24.1	0.81	1.8	1.2	3	LA
4HWPJQ	22.4	22.9	22.3	25.0	23.2	-0.16	1.6	1.3	23.2	-0.16	1.6	1.3	4	LA
4PGRK2	23.4	23.0	23.4	23.0	23.2	-0.13	1.5	0.3	23.2	-0.13	1.5	0.3	4	LH
634CMA_AL	24.1	25.2	24.1	25.1	24.6	1.35	1.9	0.6	24.6	1.35	1.9	0.6	4	AL
7H98B2	22.8	21.0 *	22.2	22.7	22.2	-1.14	1.4	0.8	22.2	-1.14	1.4	0.8	4	LA
7JLVU2	21.9	No Data	No Data	No Data	21.9	-1.45	1.5	0.0	21.9	-1.45	1.5	0.0	1	LY
7ZQ6V2	23.3	23.4	23.1	24.2 L	23.5	0.20	1.4	0.5	23.5	0.20	1.4	0.5	4	LW
84PZXZ_AL	22.4	23.4	23.5 H	22.9	23.1	-0.26	1.9	0.5	23.1	-0.26	1.9	0.5	4	AL
94GFM3	24.2	24.3	24.2	24.7	24.3	1.06	1.9	0.2	24.3	1.06	1.9	0.2	4	LH
99YHRM	22.7	22.0	22.9	22.4	22.5	-0.84	1.4	0.4	22.5	-0.84	1.4	0.4	4	LW
A9QT62	24.7	24.3 L	24.8 L	24.7 L	24.6	1.35	0.9	0.2	24.6	1.35	0.9	0.2	4	LA
ARFEEQ	24.8	23.0	23.8	24.5	24.0	0.71	2.0	0.8	24.0	0.71	2.0	0.8	4	LH
B9NQNV_AL	24.1 L	23.8	24.5 L	23.1 L	23.9	0.60	0.9	0.6	23.9	0.60	0.9	0.6	4	AL
BJKKVY	21.6 H	22.4 L	22.1	21.4	21.9	-1.47	1.6	0.5	21.9	-1.47	1.6	0.5	4	LH
BM287X_AL	24.2	24.8	24.7	24.0	24.4	1.14	1.3	0.4	24.4	1.14	1.3	0.4	4	AL
BY2RXP_AL	21.6 H	23.6	23.9	22.7	23.0	-0.35	2.1	1.0	23.0	-0.35	2.1	1.0	4	XX
CE96RT	21.9	23.4	23.0	22.2	22.6	-0.70	1.5	0.7	22.6	-0.70	1.5	0.7	4	LU
E4MJZ4	17.2 X	17.1 X	17.8 X	17.6 XL	17.4	-6.04 X	1.1	0.3	17.4	-6.04 X	1.1	0.3	4	XX
F7M9JN_AL	22.9	21.6	22.1 L	22.7	22.3	-1.03	1.4	0.6	22.3	-1.03	1.4	0.6	4	XX
FZW2UN	21.9	23.9	23.5 H	24.1	23.4	0.05	1.8	1.0	23.4	0.05	1.8	1.0	4	LA
GGKAU8	23.4 H	24.9	23.6	24.8 L	24.2	0.91	1.8	0.8	24.2	0.91	1.8	0.8	4	LA
GY3DCR	24.2	22.0 H	24.0	23.4	23.4	0.09	2.5	1.0	23.4	0.09	2.5	1.0	4	LA
H7XU7U	No Data	24.2	22.6	26.7 *H	24.5	1.23	2.0	2.0 H	24.5	1.23	2.0	2.0 H	3	LU
JH2HPC	23.2	23.4	22.9	23.0	23.1	-0.17	1.7	0.2	23.1	-0.17	1.7	0.2	4	LA
KG6JWV	23.1	22.8	22.8	23.8	23.1	-0.18	1.5	0.5	23.1	-0.18	1.5	0.5	4	LU
LRKX7B	22.6	23.3	22.6	22.2	22.7	-0.65	1.8	0.5	22.7	-0.65	1.8	0.5	4	LZ
LRZWNF_AL	24.0 H	23.9	24.8	24.7	24.3	1.06	1.9	0.5	24.3	1.06	1.9	0.5	4	AK
LTX8JH	22.3	22.6	22.2	22.0	22.3	-1.05	1.8	0.3	22.3	-1.05	1.8	0.3	4	LZ

Containerboard Interlaboratory Testing Program

Analysis 225

STFI, 35 lb Linerboard - 35E3

TAPPI Official Test Method T826

Report #633 (F)
June 2022

	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
M3YA2K	22.5	22.6	22.8	22.6	22.6	-0.70	1.8	0.1 L	22.6	-0.70	1.8	0.1 L	4	LU
MZTMNF	No Data	24.5 L	23.4 L	24.0 L	24.0	0.70	0.7	0.5	24.0	0.70	0.7	0.5	3	XX
P84MZV	23.0	23.8	23.4	23.3	23.4	0.07	1.5	0.3	23.4	0.07	1.5	0.3	4	TT
PJGK8J	22.3	22.8	23.5	22.9	22.9	-0.43	1.5	0.5	22.9	-0.43	1.5	0.5	4	LY
PKQWKE	22.4	22.6	22.2	23.6	22.7	-0.60	1.4	0.6	22.7	-0.60	1.4	0.6	4	LW
QP26QQ_AL	23.5 L	23.2	23.4	22.6	23.2	-0.13	1.5	0.4	23.2	-0.13	1.5	0.4	4	AK
REGDEL	24.4	24.6	21.7 L	No Data	23.6	0.26	1.7	1.6 H	23.6	0.26	1.7	1.6 H	3	LU
RRPY3K	25.6 *L	26.0 *L	24.9 L	25.6 L	25.5	2.27 *	0.6	0.4	25.5	2.27 *	0.6	0.4	4	LH
TF79CE	22.4	22.6	22.5	23.8	22.8	-0.52	2.0	0.7	22.8	-0.52	2.0	0.7	4	LW
TJ6HMF	23.3	23.1	24.3	23.1	23.5	0.17	1.8	0.6	23.5	0.17	1.8	0.6	4	LA
TKY77B	24.7	24.3	23.7	23.4	24.0	0.73	1.6	0.6	24.0	0.73	1.6	0.6	4	LU
TKY77B_AL	22.6	22.2	21.8	22.8	22.3	-0.99	1.4	0.5	22.3	-0.99	1.4	0.5	4	AL
TQMQAR	23.1	22.7	22.6	22.5	22.7	-0.61	1.3	0.3	22.7	-0.61	1.3	0.3	4	TT
TRV3N8	22.6	21.5	21.9	22.8	22.2	-1.15	1.8	0.6	22.2	-1.15	1.8	0.6	4	LU
U7FPRD	25.9 *	26.0 *	25.5 *	25.4	25.7	2.45 *	1.4	0.3	25.7	2.45 *	1.4	0.3	4	LH
U9ZWR2	21.2	22.2	22.9	21.2 L	21.9	-1.46	1.5	0.8	21.9	-1.46	1.5	0.8	4	LZ
UGGBYC	19.9 X	21.1	19.0 X	19.3 X	19.8	-3.56 X	1.6	0.9	19.8	-3.56 X	1.6	0.9	4	LY
UGGBYC_AL	23.2	24.3	19.4 X	21.6	22.1	-1.21	1.6	2.1 H	22.1	-1.21	1.6	2.1 H	4	XX
ULM26P	17.6 X	20.5 *L	17.7 X	21.8	19.4	-4.00 X	1.7	2.1 H	19.4	-4.00 X	1.7	2.1 H	4	LZ
ULM26P_AL	43.9 XL	30.2 XL	29.9 XL	33.3 XL	34.3	11.27 X	0.0	6.6 H	34.3	11.27 X	0.0	6.6 H	4	AL
V4N777	22.9 L	23.0	22.7 L	22.3 L	22.7	-0.57	0.9	0.3	22.7	-0.57	0.9	0.3	4	BK
W4H9E8	33.8 XH	32.5 XL	32.5 X	30.8 XH	32.4	9.32 X	3.5	1.2	32.4	9.32 X	3.5	1.2	4	LH
WCW6B2	23.3 L	24.5	24.4	24.4	24.1	0.86	1.1	0.6	24.1	0.86	1.1	0.6	4	LH
X6684P	22.4	21.9	22.0	21.9	22.0	-1.30	1.6	0.2	22.0	-1.30	1.6	0.2	4	LA
X6684P_AL	23.0	22.6	22.5	23.2	22.8	-0.53	1.5	0.3	22.8	-0.53	1.5	0.3	4	AL
YZRVH9	23.0	22.1	23.3	22.2	22.7	-0.67	1.4	0.6	22.7	-0.67	1.4	0.6	4	LH
Z6GQY8_AL	23.2	23.7	22.8	23.9	23.4	0.08	2.0	0.5	23.4	0.08	2.0	0.5	4	AK
Z7BEG3	23.6	23.5	23.4 H	24.0	23.7	0.36	2.0	0.3	23.7	0.36	2.0	0.3	4	LH
ZVRZEZ	21.0 *	19.7 X	22.9	22.6	21.5	-1.81	1.6	1.5	21.5	-1.81	1.6	1.5	4	LZ

Consensus (All Labs) Results

Wk Mean	23.18	23.31	23.31	23.46	Month Mean	23.31	Grand Mean	23.31
Avg SDr	1.60	1.66	1.66	1.81	Avg SD	1.68	Avg SD	1.68
SD btwn Labs	1.10	1.18	0.96	1.23	SD btwn Labs	0.98	SD btwn Labs	0.98
Labs Incld	57	59	57	57	SD btwn Wks	0.74	SD btwn Wks	0.74
Labs Excld	5	4	6	4	Labs Incld	59	Labs Incld	59
Labs not Rcvd	2	1	1	3				

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		

	Monthly Results				Cumulative Results				
WebCode	Mean	CPV	SD		Mean	CPV	SD Months	Months	Inst
2TJ3M4	130.0	-0.77	12.59		136.0	-0.32	7.51	3	LS
2UGCH8_AL	146.1	0.35	26.18		126.2	-1.14	17.35	3	XX
3PKBRC_AL	122.2	-1.32	17.41		118.5	-1.79	3.47	3	AL
4BVF9R	161.9	1.45	22.74		157.0	1.46	16.94	3	LA
4HWPJQ	128.6	-0.87	20.48		123.2	-1.39	10.00	3	EV
7ZQ6V2	130.5	-0.74	16.78		151.8	1.02	29.42 H	3	LA
ARFEEQ	136.6	-0.32	13.23		137.4	-0.20	1.44 L	3	EV
B9NQNV_AL	129.7	-0.80	21.66		137.7	-0.17	8.50	3	AL
BM287X_AL	163.8	1.58	17.49		146.8	0.60	15.93	3	AL
BY2RXP_AL	122.2	-1.32	15.46		122.1	-1.49	0.69 L	3	AL
FZW2UN	136.4	-0.33	16.77		137.5	-0.19	2.67	3	LA
GGKAU8	158.1	1.19	26.70		145.8	0.51	24.04	3	LA
GY3DCR	167.9	1.87	21.50		135.6	-0.35	28.04 H	3	LA
H7XU7U	162.1	1.47	32.70 H		166.0	2.22 *	8.67	3	EV
JH2HPC	143.3	0.15	19.87		147.5	0.66	5.54	3	LS
LRZWNF_AL	128.1	-0.90	16.86		139.0	-0.06	12.36	3	AK
LTX8JH	135.7	-0.38	12.69		140.6	0.07	6.09	3	LS
M3YA2K	142.3	0.08	8.71		146.7	0.59	6.87	3	EV
PJGK8J	140.8	-0.02	11.95		146.6	0.59	7.56	3	EV
QP26QQ	147.2	0.43	35.77 H		145.0	0.45	2.24 L	3	EV
REGDEL	158.5	1.21	23.56		152.4	1.08	9.91	3	EV
RRPY3K	207.7	4.65 X	33.40 H		213.0	6.20 X	22.96	3	LS
TF79CE	112.7	-1.98 *	9.35		115.1	-2.08 *	2.11 L	3	XX
TKY77B_AL	125.2	-1.11	16.19		120.0	-1.66	8.27	3	AL
TRV3N8	133.5	-0.53	6.86 L		136.4	-0.28	4.39	3	EV
UGGBYC_AL	159.5	1.28	19.42		152.6	1.09	7.40	3	XX
ULM26P	142.6	0.11	17.12		142.6	0.24	0.00	1	LA
ULM26P_AL	143.5	0.17	17.27		143.5	0.32	0.00	1	AL
X6684P	131.8	-0.65	11.03		146.0	0.53	20.96	3	LS
X6684P_AL	134.2	-0.48	13.32		146.6	0.58	15.37	3	AL
Z6GQY8	158.9	1.24	16.89		130.5	-0.78	24.65	3	LS
ZVRZEZ	140.1	-0.07	18.53		138.3	-0.12	11.11	3	LS

Consensus (All Labs) Results

Month Mean	141.09	Grand Mean	139.72
Avg SD	19.06	Avg SD Months	13.62
SD btwn Labs	14.33	SD btwn Labs	11.82
Labs Incld	31	Labs Incld	31

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

Containerboard Interlaboratory Testing Program

Analysis 229

Roughness - Sheffield Method, 42 lb Linerboard - 42H1

TAPPI Official Test Method T538

	Monthly Results				Cumulative Results				
WebCode	Mean	CPV	SD		Mean	CPV	SD Months	Months	Inst
2EMRYX_AL	379.2	0.38	6.75		376.9	0.10	2.30	3	AL
3PKBRC_AL	360.8	-1.68	8.42		369.5	-0.91	8.17 H	3	AL
634CMA	373.1	-0.30	6.47		373.1	-0.42	0.00	1	PP
84PZXZ_AL	387.9	1.35	7.29		385.2	1.21	2.44	3	AL
9FRVLV	390.1	1.60	8.12		389.3	1.78	1.75	3	PP
A9QT62	381.1	0.59	5.70		384.4	1.11	3.04	3	XX
F7M9JN	377.0	0.13	5.82		375.2	-0.13	2.50	2	PP
F7M9JN_AL	381.6	0.64	5.77		380.5	0.58	1.48	2	XX
KG6JWV	374.7	-0.12	8.23		378.0	0.24	2.98	3	XX
LRZWNF_AL	358.7	-1.91 *	5.98		363.1	-1.78	4.06	3	AK
LTX8JH	379.7	0.43	10.83		379.4	0.43	1.72	3	XX
P3AQDP	426.8	5.69 X	31.46 H		421.7	6.15 X	4.49	3	TS
QP26QQ	374.0	-0.20	8.99		376.1	-0.02	1.81	3	LA
QP26QQ_AL	376.5	0.08	7.59		375.6	-0.08	1.33	3	AK
UGGBYC_AL	378.9	0.34	15.27 H		373.8	-0.32	5.21	3	XX
ULM26P_AL	373.0	-0.31	7.73		373.0	-0.44	0.00	1	AL
W4H9E8_AL	339.7	-4.04 X	3.14 L		339.7	-4.95 X	0.00	1	AK
X6684P_AL	366.7	-1.02	6.82		370.7	-0.74	3.50	3	AL
XFPJGN	387.9	1.35	6.54		386.1	1.33	1.80	3	TS
Z6GQY8_AL	363.7	-1.35	6.62		361.9	-1.94 *	1.90	3	AL

Consensus (All Labs) Results

Month Mean	375.81	Grand Mean	376.22
Avg SD	8.04	Avg SD Months	3.34
SD btwn Labs	8.96	SD btwn Labs	7.39
Labs Incld	18	Labs Incld	18

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

	Monthly Results				Cumulative Results				
WebCode	Mean	CPV		SD	Mean	CPV		SD Months	Months	Inst
2EMRYX	127.6	0.20		7.38	129.0	0.17		3.13	3	TM
2TJ3M4	142.8	0.99		10.62	141.0	0.85		2.95	3	HY
2UGCH8	114.0	-0.51		3.94	110.3	-0.88		4.04	3	TM
2UVV97	109.6	-0.74		5.04	118.2	-0.43		7.43	3	TM
4HWPJQ	124.0	0.01		6.89	125.9	0.00		4.69	3	TM
634CMA	143.8	1.04		7.26	143.8	1.00		0.00	1	HY
7ZQ6V2	150.5	1.39		3.68	161.1	1.98	*	14.81	3	HY
84PZXZ	57.5	-3.45	X	2.10	56.8	-3.88	X	0.55 L	3	LZ
A9QT62	107.0	-0.87		3.94	102.6	-1.31		4.61	3	SC
ARFEEQ	112.2	-0.60		3.83	116.5	-0.53		4.11	3	SC
B9NQNV	88.2	-1.85		3.70	89.1	-2.07	*	2.23	3	SC
F7M9JN	138.2	0.75		4.27	140.6	0.82		3.39	2	HY
H7XU7U	94.8	-1.51		3.03	104.6	-1.20		8.91	3	TM
KG6JWV	152.6	1.50		8.07	148.9	1.29		4.49	3	HY
LRZWNF	112.2	-0.60		10.52	125.4	-0.03		15.73	3	TM
M3YA2K	124.2	0.02		4.76	127.1	0.07		3.78	3	TM
M6MGQN	137.2	0.70		9.60	137.1	0.63		0.14	2	HY
PJGK8J	135.2	0.60		6.73	139.5	0.76		3.92	3	HZ
QP26QQ	116.6	-0.37		3.97	109.9	-0.90		5.83	3	TM
REGDEL	118.8	-0.26		2.77	116.9	-0.51		3.35	3	TM
TBU2DU	146.6	1.19		5.32	145.1	1.08		1.72	3	TM
TJ6HMF	137.2	0.70		6.14	137.1	0.63		5.60	3	HZ
X6684P	125.2	0.08		5.76	128.3	0.14		2.86	3	TM
Y9MUB4	76.9	-2.44	*	3.41	92.1	-1.90		27.37 H	3	SC
Z6GQY8	126.0	0.12		8.64	127.9	0.11		2.87	3	TM
ZMYMGL	132.4	0.45		7.64	130.2	0.24		3.11	2	XX

Consensus (All Labs) Results

Month Mean	123.75	Grand Mean	125.93
Avg SD	6.31	Avg SD Months	8.21
SD btwn Labs	19.20	SD btwn Labs	17.80
Labs Incld	25	Labs Incld	25

Consensus By Method

Test Method	Group Mean	SD btwn Group	Difference from Grand Mean	Labs Included
Scott Bond Type	120.68	18.74	3.07	21
Modified Scott Bond Mechanics	151.52	1.50	27.77	2

Analysis Notes

84PZXZ - 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

	Monthly Results				Cumulative Results				
WebCode	Mean	CPV	SD		Mean	CPV	SD Months		Months
2DQEC7	30.8	0.90	2.77		31.4	1.14	1.22		3
2TJ3M4	28.2	0.14	1.92		30.4	0.80	4.02		3
2UGCH8	32.8	1.49	2.97		29.4	0.47	4.53		3
3PKBRC	27.0	-0.21	3.92		28.2	0.08	1.05		3
4BVF9R	24.9	-0.84	2.84		25.8	-0.72	1.27		2
634CMA	30.6	0.85	2.07		30.6	0.88	0.00		1
7ZQ6V2	28.0	0.08	1.00		25.6	-0.79	3.03		3
84PZXZ	20.5	-2.14 *	4.12		22.9	-1.70	2.30		3
A9QT62	28.2	0.14	0.45	L	28.1	0.05	0.12	L	3
ARFEEQ	29.8	0.61	2.77		29.6	0.53	0.49		3
B9NQNV	31.4	1.09	3.30		31.3	1.10	0.34	L	3
BY2RXP	27.4	-0.10	2.51		27.0	-0.32	2.42		3
F7M9JN	29.6	0.55	4.39		27.3	-0.22	3.25		2
H7XU7U	26.8	-0.28	1.30		29.1	0.39	2.52		3
JH2HPC	26.8	-0.28	0.45	L	26.8	-0.39	0.40		3
JRUQGU	25.8	-0.57	1.30		29.7	0.59	4.23		3
KG6JWV	24.4	-0.98	3.91		23.5	-1.48	0.94		3
LRZWNF	25.3	-0.71	2.56		28.9	0.30	3.23		3
LTX8JH	29.1	0.40	6.23	H	31.3	1.10	1.88		3
M3YA2K	26.4	-0.39	6.19	H	30.2	0.74	3.36		3
PJGK8J	19.9	-2.31 *	3.01		21.0	-2.31 *	2.59		3
QP26QQ	29.6	0.54	4.12		28.6	0.22	0.83		3
QV8286	25.0	-0.81	2.74		25.1	-0.97	0.90		3
REGDEL	30.2	0.73	1.92		31.3	1.10	0.95		3
RNNXZ3	26.6	-0.33	2.07		26.1	-0.64	1.10		3
RRPY3K	20.2	-2.22 *	1.48		20.4	-2.52 *	0.35	L	3
TF79CE	28.6	0.26	3.51		27.9	-0.04	1.81		3
TKY77B	30.8	0.90	1.48		32.2	1.39	1.91		2
TRV3N8	27.6	-0.04	0.89		26.1	-0.61	1.75		3
WCW6B2	27.5	-0.07	1.17		28.3	0.11	0.69		3
X6684P	28.4	0.20	2.30		28.6	0.21	0.53		3
Z6GQY8	34.4	1.97 *	3.36		28.3	0.10	5.33	H	3
ZVRZEZ	32.6	1.44	2.07		32.2	1.41	1.06		3

Consensus (All Labs) Results

Month Mean	27.73	Grand Mean	27.97
Avg SD	2.99	Avg SD Months	2.33
SD btwn Labs	3.39	SD btwn Labs	3.00
Labs Incld	33	Labs Incld	33

Key to Instrument Codes Reported by Participants

ZZ Instruments No Longer Tracked

	Monthly Results				Cumulative Results				
WebCode	Mean	CPV	SD		Mean	CPV	SD Months	Months	Inst
2ATVED	33.5	0.80	4.53	H	33.4	0.84	1.50	3	GG
2DQEC7	33.0	0.48	2.89		32.8	0.42	0.91	3	GG
2EMRYX_AL	32.6	0.23	2.24		32.6	0.25	1.23	3	AL
2TJ3M4	30.8	-0.82	3.21		31.6	-0.46	0.74	3	LP
2UGCH8_AL	32.8	0.38	1.64		33.4	0.81	0.69	3	XX
3PKBRC_AL	30.0	-1.32	2.10		30.9	-0.95	1.59	3	AL
4BVF9R	29.9	-1.37	1.61		30.6	-1.13	1.07	3	LA
634CMA	32.7	0.28	3.16		32.7	0.30	0.00	1	TP
7ZQ6V2	32.8	0.37	2.57		33.1	0.59	0.31	3	LP
84PZXZ_AL	35.0	1.72	1.86		34.8	1.78	1.69	3	AL
94GFM3	26.8	-3.25 X	1.48		27.9	-3.01 X	1.01	3	XX
ARFEEQ	30.7	-0.88	3.15		31.2	-0.75	1.07	3	LP
B9NQNV_AL	30.8	-0.82	2.33		32.7	0.36	1.66	3	AL
BM287X_AL	33.1	0.54	1.89		33.5	0.91	0.40	3	AL
BY2RXP_AL	31.6	-0.36	1.73		31.6	-0.41	0.67	3	AL
ER7ZYJ	32.9	0.44	1.52		29.9	-1.64	2.64	3	LP
F7M9JN	33.0	0.50	1.56		32.6	0.23	0.64	2	TP
F7M9JN_AL	31.9	-0.17	1.45		31.9	-0.22	0.02	2	XX
FZW2UN	34.0	1.12	2.05		33.8	1.13	0.73	3	LA
GGKAU8	33.8	0.96	2.53		32.1	-0.09	1.49	3	LA
GY3DCR	32.0	-0.11	2.20		32.1	-0.06	0.26 L	3	LA
H7XU7U_AL	30.6	-0.96	3.70		32.4	0.09	1.54	3	AL
JH2HPC	31.9	-0.17	1.91		31.5	-0.53	0.67	3	LA
JRUQGU_AL	33.2	0.60	1.20		32.9	0.49	0.52	3	AL
KG6JWV	33.3	0.70	3.37		31.8	-0.29	1.55	3	TP
LRZWNF_AL	33.3	0.70	3.82		32.4	0.09	1.02	3	AK
LTX8JH	35.2	1.83	3.00		35.3	2.14 *	0.38	3	GA
M3YA2K	33.4	0.74	4.72	H	33.0	0.52	1.10	3	GA
P86FWH	32.6	0.22	2.05		33.3	0.78	0.90	3	LP
PJGK8J	33.8	0.99	1.89		32.7	0.31	1.96	3	LP
QP26QQ_AL	31.4	-0.50	2.11		31.8	-0.27	0.44	3	AK
REGDEL_AL	32.6	0.23	2.51		34.1	1.33	1.38	3	AL
RLXUAG	29.3	-1.73	1.00	L	30.9	-0.94	2.53	3	LP
RRPY3K	33.8	0.96	4.46	H	33.8	1.09	0.56	3	TD
TF79CE	33.1	0.53	2.68		29.1	-2.17 *	6.16 H	3	LP
TKY77B	31.8	-0.22	2.53		32.4	0.13	1.24	3	GG
TKY77B_AL	32.3	0.07	1.57		32.4	0.10	0.80	3	AL
TRV3N8	32.9	0.46	1.74		32.4	0.11	0.57	3	LP
UGGBYC_AL	32.7	0.28	1.86		32.5	0.16	0.17 L	3	XX

Containerboard Interlaboratory Testing Program

Analysis 237

Air Resistance, 42 lb Linerboard - 42H1

TAPPI Official Test Method T460

	Monthly Results				Cumulative Results				
WebCode	Mean	CPV	SD		Mean	CPV	SD Months	Months	Inst
ULM26P_AL	29.9	-1.37	0.79	L	29.9	-1.62	0.00	1	XX
W4H9E8	26.4	-3.51 X	2.13		25.2	-4.88 X	1.13	3	HG
W4H9E8_AL	29.3	-1.74	4.04		29.3	-2.04 *	0.00	1	AK
X6684P_AL	34.8	1.60	2.16		34.8	1.81	0.22 L	3	AL
XA6HYP	29.2	-1.81	3.39		32.8	0.38	3.29 H	3	TD
XZHKB6	29.1	-1.84	1.68		30.4	-1.28	1.76	2	GG
Z6GQY8_AL	33.1	0.55	3.63		31.7	-0.36	1.49	3	AL
ZVRZEZ	28.7	-2.10 *	2.26		29.4	-1.95 *	0.81	3	XX

Consensus (All Labs) Results

Month Mean	32.18	Grand Mean	32.23
Avg SD	2.63	Avg SD Months	1.59
SD btwn Labs	1.65	SD btwn Labs	1.44
Labs Incld	45	Labs Incld	45

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
HG	Technidyne - Hagerty Model #1 and Profile System	LA	L&W Autoline (237 Enrollment)
LP	L&W Air Permeance Tester SE 166	TD	TMI Gurley Densometer
TP	Technidyne Profile/ plus Roughness & Porosity	XX	Instrument make/model not specified by lab

	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
2TJ3M4	No Data	No Data	No Data	60.7	60.7	0.91	2.7	0.0	60.8	1.01	2.6	0.5 L	4	LD
4BVF9R	55.4	54.2	52.7	56.8	54.8	-1.11	4.6	1.8	53.5	-2.00 *	4.8	1.6	14	MB
4HWPJQ	61.1	59.3	59.6	59.6	59.9	0.63	3.7	0.8	59.9	0.62	3.3	1.7	16	LC
4PGRK2	62.5	61.2	61.3	64.5 *	62.4	1.47	3.8	1.5	61.7	1.38	3.3	1.2	16	LD
634CMA	55.3	52.2	54.9	55.5	54.5	-1.21	3.2	1.6	54.8	-1.46	3.0	1.2	8	LD
6ECELC	58.3	58.3	58.0	58.4	58.3	0.07	2.5	0.2 L	58.6	0.11	3.0	0.5 L	16	LD
6GW7VU	58.4	59.0	58.7	57.9	58.5	0.15	3.2	0.5	58.5	0.05	3.4	0.5 L	16	LC
7ZQ6V2	58.4	56.2	52.6	54.8	55.5	-0.86	4.1	2.4	55.8	-1.06	3.9	1.9	16	LD
84PZXZ	53.8	56.7	55.8	53.0	54.8	-1.10	2.4	1.7	54.9	-1.44	2.5	1.0	16	LD
8EL9CW	54.3	55.3	55.6	54.8	55.0	-1.04	2.6	0.6	54.9	-1.41	2.5	0.9	16	LD
94GFM3	53.8	56.9	53.6	49.5 *	53.4	-1.57	3.4	3.0	54.7	-1.50	3.2	2.5	16	LD
97MXLX	58.1	58.1	58.2	58.2	58.2	0.04	1.7	0.1 L	58.2	-0.05	1.6	0.1 L	16	LD
99YHRM	56.8	58.1	56.5	59.1	57.6	-0.15	3.5	1.2	58.0	-0.14	3.0	1.2	16	LZ
BY2RXP	63.3 H	58.5	60.1 H	59.5	60.3	0.78	5.2	2.1	61.0	1.09	4.5	2.2	16	LZ
CE96RT	60.2 H	59.0 H	61.2	61.7	60.5	0.84	5.6	1.2	56.9	-0.59	4.8	3.3	16	LD
E4MJZ4	60.1 L	62.2 L	60.4 L	60.4 L	60.8	0.93	1.2	1.0	60.6	0.92	1.0	1.3	12	XX
F7M9JN	58.8	59.7	58.9	58.4	58.9	0.30	2.9	0.5	57.9	-0.20	3.4	1.2	12	LD
FJTA9L	61.5	64.2 *	64.8 *	64.5 *	63.8	1.94 *	4.9	1.5	63.4	2.08 *	4.3	1.6	16	TX
FZW2UN	55.2	62.5	58.1 H	60.1	59.0	0.32	5.1	3.1	56.4	-0.82	4.5	2.9	16	TU
G4BTM2	57.0	56.6 L	56.5	56.6	56.7	-0.47	1.8	0.2 L	57.5	-0.35	1.8	1.7	16	MB
GGKAU8	52.1 *	50.9 *	50.3 *	50.9 *	51.0	-2.39 *	3.4	0.8	50.8	-3.11 X	3.4	2.0	16	MB
H7XU7U	58.9	69.7 X	56.8	56.7	60.5	0.84	3.3	6.2 H	60.2	0.74	3.4	5.6 H	16	LC
HB8X9Q	59.2 L	59.3 L	59.3 L	59.4 L	59.3	0.42	1.0	0.1 L	59.3	0.40	0.9	0.1 L	16	LD
JH2HPC	58.8 L	58.2	58.7 L	58.9	58.7	0.20	1.7	0.3	58.6	0.09	1.6	0.4 L	16	LD
K7NUXQ	57.8	59.8	58.6	60.8	59.3	0.41	2.7	1.3	62.3	1.62	3.8	3.8	16	LC
KG6JWV	58.9	62.1	61.7	61.4	61.0	1.02	5.0	1.4	60.0	0.68	4.2	1.4	16	LC
LRKX7B	56.7	57.7	59.2	59.9 L	58.4	0.11	3.1	1.4	59.7	0.56	2.9	1.7	16	TH
LRZWNF	61.0 L	57.0 H	57.8	58.1	58.5	0.15	4.0	1.7	58.0	-0.16	4.1	1.5	16	LD
LTX8JH	57.6	58.7	57.6	57.9	58.0	-0.03	3.6	0.5	58.2	-0.08	3.4	1.3	16	LZ
M3YA2K	56.9	58.9	55.1	58.3	57.3	-0.25	3.6	1.7	57.3	-0.42	3.3	1.5	16	LD
MZTMNF	61.4	59.1	57.8	59.0	59.3	0.43	4.1	1.5	59.5	0.46	3.6	2.4	16	LD
N9HPAN	56.4	58.2 L	56.6	54.3	56.4	-0.57	2.9	1.6	56.8	-0.66	3.1	1.3	16	EM
P84MZV	60.7 H	57.7	58.1	55.3 H	58.0	-0.03	5.7	2.2	57.9	-0.18	5.8	1.3	16	TG
P86FWH	55.1	60.0	58.6	57.1	57.7	-0.11	3.3	2.1	57.1	-0.52	3.1	1.5	16	LD
PJGK8J	58.1	58.9	57.5	56.7	57.8	-0.09	3.8	0.9	58.3	-0.03	4.2	1.7	16	LZ

Containerboard Interlaboratory Testing Program

Analysis 240

Flat Crush Strength (CMT), 26 lb Corrugating Medium - CM12

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
QV8286	64.0	59.7	60.3	60.3	61.1	1.02	4.1	2.0	60.9	1.03	4.0	1.6	16	LZ
RLXUAG	61.0	62.0	62.0	60.1	61.3	1.09	3.7	0.9	59.3	0.40	3.9	2.4	16	LD
TF79CE	61.5	57.7	60.4	60.3	60.0	0.66	3.7	1.6	61.1	1.11	4.0	1.4	16	LD
TJ6HMF	57.7	57.0	57.1	59.5	57.8	-0.08	3.4	1.2	58.1	-0.09	3.3	1.2	16	LD
TKY77B	64.5 *	63.7	62.2	63.2	63.4	1.82	2.5	1.0	62.8	1.82	2.9	1.0	11	LZ
TQMQAR	59.9	59.3 H	60.4	60.9	60.1	0.70	4.4	0.7	59.2	0.35	4.7	1.4	16	TJ
U7FPRD	59.0	55.9	60.0	58.7	58.4	0.12	2.9	1.8	56.2	-0.89	3.0	2.2	16	LD
UGGBYC	61.0 H	62.5	62.0	62.0	61.9	1.30	4.5	0.6	61.4	1.26	4.0	1.8	16	LD
ULM26P	55.7	53.4	58.5	59.4	56.7	-0.45	4.2	2.7	57.2	-0.46	4.0	2.1	12	LD
UVVF76	56.7	59.7	61.4	56.6	58.6	0.19	4.6	2.4	59.5	0.47	4.2	3.0	12	LD
W4H9E8	52.4	53.0	51.3	53.0	52.4	-1.91	2.7	0.8	54.2	-1.69	6.0	2.7	12	LD
WCW6B2	64.1 *	61.9	64.2	63.6	63.4	1.83	3.4	1.1	63.5	2.12 *	3.9	2.0	16	LD
WRM3G3	59.2	58.2	59.0	58.5	58.7	0.23	3.6	0.5	58.7	0.13	3.5	0.6	16	LD
WZGCK7	55.9	55.3	55.4	56.6	55.8	-0.77	3.4	0.6	55.6	-1.15	3.3	1.5	16	TH
X2UWDG	59.3	58.6	58.0	58.6	58.6	0.20	2.0	0.5	59.8	0.60	3.4	2.4	16	LC
X6684P	56.0	55.0	56.8	55.4	55.8	-0.76	3.7	0.8	55.2	-1.30	3.8	1.8	16	LD
XA6HYP	51.4 *	52.0	50.0 *	49.9 *	50.8	-2.46 *	3.1	1.1	49.8	-3.53 X	3.7	1.5	16	TH
Y9MUB4	54.4	57.7	54.8	51.7	54.6	-1.16	4.1	2.5	55.2	-1.30	3.9	1.7	16	LC
YBQKHJ	56.6	49.7 *	49.1 *H	57.2	53.1	-1.67	4.3	4.3 H	56.5	-0.75	4.3	4.1 H	12	LD
YZRVH9	57.9	57.5	56.2	56.2	56.9	-0.37	2.8	0.9	57.1	-0.51	2.3	0.8	16	EN
Z66R7J	54.2 L	54.1 L	54.1 L	53.9 L	54.1	-1.36	0.9	0.1 L	55.9	-1.01	1.3	1.6	16	TU
Z7BEG3	59.7	61.4	61.0	59.9	60.5	0.83	4.0	0.9	61.1	1.11	4.6	2.3	16	LD

Consensus (All Labs) Results

Wk Mean	58.10	58.00	57.77	57.97	Month Mean	58.05	Grand Mean	58.36
Avg SDr	3.32	3.93	3.56	3.58	Avg SD	3.59	Avg SD	3.61
SD btwn Labs	3.05	3.13	3.38	3.33	SD btwn Labs	2.94	SD btwn Labs	2.43
Labs Incld	56	55	56	57	SD btwn Wks	1.75	SD btwn Wks	1.97
Labs Excld	0	1	0	0	Labs Incld	57	Labs Incld	55
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
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)
TX	TMI Crush Tester (model not specified)	XX	Instrument make/model not specified by lab

Containerboard Interlaboratory Testing Program

Analysis 250

Fluted Edge Crush Strength (CFC), 26 lb Corrugating Medium - CM12

TAPPI Official Test Method T843

	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
634CMA	70.2	70.0	67.7	69.2	69.3	-0.07	3.7	1.1	69.2	0.29	3.5	1.0	7	LD
6GW7VU	67.7	68.7	67.5	68.4	68.1	-0.66	3.4	0.6	68.5	0.07	3.1	0.5 L	16	LD
7ZQ6V2	72.3	71.0	74.0	73.4 H	72.7	1.65	4.1	1.3	71.9	1.31	3.6	1.6	16	LD
84PZXZ	71.7	71.6	74.0	73.2	72.6	1.61	2.3	1.2	70.5	0.79	3.0	1.7	16	LD
97MXLX	68.5 L	68.5	68.6	68.6	68.6	-0.42	1.7	0.0 L	68.9	0.18	1.6	0.3 L	16	LD
99YHRM	67.9	67.2	66.3	67.5	67.2	-1.09	3.1	0.7	67.5	-0.33	3.4	1.3	16	LZ
BY2RXP	67.9	65.9	64.6	67.5	66.5	-1.47	4.0	1.5	67.1	-0.47	3.8	1.4	16	LZ
E4MJZ4	70.2 L	72.8 L	71.5 L	73.5 L	72.0	1.33	0.7	1.5	70.7	0.85	0.9	2.1	12	XX
F7M9JN	70.9	71.4	69.9	70.9	70.8	0.69	3.3	0.7	71.4	1.11	3.5	1.4	12	LD
G4BTM2	69.2	69.8 L	69.0	70.0	69.5	0.06	1.8	0.5	69.3	0.34	1.7	0.6 L	16	MB
H7XU7U	73.1	62.4	68.6	65.6 H	67.4	-0.99	4.2	4.6 H	68.3	-0.03	3.9	4.2	16	LC
JH2HPC	69.0	68.6	69.0	69.1	68.9	-0.23	1.8	0.2 L	69.0	0.22	1.6	0.3 L	16	LD
KG6JWV	70.7	72.2 L	75.3	71.3	72.4	1.50	3.2	2.1	70.5	0.79	3.5	2.3	16	LC
LRKX7B	60.7 X	61.2 *	61.2 *	61.7 X	61.2	-4.12 X	2.4	0.4	62.6	-2.12 *	3.4	1.3	16	TH
LRZWNF	62.9 X	70.3	69.2	70.3	68.2	-0.62	3.6	3.5	68.5	0.04	3.7	2.3	16	LD
P86FWH	71.1	73.2	71.4	67.5	70.8	0.72	3.3	2.4	70.7	0.84	3.3	1.9	16	LD
RLXUAG	71.9	68.0	70.5	68.9	69.8	0.22	4.0	1.7	70.1	0.63	3.8	2.1	16	LD
TF79CE	70.9 H	66.2	70.2	68.4	68.9	-0.24	5.6	2.1	67.9	-0.18	4.4	1.6	16	LD
V4N777	68.1	68.3	67.9	68.3	68.1	-0.63	3.9	0.2 L	67.8	-0.19	3.0	0.5 L	16	LD
W4H9E8	64.9 *	67.4	66.6	67.9	66.7	-1.35	3.6	1.3	63.4	-1.80	4.6	6.9 H	16	LD
X6684P	58.0 XH	60.4 *H	58.6 *H	57.4 XH	58.6	-5.42 X	6.5	1.3	61.9	-2.36 *	6.4	4.9	16	LD

Consensus (All Labs) Results

Wk Mean	69.79	68.34	68.65	69.44	Month Mean	69.39	Grand Mean	68.36
Avg SDr	3.81	3.67	3.29	3.15	Avg SD	3.41	Avg SD	3.52
SD btwn Labs	2.05	3.59	3.94	2.19	SD btwn Labs	1.99	SD btwn Labs	2.73
Labs Incld	18	21	21	19	SD btwn Wks	1.82	SD btwn Wks	2.49
Labs Excld	3	0	0	2	Labs Incld	19	Labs Incld	21
Labs not Rcvd	0	0	0	0				

Key to Instrument Codes Reported by Participants

LC	L&W Crush Tester 48	LD	L&W Crush Tester 248
LZ	L&W Crush Tester (model not specified)	MB	Messmer Buchel K440
TH	TMI Compression Tester, Model 17-76	XX	Instrument make/model not specified by lab

	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
4BVF9R	45.1	48.9	44.4	40.6 H	44.7	0.44	4.3	3.4 H	43.5	-0.37	4.0	2.3	14	MB
634CMA	43.9	40.9	43.5	44.0	43.1	-0.43	2.7	1.4	42.9	-0.85	3.2	1.1	8	LD
6ECELC	43.8 L	44.1	43.8	44.0	43.9	0.02	2.0	0.2 L	43.8	-0.10	2.7	0.3 L	16	LD
7ZQ6V2	46.9	44.1	43.5	47.7	45.6	0.86	3.4	2.1	44.2	0.22	3.3	1.5	16	XX
84PZXZ	46.2	46.5	45.9	47.9	46.6	1.42	2.4	0.9	44.9	0.75	2.4	1.6	16	LD
8EL9CW	44.2	44.9	44.3	45.7	44.8	0.46	3.2	0.7	45.0	0.90	2.9	1.1	16	LC
94GFM3	47.6	46.0	43.5	46.1	45.8	0.99	2.7	1.7	46.6	2.12 *	3.3	1.7	16	LD
F7M9JN	44.1	45.5	41.8	42.5	43.5	-0.23	2.9	1.6	43.3	-0.47	2.5	1.9	12	LD
FJTA9L	39.2 *	40.6	38.5	39.5	39.4	-2.34 *	3.1	0.9	43.4	-0.40	3.8	3.3	16	LZ
G4BTM2	43.2	43.1	43.1	43.7	43.3	-0.32	1.6	0.3	43.0	-0.70	1.7	0.4 L	16	MB
HB8X9Q	45.3 L	45.3 L	45.3 L	45.3 L	45.3	0.73	0.5	0.0 L	45.6	1.35	0.6	0.2 L	16	LD
JH2HPC	43.9	44.7	44.8	44.2	44.4	0.26	2.9	0.4	44.5	0.43	2.9	0.3 L	16	LD
K7NUXQ	33.6 XH	39.9 H	38.7	37.2 *	37.4	-3.41 X	4.9	2.7	37.5	-5.16 X	3.8	1.5	16	XX
KG6JWV	43.5	49.3 *	46.1	45.4	46.1	1.14	3.8	2.4	44.9	0.81	3.7	1.8	16	LC
LRKX7B	41.6 L	43.4	43.5	44.6	43.3	-0.32	3.0	1.2	42.8	-0.89	2.6	1.3	16	TH
LTX8JH	42.7	44.4	43.1	43.4	43.4	-0.26	2.8	0.7	42.3	-1.31	2.7	1.7	16	LD
MZTMNF	46.0	45.4	48.6 *H	45.1	46.3	1.24	3.9	1.6	45.0	0.86	3.6	1.9	16	LZ
N9HPAN	44.8 H	43.8	45.5	45.7	44.9	0.54	4.2	0.9	45.9	1.57	3.4	2.0	16	EM
P86FWH	41.0	44.1	43.2	41.6	42.5	-0.74	4.1	1.4	42.8	-0.86	3.7	1.5	16	LD
PYT9C8	44.4	44.2 L	44.1	42.9	43.9	0.01	2.9	0.7	45.3	1.09	2.7	1.7	12	LD
RLXUAG	42.4	42.7	41.6	42.5	42.3	-0.85	3.0	0.5	43.2	-0.59	3.4	1.4	16	LD
TJ6HMF	42.1	41.5	45.6	41.3	42.6	-0.66	3.3	2.0	43.8	-0.11	3.4	1.9	16	LD
ULM26P	41.6	42.4	41.9	40.8 H	41.7	-1.16	3.7	0.7	41.7	-1.79	3.5	1.6	12	LD
UVVF76	41.8	45.0	45.3	39.8	43.0	-0.48	3.9	2.6	43.5	-0.37	3.7	1.9	12	LD
WY9T6J	44.5	42.8	44.6	41.9	43.4	-0.24	2.4	1.3	43.9	0.00	2.8	2.0	16	TH
WZGCK7	34.7 X	34.1 X	37.9 *	39.3	36.5	-3.88 X	2.7	2.5	36.0	-6.38 X	2.4	1.9	16	TH
X2UWDG	47.9 *	48.6	47.7	47.7 L	48.0	2.13 *	1.7	0.4	48.0	3.24 X	2.5	0.9	16	LC
YBQKHJ	42.3	38.2 *	37.4 *	42.0	40.0	-2.05 *	2.7	2.5	41.7	-1.79	3.3	3.2	12	EM
Z66R7J	42.1 L	42.0 L	42.6 L	43.0 L	42.4	-0.77	1.0	0.5	43.4	-0.43	1.5	1.5	16	TU
Z7BEG3	45.7	46.7	44.6	43.3	45.1	0.62	3.6	1.5	45.1	0.95	3.2	1.3	16	LD

Containerboard Interlaboratory Testing Program
Analysis 255
Ring Crush (RCT), 26 lb Corrugating Medium - CM12
TAPPI Official Test Method T822

Consensus (All Labs) Results

Wk Mean	43.85	44.11	43.47	43.29	Month Mean	43.90	Grand Mean	43.92
Avg SDr	3.03	3.13	2.93	3.32	Avg SD	3.06	Avg SD	3.08
SD btwn Labs	2.06	2.59	2.64	2.63	SD btwn Labs	1.91	SD btwn Labs	1.25
Labs Incld	28	29	30	30	SD btwn Wks	1.49	SD btwn Wks	1.74
Labs Excld	2	1	0	0	Labs Incld	28	Labs Incld	27
Labs not Rcvd	0	0	0	0				

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	TH	TMI Compression Tester, Model 17-76
TU	TMI Universal Crush Tester (TMI K440)	XX	Instrument make/model not specified by lab

Containerboard Interlaboratory Testing Program

Analysis 261

STFI, 26 lb Corrugating Medium - CM12

TAPPI Official Test Method T826

Report #633 (F)
June 2022

	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
34FG28	14.5 L	14.3	14.5	14.5	14.5	1.27	0.8	0.1	13.8	0.24	0.9	0.7	16	LA
4BVF9R	15.3 *	15.2 *	13.5 H	No Data	14.7	1.71	1.3	1.0 H	14.5	1.72	1.3	0.8	12	LA
634CMA	13.6	13.5	13.1	14.0	13.5	-0.53	1.0	0.4	13.8	0.16	1.1	0.5	8	LB
6GW7VU	13.9	13.4	13.1	14.1	13.6	-0.39	0.8	0.5	13.5	-0.40	0.9	0.4	16	LB
7H98B2	14.0	12.8	14.0	13.8	13.6	-0.37	1.1	0.6	13.6	-0.27	1.0	0.5	16	LA
84PZXZ	13.7	13.6	14.6	13.1	13.7	-0.14	0.8	0.6	13.8	0.09	0.8	0.6	16	LA
8EL9CW	14.1	14.4	14.2	13.9 H	14.2	0.67	1.3	0.2	14.1	0.83	1.2	0.4	16	LH
97MXLX	13.7 L	13.6 L	13.7 L	13.7 L	13.7	-0.26	0.4	0.1 L	13.7	-0.05	0.4	0.1 L	16	LA
E4MJZ4	11.7 X	12.0 *	12.2 *	12.6 *	12.1	-3.31 X	0.9	0.4	12.7	-2.19 *	1.0	0.6	12	XX
FZW2UN	12.9	13.7	13.6 H	14.0	13.6	-0.53	1.3	0.5	13.7	-0.08	1.1	0.6	16	LA
GGKAU8	13.6	13.9 H	14.2	14.2 L	14.0	0.34	1.1	0.3	13.9	0.28	1.6	0.7	16	LA
JH2HPC	13.7	13.9	13.9	13.8	13.8	0.03	1.1	0.1	13.9	0.31	1.1	0.1 L	16	LB
KG6JWV	14.2	14.0	13.9	14.0	14.0	0.40	1.0	0.1	14.2	0.94	1.0	0.3	16	LU
LRKX7B	12.9	12.5	12.9	13.4	12.9	-1.75	0.8	0.4	13.1	-1.40	0.8	0.5	16	LZ
LRZWNF	14.5 H	14.2	15.3 *	14.8	14.7	1.74	1.2	0.5	14.6	1.89	1.2	0.5	16	LA
LTX8JH	13.5	12.8	13.6	13.9	13.4	-0.74	1.1	0.5	13.2	-1.07	1.0	0.5	16	LZ
M3YA2K	13.7	13.3	13.6	13.8	13.6	-0.47	1.0	0.2	13.3	-1.01	1.1	0.6	16	LU
PYT9C8	13.9	13.7	14.6	13.8 L	14.0	0.29	0.9	0.4	13.6	-0.18	1.2	0.6	16	LA
TQMQAR	12.9	13.2	13.1	13.1	13.1	-1.49	1.1	0.1	13.7	-0.10	1.1	0.4	16	TT
ULM26P	10.6 X	12.3	10.5 X	13.7	11.8	-3.99 X	1.1	1.5 H	9.8	-8.28 X	1.4	2.3 H	12	LZ
WCW6B2	14.4	15.0	15.1	15.3 *L	14.9	2.19 *	0.7	0.4	14.7	2.04 *	0.7	0.4	16	LH
WRM3G3	13.1	13.6	14.2	13.9	13.7	-0.24	0.9	0.5	13.6	-0.36	0.9	0.5	12	LB
X6684P	12.2 *H	13.5	13.1	13.1	13.0	-1.68	1.1	0.6	13.5	-0.54	1.3	0.7	16	LB
XA6HYP	13.8	13.6	13.4	14.4 L	13.8	-0.07	0.9	0.4	13.7	-0.09	1.1	0.5	16	TS
YZRVH9	13.2	13.4 L	13.7	13.2	13.4	-0.87	0.9	0.2	13.2	-1.17	1.0	0.2	16	LH
Z6GQY8	13.2	14.7	14.2	14.2	14.1	0.51	1.1	0.6	14.2	1.03	1.2	0.5	16	LA
Z7BEG3	14.1	14.1	14.6	14.2	14.2	0.84	1.1	0.2	11.5	-4.82 X	1.0	5.3 H	16	XX
ZMYMGL	13.6	13.6	13.8	13.3	13.6	-0.47	1.1	0.2	13.4	-0.62	1.1	0.3	12	LA

Consensus (All Labs) Results

Wk Mean	13.70	13.64	13.84	13.84	Month Mean	13.82	Grand Mean	13.73
Avg SDr	0.95	1.05	1.04	1.03	Avg SD	1.02	Avg SD	1.06
SD btwn Labs	0.64	0.75	0.70	0.58	SD btwn Labs	0.51	SD btwn Labs	0.47
Labs Incld	26	28	27	27	SD btwn Wks	0.42	SD btwn Wks	0.50
Labs Excld	2	0	1	0	Labs Incld	26	Labs Incld	26
Labs not Rcvd	0	0	0	1				

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