Collaborative Testing Services, Inc.

Containerboard Interlaboratory Testing Program

Participant Summary Report #658 - July 2024

Introduction to the Containerboard Program

Explanation of Tables and Definitions of Terms

Analysis	Sample	Analysis Name
201	BX18	Top to Bottom Box Compression Strength, Corrugated Boxes
202	EC16	Edgewise Compressive Strength, by T811, Corrugated Board
203	EC16	Edgewise Compressive Strength by T839, Corrugated Board
205	42L1	Bursting Strength (Mullen), 42 lb Linerboard
206	52J1	Bursting Strength (Mullen), 52 lb Linerboard
215	42L1	Ring Crush, 42 lb Linerboard
216	52J1	Ring Crush, 52 lb Linerboard
223	42L1	STFI, 42 lb Linerboard
224	52J1	STFI, 52 lb Linerboard
228	42L	Roughness - Stylus Method, 42 lb Linerboard
229	42L1	Roughness - Sheffield Method, 42 lb Linerboard
231	42L	Internal Bond, 42 lb Linerboard
234	42L	COF Inclined Plane (Slide Angle), 42 lb Linerboard
237	42L1	Air Resistance, 42 lb Linerboard
240	CM13	Flat Crush Strength (CMT), 26 lb Corrugating Medium
250	CM13	Fluted Edge Crush Strength (CFC), 26 lb Corrugating Medium
255	CM13	Ring Crush (RCT), 26 lb Corrugating Medium
261	CM13	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	CM13	September 2023 - Current
	CM12	June 2022 - August 2023
35# Linerboard	35E3	June 2022 - Current
	35E2	June 2020 - April 2022
42# Linerboard	42L1	July 2024 - Current
	42H3	June 2023 - June 2024
52# Linerboard	52J1	November 2023 - Current
	56G2	May 2021 - May 2022

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, agriculture, hemp, 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 100 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
29APDD	536.9	-1.28	50.55		524.1	-1.61	27.87	4	LG
3JZXB7	580.4	0.00	16.31		610.7	0.88	42.59	4	LG
4KBZX6	622.4	1.24	19.68		665.8	2.47 *	32.24	4	LS
64JMWH	588.7	0.25	23.37		561.4	-0.53	20.10	4	EX
6GUXLT	641.3	1.79	27.29		616.6	1.06	18.81	4	LO
9AEQEB	571.2	-0.27	33.64		591.5	0.33	30.46	4	EX
A4L7MZ	556.6	-0.70	45.72		568.7	-0.32	27.63	4	ET
B76GZB	591.6	0.33	66.93		562.1	-0.51	25.33	4	EX
BK8Q4K	577.4	-0.09	66.42		557.7	-0.64	28.21	4	LG
C9CYX8	571.2	-0.27	31.62		571.2	-0.25	0.00	1	LN
D29CJC	504.1	-2.24 *	33.06		496.3	-2.40 *	60.45 H	4	TB
EW9KNK	560.6	-0.58	20.71		557.9	-0.63	7.09	4	LM
FU3HDA	632.2	1.53	20.08		599.9	0.58	25.50	4	LG
GGUYFE	568.4	-0.35	35.26		568.2	-0.34	0.28	2	EX
GN88GF	568.8	-0.34	40.00		545.0	-1.00	24.70	4	ER
HKLLNT	601.0	0.61	29.98		607.2	0.79	13.09	4	LS
KVZGGP	575.2	-0.15	31.76		592.1	0.35	21.50	4	EX
MW4W2Z	611.8	0.93	15.55		616.4	1.05	8.97	4	EX
N3NB6X	554.9	-0.75	23.74		578.3	-0.05	19.39	4	LM
P4C86C	569.8	-0.31	28.18		588.0	0.23	15.47	4	ES
P73B3P	561.1	-0.57	27.87		583.9	0.12	22.02	3	LG
Q67EQZ	573.8	-0.19	17.02		578.8	-0.03	8.94	4	LG
Q88FTH	579.5	-0.02	37.62		586.3	0.18	10.09	4	LG
QB8NWT	572.4	-0.23	34.23		584.9	0.14	36.46	4	ER
RCHQJR	602.1	0.64	41.86		583.6	0.10	26.26	2	EX
RX2XUK	528.4	-1.53	37.75		530.6	-1.42	29.84	4	LL
TEK9UT	536.4	-1.29	33.11		557.9	-0.63	15.67	4	ER
W3F3VB	657.1	2.26 *	31.36		658.5	2.26 *	29.34	4	ER
WYYU8B	628.8	1.42	77.36 H		581.0	0.03	38.66	4	LS
ZH3J9X	585.8	0.16	34.38		572.9	-0.20	13.54	4	ER

Consensus (All Labs) Results

Month Mean	580.33	Grand Mean	579.91
Avg SD	37.40	Avg SD Months	26.37
SD btwn Labs	34.00	SD btwn Labs	34.76
Labs Incld	30	Labs Incld	30

Consensus By Method

Test Method	Group Mean	SD btwn Group	Difference from Grand Mean	Labs Included
Hot melt adhesive sealing	570.39	40.69	9.95	10
Clip sealing	581.53	25.52	1.20	19
Staple sealing	657.08	0.00	76.75	1

Key to Instrument Codes Reported by Participants

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	LN	Lansmont 152-50k
LO	Lansmont 152-30k	LS	Lansmont Squeezer
TB	TMI Monitor/Compression Tester, Model 17-70		

Containerboard Interlaboratory Testing Program

Analysis 202

Edgewise Compressive Strength, by T811, Corrugated Board - EC16

TAPPI Official Test Method T811

	Monthly Results				Cumulative Results				
WebCode	Mean	CPV	SD		Mean	CPV	SD Months	Months	Inst
7DNUBG	41.8	-1.50	1.71		43.5	-1.35	2.13	3	TS
B76GZB	44.3	-0.92	2.61		46.9	-0.49	1.78	4	LC
BK8Q4K	52.5	0.95	1.67		51.1	0.56	1.33	4	EX
DAKQ4T	51.5	0.73	2.90		53.5	1.17	1.39	4	XX
EGYWD6	49.6	0.30	1.78		50.5	0.43	1.72	4	XX
GKRFR9	55.7	1.70	1.86		55.7	1.73	0.00	1	LC
GN88GF	44.9	-0.79	6.02	H	44.4	-1.11	1.96	4	EN
HJUPYY	140.3	21.15 X	6.54	H	145.4	24.29 X	8.05 H	4	LD
HKLLNT	45.7	-0.60	1.63		45.4	-0.86	2.62	4	LD
KVZGGP	50.7	0.55	2.36		49.6	0.18	2.55	4	LC
PECWNX	46.5	-0.42	1.11	L	47.8	-0.27	1.62	3	LD

Consensus (All Labs) Results

Month Mean	48.34	Grand Mean	48.85
Avg SD	2.71	Avg SD Months	1.95
SD btwn Labs	4.35	SD btwn Labs	3.97
Labs Incld	10	Labs Incld	10

Key to Instrument Codes Reported by Participants

EN	Emerson 2200	EX	Emerson (model not specified)
LC	L&W Crush Tester 48	LD	L&W Crush Tester 248
TS	TMI Digital Crush Tester, Model 17-56	XX	Instrument make/model not specified by lab

	Monthly Results				Cumulative Results				
WebCode	Mean	CPV	SD		Mean	CPV	SD Months	Months	Inst
24EVFB	55.0	1.08	1.32	L	55.2	1.29	2.10	4	TH
3JZXB7	53.9	0.88	0.91	L	51.7	0.42	2.41	4	BU
4KBZX6	55.4	1.16	2.17		58.1	2.01 *	1.93	4	EM
6GUXLT	36.9	-2.32 *	2.83		41.7	-2.07 *	4.35	4	LD
6UXLF8	46.2	-0.57	1.51		44.2	-1.44	1.73	4	TS
7DNUBG	40.7	-1.60	1.13	L	40.8	-2.28 *	5.65 H	3	TS
9AEQEB	49.5	0.05	1.19	L	49.2	-0.21	1.10	4	LD
A4L7MZ	47.6	-0.31	1.95		49.8	-0.04	2.22	4	TD
AUHTPL	52.0	0.51	1.68		50.2	0.06	1.70	4	LD
B76GZB	53.6	0.81	1.66		54.3	1.08	1.00	4	LC
BK8Q4K	47.9	-0.25	2.69		48.1	-0.47	0.92	4	LY
CNHFKY	47.4	-0.35	2.13		46.4	-0.89	1.05	4	BU
D29CJC	52.4	0.58	1.03	L	51.2	0.30	1.33	4	LD
EGYWD6	51.6	0.45	1.81		50.9	0.22	2.04	4	XX
EW9KNK	47.9	-0.26	1.00	L	48.0	-0.49	0.84	4	EM
FU3HDA	40.7	-1.60	2.56		45.6	-1.08	3.33	4	EM
GB2UNV	50.3	0.19	1.99		52.4	0.58	4.53	4	TU
GN88GF	48.1	-0.22	1.73		47.6	-0.60	0.83	4	EN
H827KT	50.2	0.18	2.15		48.1	-0.47	2.94	2	TD
HKLLNT	47.6	-0.31	1.11	L	47.0	-0.75	2.05	4	LD
J26XD6	57.0	1.46	2.59		57.2	1.80	0.44	4	TG
JBFZY7	35.3	-2.62 *	3.91		34.1	-3.95 X	1.15	3	XX
KVZGGP	53.0	0.70	1.84		52.7	0.66	1.21	4	LC
MW4W2Z	54.3	0.95	1.92		53.8	0.95	1.06	4	CT
N3NB6X	45.3	-0.75	14.10	H	50.1	0.03	3.36	4	TG
P4C86C	45.8	-0.65	2.47		51.9	0.47	4.22	4	LD
Q67EQZ	44.7	-0.85	1.09	L	45.3	-1.18	0.52	4	EM
Q88FTH	55.0	1.08	1.40		53.3	0.82	1.44	4	MK
QB8NWT	47.7	-0.29	2.71		47.3	-0.68	0.80	4	LD
TEK9UT	52.6	0.62	1.53		50.5	0.13	1.42	4	EM
W3F3VB	54.6	1.00	2.68		54.2	1.04	1.30	4	LD
WYYU8B	47.2	-0.39	1.30	L	46.7	-0.82	2.00	4	EM
YJGLJC	57.1	1.47	2.00		53.8	0.94	2.80	4	EM
Z33YB8	53.0	0.70	1.36		52.3	0.56	2.98	4	TE
ZH3J9X	46.2	-0.57	2.10		50.3	0.08	3.06	4	LD

Consensus (All Labs) Results

Month Mean	49.24	Grand Mean	50.00
Avg SD	3.08	Avg SD Months	2.43
SD btwn Labs	5.32	SD btwn Labs	4.02
Labs Incld	35	Labs Incld	34

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	MK	Mark-10 ESM303
TD	TMI Digital Crush Tester, Model 17-09	TE	TMI Monitor/Compression Tester, Model 17-60
TG	TMI Digital Crush Tester, 17-76	TH	TMI Monitor/Compression Tester, Model 17-76
TS	TMI Digital Crush Tester, Model 17-56	TU	TMI Universal Crush Tester (TMI K440)
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
2C87P8	114.0	111.3 L	113.7	111.2	112.6	-0.55	4.9	1.5	112.6	-0.55	4.9	1.5	4	AH
4BN4RW_AL	115.6	116.8	111.9	115.9	115.0	0.04	8.5	2.1	115.0	0.04	8.5	2.1	4	XX
7LH3W9	110.5	106.7	112.2	103.0 *	108.1	-1.61	7.0	4.1	108.1	-1.61	7.0	4.1	4	XX
8GJ8AQ	114.5	114.0	115.1	113.4	114.2	-0.15	8.6	0.7	114.2	-0.15	8.6	0.7	4	LB
8TYXC3	111.2	110.9	109.4	108.8	110.1	-1.14	7.6	1.2	110.1	-1.14	7.6	1.2	4	LA
9AEQEB	110.0	106.4	106.0	111.2	108.4	-1.54	8.1	2.6	108.4	-1.54	8.1	2.6	4	AH
AACFXY	133.0 X	140.5 X	141.5 XH	148.5 X	140.9	6.22 X	11.4	6.3 H	140.9	6.22 X	11.4	6.3 H	4	AX
AERNLX	116.6	117.1	116.2	117.1	116.8	0.46	6.3	0.4 L	116.8	0.46	6.3	0.4 L	4	LA
B76GZB	112.4	113.5	113.9	116.1	114.0	-0.21	7.2	1.5	114.0	-0.21	7.2	1.5	4	AH
BK8Q4K	119.5	125.6 *	121.9	125.0	123.0	1.95 *	8.9	2.8	123.0	1.95 *	8.9	2.8	4	AX
CUV2QK	114.5	112.9	123.4	119.1	117.5	0.63	7.7	4.8	117.5	0.63	7.7	4.8	4	LA
CUV2QK_AL	109.3	118.0	111.1	116.5	113.7	-0.26	6.6	4.2	113.7	-0.26	6.6	4.2	4	AL
D29CJC	106.2 *	107.0	113.1	107.7	108.5	-1.52	7.9	3.1	108.5	-1.52	7.9	3.1	4	XX
D6LDF4	121.4	125.4 *	No Data	123.2	123.3	2.03 *	4.4	2.0	123.3	2.03 *	4.4	2.0	3	AX
D6LDF4_AL	112.6	106.2	107.0	111.3	109.3	-1.33	6.7	3.2	109.3	-1.33	6.7	3.2	4	AL
DH9MZN	121.6	118.0 L	114.7	119.5	118.4	0.85	8.2	2.9	118.4	0.85	8.2	2.9	4	TB
DJNLKD	111.6	108.7	108.3	105.5	108.5	-1.51	7.4	2.5	108.5	-1.51	7.4	2.5	4	TP
E276T4	116.5	114.3	115.1	117.0	115.7	0.21	7.7	1.2	115.7	0.21	7.7	1.2	4	LJ
E276T4_AL	110.4	111.4	106.2	111.9	110.0	-1.16	6.6	2.6	110.0	-1.16	6.6	2.6	4	AL
EGYWD6	118.3	113.9	114.1	114.4	115.2	0.07	8.7	2.1	115.2	0.07	8.7	2.1	4	LC
EKHU72_AL	119.1	120.7	117.7	119.9	119.3	1.08	8.5	1.3	119.3	1.08	8.5	1.3	4	AL
FGEFVG	117.5	114.1	111.9	114.9	114.6	-0.05	8.9	2.3	114.6	-0.05	8.9	2.3	4	LZ
FP44T6	113.3	116.8	115.2	114.5	114.9	0.02	7.4	1.5	114.9	0.02	7.4	1.5	4	LJ
GCGD9T	104.6 *	109.2	109.7	106.3	107.4	-1.77	7.6	2.4	107.4	-1.77	7.6	2.4	4	LC
H6AAWZ_AL	110.2	118.9	No Data	121.3	116.8	0.47	7.6	5.8	116.8	0.47	7.6	5.8	3	AL
HJUPYY	112.0	109.6	110.4	106.1	109.5	-1.27	6.7	2.5	109.5	-1.27	6.7	2.5	4	LA
HKLLNT	113.3	110.0 H	112.0	118.8	113.6	-0.31	10.7	3.8	113.6	-0.31	10.7	3.8	4	LA
HMUZVY_AI	107.6	112.7	107.4 L	111.6	109.8	-1.20	4.5	2.8	109.8	-1.20	4.5	2.8	4	XX
JN6YP9_AL	112.2	113.3	112.9	113.4 H	113.0	-0.45	10.1	0.5	113.0	-0.45	10.1	0.5	4	AL
JQMGKX_AL	115.7	115.8	119.3	118.7	117.4	0.61	6.0	1.9	117.4	0.61	6.0	1.9	4	AL
JRGAFG	118.6	118.2	116.6 L	126.6 *	120.0	1.23	5.3	4.5	120.0	1.23	5.3	4.5	4	AH
L49DXF_AL	114.3 H	117.8	114.3	117.1	115.9	0.24	9.8	1.9	115.9	0.24	9.8	1.9	4	AL
L9HT74	128.9 XH	134.1 X	125.9 *	137.1 X	131.5	3.99 X	10.3	5.1	131.5	3.99 X	10.3	5.1	4	LJ
LZA22F	109.9	110.1	107.0	111.7	109.7	-1.24	9.1	2.0	109.7	-1.24	9.1	2.0	4	LC
M7QXHB_AL	118.7	120.2	117.7	119.9	119.1	1.02	5.7	1.1	119.1	1.02	5.7	1.1	4	AL

Containerboard Interlaboratory Testing Program

Analysis 205

Bursting Strength (Mullen), 42 lb Linerboard - 42L1

TAPPI Official Test Method T807

Report #658
July 2024

	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
MT6K7Z	113.3	120.3	109.1	116.8	114.9	0.01	9.3	4.8	114.9	0.01	9.3	4.8	4	XX
MW4W2Z	118.0	116.5	120.5	120.5	118.9	0.96	9.3	2.0	118.9	0.96	9.3	2.0	4	XX
P4C86C	111.7	113.0	111.2	111.9	112.0	-0.69	8.4	0.8	112.0	-0.69	8.4	0.8	4	LA
QB8NWT	112.2	108.4	103.0 *	112.8	109.1	-1.37	7.9	4.5	109.1	-1.37	7.9	4.5	4	LZ
QGYY8Q_AL	118.3	No Data	119.9	No Data	119.1	1.02	8.8	1.1	119.1	1.02	8.8	1.1	2	AL
QHD7T9	119.9	118.7	121.5	116.1	119.1	1.01	6.0	2.3	119.1	1.01	6.0	2.3	4	LA
RCHQJR	No Data	114.6	No Data	No Data	114.6	-0.06	9.0	0.0	114.6	-0.06	9.0	0.0	1	XX
T6F44W	116.2	119.9	111.6	119.9	116.9	0.49	8.7	3.9	116.9	0.49	8.7	3.9	4	LC
T6F44W_AL	116.3	121.2	116.7	122.5	119.2	1.03	10.0	3.1	119.2	1.03	10.0	3.1	4	AL
U4FM66	110.1	116.6	112.8	115.4	113.7	-0.27	8.7	2.9	113.7	-0.27	8.7	2.9	4	LA
VCPCH4	129.3 X	108.6	120.3	125.9	121.0	1.48	10.2	9.1 H	121.0	1.48	10.2	9.1 H	4	ME
VD24BK_AL	115.5	111.8	113.6	113.1	113.5	-0.32	9.4	1.5	113.5	-0.32	9.4	1.5	4	AL
VYYEG7	111.2	104.2 *	109.7	109.2	108.6	-1.50	8.2	3.0	108.6	-1.50	8.2	3.0	4	LC
W3F3VB	116.3	115.1	116.0	117.3	116.2	0.32	8.1	0.9	116.2	0.32	8.1	0.9	4	LA
WF62LD_AL	111.0	108.4	110.6	109.6	109.9	-1.18	7.1	1.2	109.9	-1.18	7.1	1.2	4	AL
WPTUU4_AL	114.2	115.7	113.1	117.8	115.2	0.08	8.0	2.0	115.2	0.08	8.0	2.0	4	AL
WTUXLQ_AI	115.1	116.5	117.7	119.0	117.1	0.53	8.6	1.7	117.1	0.53	8.6	1.7	4	AL
WU6ZAA	119.7 L	119.4 L	119.0 L	118.8 L	119.2	1.05	3.0	0.4 L	119.2	1.05	3.0	0.4 L	4	AH
YA8G7L	118.9	119.7	124.5 *	117.3	120.1	1.26	8.2	3.1	120.1	1.26	8.2	3.1	4	LJ
YARWLP	112.1 L	109.6 L	112.6 L	113.1 L	111.9	-0.72	2.7	1.6	111.9	-0.72	2.7	1.6	4	LA
YR94XL	116.1	105.8 H	120.6	116.9	114.8	0.00	17.4	6.4 H	114.8	0.00	17.4	6.4 H	4	LC
Z33YB8	118.6	121.5	121.2	123.7 H	121.3	1.53	8.9	2.1	121.3	1.53	8.9	2.1	4	LC
ZCPX2C	116.7 L	109.8	115.7	No Data	114.1	-0.19	6.8	3.7	114.1	-0.19	6.8	3.7	3	XX
ZH3J9X	115.9	117.5	116.8	117.1	116.8	0.47	7.0	0.7	116.8	0.47	7.0	0.7	4	AH
ZURHYZ_AL	120.8	118.2	120.8	123.3	120.8	1.42	8.4	2.1	120.8	1.42	8.4	2.1	4	AL

Consensus (All Labs) Results

Wk Mean	114.50	114.32	114.46	115.76	Month Mean	114.85	Grand Mean	114.85
Avg SDr	8.02	8.60	8.18	7.57	Avg SD	8.11	Avg SD	8.11
SD btwn Labs	3.89	5.05	5.06	5.31	SD btwn Labs	4.18	SD btwn Labs	4.18
Labs Incld	56	57	56	55	SD btwn Wks	2.99	SD btwn Wks	2.99
Labs Excld	3	2	1	2	Labs Incld	58	Labs Incld	58
Labs not Rcvd	1	1	3	3				

Key to Instrument Codes Reported by Participants

AH	Perkins Model AH	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)
ME	Messmer Automatic Burst Tester ME-06	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
2C87P8	105.6	117.2	111.9	108.3 L	110.8	0.15	8.4	5.0	110.3	0.01	7.1	2.9	12	AH
4BN4RW_AL	111.5	101.7	109.0	109.2	107.9	-0.59	10.8	4.3	107.5	-0.88	11.7	4.2	8	XX
7LH3W9	107.7	112.8	104.0	103.8	107.1	-0.79	8.9	4.2	108.6	-0.54	10.5	3.4	12	XX
8GJ8AQ	113.5	111.5	112.5	107.3	111.2	0.26	11.5	2.7	106.7	-1.14	9.0	11.4 H	12	LB
8TYXC3	102.4	103.9	107.1	104.7	104.5	-1.44	10.6	2.0	106.3	-1.28	11.2	5.2	12	LA
9AEQEB	105.6	108.0	100.8	108.0	105.6	-1.17	8.9	3.4	107.9	-0.76	10.2	3.8	12	AH
AACFXY	108.5 H	121.0 *	124.0 *	125.5 *	119.8	2.45 *	14.5	7.7 H	123.1	4.09	X13.7	9.6 H	8	XX
AERNLX	111.6	110.5	112.2 L	110.8	111.3	0.28	7.6	0.8	111.4	0.35	5.5	0.7 L	12	LA
B76GZB	105.0	113.5	109.5	108.5	109.1	-0.27	12.3	3.5	109.2	-0.36	12.8	3.2	12	AH
BK8Q4K	112.6	114.6	115.7	108.4 H	112.8	0.68	19.8	3.2	115.0	1.49	16.2	4.5	12	LA
CUV2QK	116.7	108.4	116.2	115.1	114.1	1.00	11.9	3.8	112.7	0.76	12.1	3.5	12	LA
CUV2QK_AL	106.4	112.2	111.4	108.4	109.6	-0.15	7.3	2.7	109.2	-0.35	9.1	3.4	12	AL
D29CJC	109.4	109.7	109.3	109.3	109.4	-0.19	9.8	0.2 L	108.6	-0.52	9.7	3.9	8	XX
D6LDF4	117.4	114.8	No Data	113.0	115.1	1.25	7.8	2.2	114.6	1.37	6.7	3.1	5	AH
D6LDF4_AL	110.0	106.2	105.4	108.2	107.5	-0.70	6.6	2.1	105.8	-1.43	7.1	4.3	6	AL
DH9MZN	111.2	113.0	119.1	117.1	115.1	1.26	10.1	3.6	112.1	0.56	12.9	3.9	12	TB
DJNLKD	102.7	111.1	105.1	105.1	106.0	-1.07	10.0	3.6	109.4	-0.28	7.3	3.3	12	TP
E276T4	112.8	113.1	101.9	109.0	109.2	-0.25	11.4	5.2	108.1	-0.71	10.6	5.0	8	LJ
E276T4_AL	112.6	110.9	107.2	115.6	111.6	0.36	10.3	3.5	112.6	0.72	10.8	2.8	8	AL
EKHU72_AL	108.7	114.5	108.9 H	119.4	112.9	0.69	12.9	5.1	113.4	1.00	11.4	4.2	8	AL
FGEFVG	113.4	115.2	114.4	113.9	114.2	1.04	8.8	0.8	112.4	0.66	10.6	4.1	12	LZ
FP44T6	109.7	107.3	110.7	108.5	109.1	-0.28	8.6	1.5	109.8	-0.17	8.2	1.4	12	LJ
GCGD9T	108.3	107.1	103.0	106.0	106.1	-1.04	12.0	2.3	106.1	-1.33	12.0	2.3	4	LC
H6AAWZ_AL	111.9	105.2 H	No Data	109.6	108.9	-0.32	13.0	3.4	112.2	0.61	10.0	3.6	11	AL
HJUPYY	102.8	113.9	105.7	95.2 *	104.4	-1.48	12.1	7.7 H	103.6	-2.14	*12.1	5.6	12	LA
HKLLNT	110.6	108.1	116.4	104.8	110.0	-0.05	11.2	4.9	111.1	0.27	15.4	3.6	12	LA
HMUZVY_AI	107.1	103.2	103.8	107.5	105.4	-1.22	7.3	2.2	105.0	-1.67	9.0	2.7	12	XX
JN6YP9_AL	112.4	109.6	112.5	114.8	112.3	0.55	10.1	2.1	109.2	-0.33	11.7	3.6	12	AL
JQMGKX_AL	111.1	112.9	107.7	108.4	110.0	-0.04	10.7	2.4	110.7	0.12	10.1	1.7	12	AL
JRGAFG	113.0	114.8	112.0	120.2	115.0	1.24	7.8	3.7	115.0	1.49	7.5	4.3	7	AH
L49DXF_AL	112.1	113.0	112.3	113.6	112.8	0.67	10.7	0.7	111.1	0.24	11.8	3.7	12	AL
L9HT74	117.2	111.0	109.0	116.4	113.4	0.83	11.6	4.1	111.9	0.52	12.7	5.4	12	LA
LZA22F	96.8 *	105.4	103.7	108.0	103.5	-1.71	10.5	4.8	104.6	-1.81	9.0	3.4	12	LA
M7QXHB_AL	115.9	118.5	111.7	111.2	114.3	1.06	10.2	3.5	116.4	1.94	* 8.7	3.0	12	AL
MT6K7Z	115.0	118.2	120.2 *	109.8	115.8	1.44	9.3	4.5	112.7	0.76	9.5	5.3	8	XX

Containerboard Interlaboratory Testing Program

Analysis 206

Bursting Strength (Mullen), 52 lb Linerboard - 52J1

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
MW4W2Z	104.0	98.5 *	113.5	113.5	107.4	-0.72	11.3	7.4	107.6	-0.85	12.2	5.2	8	XX
P4C86C	105.6	106.9	107.2	112.8	108.1	-0.52	10.4	3.2	109.1	-0.38	12.3	4.2	12	LA
QB8NWT	102.3	104.5	108.7	109.6	106.3	-0.99	12.9	3.4	106.1	-1.32	11.9	2.5	12	LZ
QGYY8Q_AL	106.5	No Data	106.1	No Data	106.3	-0.99	10.5	0.3	110.0	-0.10	10.6	3.6	6	AL
QHD7T9	115.6	117.7	111.6	119.7	116.2	1.53	9.1	3.5	114.9	1.48	7.3	3.4	12	LA
RCHQJR	No Data	109.4	No Data	No Data	109.4	-0.20	9.6	0.0	111.6	0.43	8.1	2.3	9	XX
T6F44W	108.1	114.7	107.6	105.0	108.9	-0.33	12.9	4.1	111.1	0.25	12.6	4.7	12	LC
T6F44W_AL	118.1	116.9	111.0	113.4	114.9	1.20	13.9	3.3	112.4	0.66	16.6	5.4	12	XX
U4FM66	112.8	108.2	106.9	104.4	108.1	-0.54	10.9	3.6	110.5	0.07	12.2	4.2	12	LA
VCPCH4	119.4	114.6	121.1 *	125.9 *	120.3	2.58 *	11.5	4.7	115.1	1.53	9.3	5.2	11	LA
VD24BK_AL	101.7	112.4	105.7	111.4	107.8	-0.61	12.4	5.0	109.3	-0.32	11.2	3.5	12	AL
VYYEG7	111.3	106.2	106.4 L	106.0	107.4	-0.70	10.0	2.6	110.0	-0.09	9.8	4.4	12	LC
W3F3VB	104.9	106.6	103.4	100.6 L	103.8	-1.62	10.8	2.6	106.7	-1.14	11.0	3.9	12	XX
WF62LD_AL	104.3	97.9 *	104.4	102.1	102.1	-2.06 *	11.9	3.0	104.8	-1.76	10.9	3.1	12	AL
WPTUU4_AL	105.2	115.7	109.3 H	104.2	108.6	-0.40	14.1	5.2	108.9	-0.46	11.3	4.2	12	XX
WTUXLQ_AI	112.1	112.4	115.6	108.8	112.2	0.53	10.4	2.8	112.7	0.76	11.2	4.7	12	AL
WU6ZAA	130.3 XL	130.2 XL	129.7 XL	130.4 XL	130.2	5.12 X	3.6	0.3 L	130.4	6.40 X	3.5	1.7	12	AH
YA8G7L	107.7	108.3	112.1	115.7	110.9	0.19	14.5	3.7	111.0	0.24	12.5	4.3	12	LZ
YARWLP	124.1 *L	120.4 L	120.8 *L	122.3 L	121.9	3.00 X	2.8	1.7	118.6	2.66 *	2.3	3.7	8	LA
YR94XL	104.6 H	109.6	109.9	116.5	110.2	0.00	18.9	4.9	111.6	0.42	14.5	4.3	12	LC
Z33YB8	110.0	108.1	107.0	115.3	110.1	-0.02	14.9	3.7	110.4	0.03	13.5	3.1	12	XX
ZCPX2C	111.7	104.8	109.6	No Data	108.7	-0.38	8.1	3.5	109.0	-0.42	8.2	2.9	7	XX
ZH3J9X	114.2	114.8	111.4	111.1	112.9	0.69	10.8	1.9	112.3	0.65	12.3	4.0	12	AH
ZURHYZ_AL	117.5	105.5	115.7	115.6	113.5	0.87	10.6	5.5	111.8	0.48	12.6	4.6	12	AL

Consensus (All Labs) Results

Wk Mean	110.01	110.63	110.17	110.84	Month Mean	110.17	Grand Mean	110.29
Avg SDr	11.84	10.57	10.88	11.45	Avg SD	11.25	Avg SD	10.91
SD btwn Labs	5.19	5.09	5.15	5.97	SD btwn Labs	3.91	SD btwn Labs	3.14
Labs Incld	57	57	55	55	SD btwn Wks	3.84	SD btwn Wks	4.14
Labs Excld	1	1	1	1	Labs Incld	57	Labs Incld	57
Labs not Rcvd	1	1	3	3				

Key to Instrument Codes Reported by Participants

AH	Perkins Model AH	AL	L & W Autoline 400
LA	L&W Bursting Strength Tester	LB	L&W Burst-O-Matic
LC	L&W Autoline (206 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

Containerboard Interlaboratory Testing Program

Analysis 215

Ring Crush, 42 lb Linerboard - 42L1

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
6YB7MT	90.3	95.0	91.9	92.3	92.4	-0.62	3.2	1.9	92.4	-0.62	3.2	1.9	4	LD
6YPTYF	93.7	94.6	93.8 L	93.9 L	94.0	-0.19	1.8	0.4 L	94.0	-0.19	1.8	0.4 L	4	LZ
8GJ8AQ	98.3	95.5 H	98.7	96.2	97.2	0.61	4.3	1.5	97.2	0.61	4.3	1.5	4	LD
AACFXY	82.3 XH	89.6	90.4 H	83.8 XH	86.5	-2.11 *	6.0	4.1	86.5	-2.11 *	6.0	4.1	4	LD
B76GZB	96.7	96.5	96.7	95.9	96.5	0.44	3.1	0.4 L	96.5	0.44	3.1	0.4 L	4	LC
BHL6BX	93.3	93.3	92.8	92.0	92.8	-0.49	2.5	0.6 L	92.8	-0.49	2.5	0.6 L	4	LD
BK8Q4K	92.1	95.1	94.6	95.7	94.4	-0.10	2.6	1.6	94.4	-0.10	2.6	1.6	4	LG
CUV2QK	96.9	96.1	96.1	94.8	96.0	0.31	2.7	0.9	96.0	0.31	2.7	0.9	4	LD
DH9MZN	94.7	94.3	94.8	132.3 X	104.0	2.37 *	2.7	18.9 H	104.0	2.37 *	2.7	18.9 H	4	LD
DJNLKD	90.5	89.9 L	92.1	92.4	91.2	-0.91	2.3	1.2	91.2	-0.91	2.3	1.2	4	TH
FH7CKB	94.2	96.2	96.4	96.1	95.7	0.24	3.4	1.0	95.7	0.24	3.4	1.0	4	MB
FP44T6	95.5	95.0	95.7	94.5	95.2	0.10	2.1	0.5 L	95.2	0.10	2.1	0.5 L	4	LD
GCGD9T	92.0	90.9	92.9	90.4	91.5	-0.83	3.3	1.1	91.5	-0.83	3.3	1.1	4	LZ
GKRFR9	91.4	90.3	91.3	94.3	91.8	-0.75	2.5	1.8	91.8	-0.75	2.5	1.8	4	LC
GN88GF	92.8	92.2	91.2 L	92.9	92.3	-0.64	2.0	0.8	92.3	-0.64	2.0	0.8	4	LC
H6AAWZ	95.6	97.2	96.8	95.5	96.3	0.39	2.7	0.9	96.3	0.39	2.7	0.9	4	LC
HEW9M6	87.7	88.8	90.0	89.7	89.0	-1.47	3.9	1.0	89.0	-1.47	3.9	1.0	4	EM
HJUPYY	70.7 XH	70.1 XH	70.9 XH	72.0 XH	70.9	-6.09 X	10.1	0.8	70.9	-6.09 X	10.1	0.8	4	LB
HKLLNT	90.2	90.9	91.0	90.6	90.7	-1.05	2.4	0.4 L	90.7	-1.05	2.4	0.4 L	4	LD
HMUZVY	96.2	94.4	95.1	94.0	94.9	0.04	2.7	1.0	94.9	0.04	2.7	1.0	4	LD
J26XD6	94.1	96.5	95.8	95.1	95.4	0.16	2.6	1.0	95.4	0.16	2.6	1.0	4	TH
JN6YP9	68.1 XH	69.6 XH	68.4 XH	69.5 XH	68.9	-6.62 X	7.9	0.8	68.9	-6.62 X	7.9	0.8	4	LD
L49DXF	98.4	96.3	97.6	99.1	97.9	0.79	3.0	1.2	97.9	0.79	3.0	1.2	4	LD
LZA22F	94.9	94.5	93.8	94.3	94.4	-0.10	2.9	0.5 L	94.4	-0.10	2.9	0.5 L	4	LD
MT6K7Z	100.5	101.9 H	95.2 H	93.4 H	97.8	0.76	4.9	4.1	97.8	0.76	4.9	4.1	4	LD
QB8NWT	89.4	92.3	88.1	89.5	89.8	-1.27	3.1	1.8	89.8	-1.27	3.1	1.8	4	LD
QHD7T9	98.1	100.0	100.1	94.9	98.3	0.90	3.2	2.4	98.3	0.90	3.2	2.4	4	LC
T6F44W	90.8	93.2	84.5 *	86.1 X	88.7	-1.56	3.8	4.0	88.7	-1.56	3.8	4.0	4	LD
VAKJQQ	101.3	101.3	104.5 *	101.6 *	102.2	1.90	2.7	1.6	102.2	1.90	2.7	1.6	4	LD
VCPCH4	88.3 H	99.8	108.5 X	104.5 X	100.3	1.41	3.6	8.7 H	100.3	1.41	3.6	8.7 H	4	LX
VYYEG7	96.9	95.7	93.7	94.4 H	95.2	0.10	3.9	1.4	95.2	0.10	3.9	1.4	4	LD
WPTUU4	95.4	96.2	96.4	96.2	96.0	0.32	2.0	0.4 L	96.0	0.32	2.0	0.4 L	4	LD
WU6ZAA	95.0	95.3	95.2	95.6	95.3	0.13	1.8	0.3 L	95.3	0.13	1.8	0.3 L	4	LD
YARWLP	91.7 L	91.0 L	91.7 L	91.7 L	91.5	-0.82	0.8	0.3 L	91.5	-0.82	0.8	0.3 L	4	TU
YJGLJC	101.3	102.1	98.0	100.6 *	100.5	1.46	4.5	1.8	100.5	1.46	4.5	1.8	4	EM

Containerboard Interlaboratory Testing Program
Analysis 215
Ring Crush, 42 lb Linerboard - 42L1
TAPPI Official Test Method T822

Report #658
July 2024

	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
YR94XL	98.0	98.1	92.5	95.9	96.1	0.35	2.3	2.6	96.1	0.35	2.3	2.6	4	LD
YWHK8A	95.3 L	95.3 L	97.3 L	No Data	96.0	0.31	0.8	1.2	96.0	0.31	0.8	1.2	3	MZ
Z33YB8	98.7	95.3	93.1	96.2	95.9	0.28	3.2	2.3	95.9	0.28	3.2	2.3	4	MB
ZCPX2C	88.6 H	86.0 *	89.7	No Data	88.1	-1.70	5.3	1.9	88.1	-1.70	5.3	1.9	3	TU
ZDMBKY	98.8	98.7	97.6	96.3	97.8	0.78	3.8	1.2	97.8	0.78	3.8	1.2	4	TU
ZH3J9X	93.7	95.0	97.8	96.5	95.7	0.25	2.6	1.8	95.7	0.25	2.6	1.8	4	LD
ZKMPA7	96.2 L	95.1 L	97.4 L	No Data	96.2	0.38	0.9	1.1	96.2	0.38	0.9	1.1	3	MZ
ZR7V7D	101.9	100.4	100.6	99.6	100.6	1.50	2.9	1.0	100.6	1.50	2.9	1.0	4	LD
ZURHYZ	71.7 XH	100.3	86.9 *H	94.2	88.2	-1.67	6.4	12.3 H	88.2	-1.67	6.4	12.3 H	4	LZ

Consensus (All Labs) Results

Wk Mean	94.73	95.14	94.38	94.74	Month Mean	94.77	Grand Mean	94.77
Avg SDr	3.10	3.07	3.21	3.06	Avg SD	3.25	Avg SD	3.25
SD btwn Labs	3.74	3.67	3.86	2.80	SD btwn Labs	3.91	SD btwn Labs	3.91
Labs Incld	40	42	41	35	SD btwn Wks	4.08	SD btwn Wks	4.08
Labs Excld	4	2	3	6	Labs Incld	42	Labs Incld	42
Labs not Rcvd	0	0	0	3				

Key to Instrument Codes Reported by Participants

EM	Emerson 1200	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
MZ	Messmer Buchel (model not specified)	TH	TMI Compression Tester, Model 17-76
TU	TMI Universal Crush Tester (TMI K440)		

Containerboard Interlaboratory Testing Program

Analysis 216

Ring Crush, 52 lb Linerboard - 52J1

TAPPI Official Test Method T822

Report #658
July 2024

	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
6YB7MT	125.1	127.0	127.3	127.5	126.7	-0.11	4.9	1.1	127.3	0.19	4.2	2.9	11	LD
6YPTYF	128.8	129.4	128.1 L	131.3 L	129.4	0.37	2.0	1.4	127.8	0.30	2.6	2.1	12	LZ
8GJ8AQ	138.4 H	133.1	136.4	136.5	136.1	1.55	5.8	2.2	117.5	-1.95 *	5.3	25.9 H	12	LD
AACFXY	114.0 *H	102.9 XH	125.4	119.1	115.4	-2.11 *	7.6	9.5	114.2	-2.68 *	8.5	6.8	8	LD
B76GZB	131.4	130.1	128.0	131.7	130.3	0.52	3.0	1.7	129.2	0.63	3.0	1.8 L	12	LC
BHL6BX	125.6	125.7 L	125.6	125.8	125.7	-0.29	3.0	0.1 L	125.4	-0.22	2.7	1.0 L	12	LD
BK8Q4K	122.9	126.2	126.5	123.6	124.8	-0.45	3.3	1.8	126.5	0.03	3.5	2.1	12	LY
CUV2QK	125.7	127.0	129.0	126.7	127.1	-0.04	3.6	1.4	128.7	0.52	3.7	1.9 L	12	LD
DH9MZN	135.5	94.0 X	129.9	131.0	122.6	-0.83	3.8	19.2 H	129.2	0.63	4.6	11.5	12	LD
DJNLKD	117.5	117.7	122.3	126.2	120.9	-1.13	3.6	4.2	124.8	-0.35	4.0	3.7	12	TH
FH7CKB	128.5	129.6	131.1	127.8	129.3	0.34	3.5	1.4	130.5	0.90	3.9	2.0 L	12	MB
FP44T6	125.7	126.5	125.9	126.2	126.1	-0.22	2.8	0.3 L	126.6	0.04	3.7	0.7 L	12	LD
GCGD9T	122.6	122.7	124.8	122.2	123.1	-0.75	3.4	1.2	123.1	-0.73	3.4	1.2 L	4	LZ
GKRFR9	124.6	127.0	125.9	124.2	125.4	-0.33	4.3	1.2	126.8	0.08	4.2	2.5	12	LC
GN88GF	117.9	118.2	120.1	118.4	118.7	-1.53	4.5	1.0	117.0	-2.06 *	3.7	2.5	12	LC
H6AAWZ	86.3 X	84.1 X	86.4 X	82.9 X	84.9	-7.47 X	5.0	1.7	119.0	-1.63	4.7	25.2 H	12	LC
HEW9M6	120.6	117.7	119.9	117.5	118.9	-1.48	4.0	1.6	118.6	-1.72	4.9	4.3	12	EM
HJUPYY	95.6 XH	104.4 XH	116.8 H	118.7 H	108.9	-3.25 X	21.4	10.9 H	101.2	-5.54 X	21.3	10.4	12	LB
HKLLNT	123.5	128.2	122.2	125.5	124.9	-0.43	4.3	2.6	125.6	-0.17	3.8	1.6 L	12	LD
HMUZVY	124.8	131.4	130.6 L	123.8	127.6	0.05	3.7	3.9	128.0	0.37	3.6	2.5	9	LD
J26XD6	126.8	128.5	127.2	125.5	127.0	-0.06	4.9	1.3	128.4	0.44	4.4	2.3	12	TH
JN6YP9	84.1 XH	82.5 XH	86.1 XH	84.7 XH	84.3	-7.58 X	11.3	1.5	85.3	-9.05 X	11.5	1.3 L	12	LD
L49DXF	134.3	133.4	131.6	133.3	133.1	1.02	4.9	1.1	131.7	1.16	4.8	2.1	12	LD
LZA22F	123.0	127.9	126.0	126.5	125.8	-0.26	3.6	2.1	125.5	-0.19	3.8	1.3 L	12	LD
MT6K7Z	123.0	119.4	120.9	129.8	123.3	-0.71	6.3	4.6	124.8	-0.36	5.7	3.5	8	LD
QB8NWT	120.6	122.5	123.7	121.1 H	122.0	-0.94	6.7	1.4	125.0	-0.30	4.9	2.7	12	LD
QHD7T9	139.1	134.3	132.8	135.4	135.4	1.42	4.2	2.7	126.1	-0.07	3.9	7.2	12	LC
T6F44W	129.6	130.0	118.4	123.0	125.3	-0.37	4.7	5.6	126.5	0.03	4.4	6.7	12	LD
VAKJQQ	132.0	130.2	136.5	131.4	132.5	0.91	4.2	2.8	131.9	1.23	3.9	3.1	12	LD
VCPCH4	138.9	148.9 XH	143.1 *	137.0 *	142.0	2.58 *	5.5	5.3	135.2	1.93 *	8.8	11.0	11	LY
VYYEG7	127.5	121.8	128.3	129.5	126.7	-0.10	4.6	3.4	128.1	0.39	5.3	3.5	12	LD
WPTUU4	131.0	131.2	131.5 L	131.3	131.2	0.69	2.9	0.2 L	129.2	0.62	2.8	2.0	12	LD
WU6ZAA	121.7	121.4	121.8	121.4 L	121.6	-1.02	2.6	0.2 L	122.2	-0.91	2.9	0.5 L	12	LD
YARWLP	122.5 L	121.7 L	122.8 L	122.2 L	122.3	-0.89	1.2	0.5 L	126.7	0.06	1.1	4.7	8	TU
YJGLJC	127.5	129.6	126.9	124.3	127.1	-0.05	4.8	2.2	125.2	-0.27	4.4	1.9 L	12	EM

Containerboard Interlaboratory Testing Program

Analysis 216

Ring Crush, 52 lb Linerboard - 52J1

TAPPI Official Test Method T822

Report #658
July 2024

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
YR94XL	128.3	129.5	126.0 L	124.5	127.0	-0.05	2.7	2.3	125.1	-0.27	2.4	3.3	12	LD
YWHK8A	136.5 L	134.7 L	136.9 L	No Data	136.0	1.53	0.7	1.2	131.7	1.18	1.4	3.8	11	MZ
Z33YB8	131.7	129.3	129.1	130.6	130.2	0.50	5.0	1.2	126.8	0.10	7.6	7.2	12	MB
ZCPX2C	121.0 H	117.6 H	119.6 H	No Data	119.4	-1.39	8.9	1.7	122.3	-0.89	8.7	3.7	7	TU
ZDMBKY	132.6	126.1	127.0	129.1	128.7	0.24	5.2	2.9	131.1	1.03	5.1	3.5	12	TU
ZH3J9X	126.4	124.2	125.8	126.3	125.7	-0.29	3.2	1.0	126.3	-0.01	3.8	1.0 L	12	LD
ZKMPA7	136.4 L	134.0 L	137.0 L	No Data	135.8	1.49	0.8	1.6	131.1	1.04	1.2	4.5	7	TH
ZR7V7D	135.2	135.6	138.2 L	134.4	135.8	1.50	3.0	1.7	135.8	2.08 *	3.0	1.7 L	4	LD
ZURHYZ	135.1	154.9 X	113.6 *H	131.2	133.7	1.12	7.3	17.0 H	125.4	-0.22	9.5	18.6 H	12	LZ

Consensus (All Labs) Results

Wk Mean	127.65	127.03	127.16	126.96	Month Mean	127.33	Grand Mean	126.38
Avg SDr	4.24	3.96	5.58	5.31	Avg SD	4.46	Avg SD	4.73
SD btwn Labs	6.27	5.13	6.14	5.07	SD btwn Labs	5.67	SD btwn Labs	4.54
Labs Incld	41	37	42	39	SD btwn Wks	4.83	SD btwn Wks	7.47
Labs Excld	3	7	2	2	Labs Incld	41	Labs Incld	42
Labs not Rcvd	0	0	0	3				

Key to Instrument Codes Reported by Participants

EM	Emerson 1200	LB	L&W Crush Tester 240
LC	L&W Crush Tester 48	LD	L&W Crush Tester 248
LY	L&W Crush Tester 958	LZ	L&W Crush Tester (model not specified)
MB	Messmer Buchel K440	MZ	Messmer Buchel (model not specified)
TH	TMI Compression Tester, Model 17-76	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
27HUNJ	25.5	23.8	24.0	25.3	24.6	0.24	1.6	0.9	24.6	0.24	1.6	0.9	4	LZ
4BN4RW_AL	23.5	24.6	24.0	24.6	24.2	-0.29	1.7	0.6	24.2	-0.29	1.7	0.6	4	XX
6GUXLT	24.0	23.1	23.9	25.1	24.0	-0.46	1.6	0.8	24.0	-0.46	1.6	0.8	4	LH
6YPTYF	40.7 XL	41.6 XL	41.7 XL	41.6 XL	41.4	19.98 X	0.3	0.5	41.4	19.98 X	0.3	0.5	4	XX
7LH3W9	23.8	23.8	24.5	24.6	24.2	-0.30	1.5	0.4	24.2	-0.30	1.5	0.4	4	LH
8GJ8AQ	24.8	25.8	25.6	25.2	25.4	1.12	1.8	0.4	25.4	1.12	1.8	0.4	4	LU
8TYXC3	26.2	26.4	25.9	25.4	26.0	1.81	1.7	0.4	26.0	1.81	1.7	0.4	4	LH
AACFXY	25.1 L	24.8 L	25.2 L	24.7 L	24.9	0.60	0.0	0.2	24.9	0.60	0.0	0.2	4	LH
AERNLX	24.1	23.6	23.9	23.8	23.8	-0.69	1.8	0.2	23.8	-0.69	1.8	0.2	4	LZ
B76GZB	24.8	23.6	24.3	25.0	24.4	-0.01	1.7	0.6	24.4	-0.01	1.7	0.6	4	LU
BK8Q4K	24.9	25.3	24.4	25.0	24.9	0.55	1.6	0.4	24.9	0.55	1.6	0.4	4	BK
CUV2QK_AL	24.3	24.7 H	24.9	25.2	24.8	0.38	2.0	0.4	24.8	0.38	2.0	0.4	4	AL
D6LDF4	25.8	25.5	25.6	25.7	25.6	1.43	1.6	0.1	25.6	1.43	1.6	0.1	4	LU
D6LDF4_AL	23.9	22.7	24.5	25.5	24.1	-0.33	1.3	1.2	24.1	-0.33	1.3	1.2	4	AL
D8D96X	26.3	27.5 *	27.8 X	27.4 *	27.2	3.29 X	1.8	0.6	27.2	3.29 X	1.8	0.6	4	LH
DH9MZN	23.8	25.2	25.2	24.0	24.6	0.15	2.0	0.8	24.6	0.15	2.0	0.8	4	LW
E276T4	23.3	23.4	22.3 *	24.0	23.2	-1.40	1.2	0.7	23.2	-1.40	1.2	0.7	4	LH
E276T4_AL	22.9	23.3	22.9	23.0	23.0	-1.65	1.5	0.2	23.0	-1.65	1.5	0.2	4	AL
EGYWD6	22.6 L	24.9	24.3	24.9	24.2	-0.30	1.5	1.1	24.2	-0.30	1.5	1.1	4	LA
EKHU72_AL	26.2	24.3	24.6	23.9	24.7	0.35	2.0	1.0	24.7	0.35	2.0	1.0	4	AL
EQNMZX	25.3	25.7	24.1	25.4	25.1	0.81	1.4	0.7	25.1	0.81	1.4	0.7	4	LU
FGEFVG	21.3 *	24.0	22.8	21.5 X	22.4	-2.37 *	1.6	1.2	22.4	-2.37 *	1.6	1.2	4	LY
FH7CKB	24.6	24.4	23.8	24.4	24.3	-0.16	1.7	0.3	24.3	-0.16	1.7	0.3	4	LA
GCGD9T	25.3	24.9	25.5	24.8 L	25.1	0.80	1.6	0.3	25.1	0.80	1.6	0.3	4	LA
GN88GF	23.2	23.9	24.3	23.9	23.8	-0.69	1.5	0.4	23.8	-0.69	1.5	0.4	4	LZ
H6AAWZ	23.1	23.9 H	No Data	23.6	23.5	-1.11	1.8	0.4	23.5	-1.11	1.8	0.4	3	LU
HJUPYY	23.7	24.7	23.9	24.4	24.2	-0.31	1.7	0.5	24.2	-0.31	1.7	0.5	4	LH
HKLLNT	24.7	24.6	24.4	25.0	24.7	0.30	1.5	0.2	24.7	0.30	1.5	0.2	4	LY
HMUZVY_AI	23.8	24.1	25.1	25.2 H	24.6	0.15	2.0	0.7	24.6	0.15	2.0	0.7	4	XX
JBFZY7	22.9	22.7	23.4	23.5 L	23.1	-1.51	1.1	0.4	23.1	-1.51	1.1	0.4	4	XX
JN6YP9	24.3	24.2	23.9	24.2	24.1	-0.34	1.6	0.2	24.1	-0.34	1.6	0.2	4	LY
JN6YP9_AL	23.5	23.3	24.0	23.8	23.7	-0.90	1.7	0.3	23.7	-0.90	1.7	0.3	4	AL
JQMGKX	23.7	24.5	24.9	24.2	24.3	-0.12	1.5	0.5	24.3	-0.12	1.5	0.5	4	LU
JRGAFG	27.0 *	28.1 X	26.3 *	26.5	27.0	2.99 X	1.8	0.8	27.0	2.99 X	1.8	0.8	4	LU
KM3PAV	23.5	24.7	23.7	25.5	24.3	-0.12	1.9	0.9	24.3	-0.12	1.9	0.9	4	LH

Containerboard Interlaboratory Testing Program

Analysis 223

STFI, 42 lb Linerboard - 42L1

TAPPI Official Test Method T826

Report #658
July 2024

	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
L49DXF_AL	25.3	25.4	25.6	25.9	25.6	1.34	1.7	0.3	25.6	1.34	1.7	0.3	4	AL
LZA22F	24.3	23.5	24.1	25.3 L	24.3	-0.16	1.3	0.8	24.3	-0.16	1.3	0.8	4	LA
M2DCBP_AL	25.0	25.9	24.8	24.7	25.1	0.79	1.6	0.5	25.1	0.79	1.6	0.5	4	AL
M7QXHB_AL	23.8	22.8	23.6	24.2	23.6	-0.96	1.5	0.6	23.6	-0.96	1.5	0.6	4	AL
NG4GEC	23.9	22.7	24.7	23.8	23.8	-0.78	1.3	0.8	23.8	-0.78	1.3	0.8	4	LW
NWW4MP	26.0	26.6	26.6 *	27.2 *	26.6	2.58 *	1.8	0.5	26.6	2.58 *	1.8	0.5	4	LH
PVJUAH	25.6	26.0	25.5	25.6	25.7	1.44	1.5	0.2	25.7	1.44	1.5	0.2	4	LA
QB8NWT	24.5	24.5	25.0	25.5	24.9	0.52	1.5	0.5	24.9	0.52	1.5	0.5	4	LY
QHD7T9	24.6	23.5 L	24.2	24.4	24.2	-0.30	1.5	0.5	24.2	-0.30	1.5	0.5	4	LA
T6F44W	23.9	24.1	23.8	23.6	23.8	-0.69	1.4	0.2	23.8	-0.69	1.4	0.2	4	LZ
T6F44W_AL	39.6 XL	38.3 XL	39.8 XL	40.9 XL	39.7	17.92 X	0.0	1.1	39.7	17.92 X	0.0	1.1	4	AL
U4FM66	25.9	25.5	25.4	25.2	25.5	1.26	1.7	0.3	25.5	1.26	1.7	0.3	4	LY
VAKJQQ	24.2	24.5	24.6	24.7	24.5	0.10	1.6	0.2	24.5	0.10	1.6	0.2	4	LH
VCPCH4	26.5	26.9 *	21.7 X	26.9 *H	25.5	1.26	3.7	2.5 H	25.5	1.26	3.7	2.5 H	4	LZ
VD24BK_AL	27.9 X	29.4 XH	29.8 XH	29.0 X	29.0	5.41 X	2.1	0.8	29.0	5.41 X	2.1	0.8	4	AL
VYYEG7	25.1	24.5	25.9	26.9 *	25.6	1.35	1.6	1.1	25.6	1.35	1.6	1.1	4	LA
W3F3VB	26.0	27.6 *	25.5	26.1	26.3	2.20 *	1.2	0.9	26.3	2.20 *	1.2	0.9	4	LA
WF62LD_AL	24.0	24.0	22.9	24.6 L	23.9	-0.65	1.3	0.7	23.9	-0.65	1.3	0.7	4	AL
WPTUU4_AL	24.4	26.0	24.6	24.3	24.9	0.50	1.2	0.8	24.9	0.50	1.2	0.8	4	AL
WTUXLQ_AI	22.1	24.4	24.0	23.8	23.5	-1.06	1.5	1.0	23.5	-1.06	1.5	1.0	4	AL
WU6ZAA	36.1 X	36.8 XH	34.3 X	37.2 XH	36.1	13.74 X	2.8	1.3	36.1	13.74 X	2.8	1.3	4	XX
YA8G7L	24.3	24.2	25.1	24.5	24.5	0.11	2.0	0.4	24.5	0.11	2.0	0.4	4	LH
YARWLP	21.5 *	21.4 *	20.3 X	21.5 X	21.2	-3.83 X	1.3	0.6	21.2	-3.83 X	1.3	0.6	4	XX
YR94XL	24.2	23.4	24.4	23.9	24.0	-0.53	1.7	0.4	24.0	-0.53	1.7	0.4	4	LA
YWHK8A	24.0 L	23.7 L	23.3 L	No Data	23.7	-0.90	0.5	0.4	23.7	-0.90	0.5	0.4	3	XX
Z33YB8	23.2	24.5	24.4	24.8	24.2	-0.22	1.5	0.7	24.2	-0.22	1.5	0.7	4	LA
ZCPX2C	23.6	23.5	24.0	No Data	23.7	-0.85	1.4	0.3	23.7	-0.85	1.4	0.3	3	TT
ZDMBKY	26.0	25.1	24.9	25.6 L	25.4	1.14	1.5	0.5	25.4	1.14	1.5	0.5	4	LA
ZH3J9X	23.7 H	24.5	24.1	24.2	24.1	-0.34	1.8	0.3	24.1	-0.34	1.8	0.3	4	LU
ZKMPA7	23.7 L	23.6 L	23.3 L	No Data	23.5	-1.06	0.4	0.2	23.5	-1.06	0.4	0.2	3	XX
ZURHYZ_AL	22.6	23.0	23.1	23.3 L	23.0	-1.71	1.1	0.3	23.0	-1.71	1.1	0.3	4	AL

Containerboard Interlaboratory Testing Program

Analysis 223

STFI, 42 lb Linerboard - 42L1

TAPPI Official Test Method T826

Consensus (All Labs) Results

Wk Mean	24.31	24.44	24.44	24.84	Month Mean	24.43	Grand Mean	24.43
Avg SDr	1.57	1.52	1.60	1.85	Avg SD	1.63	Avg SD	1.63
SD btwn Labs	1.20	1.20	0.90	0.97	SD btwn Labs	0.85	SD btwn Labs	0.85
Labs Incld	62	61	58	57	SD btwn Wks	0.68	SD btwn Wks	0.68
Labs Excld	4	5	7	6	Labs Incld	59	Labs Incld	59
Labs not Rcvd	0	0	1	3				

Key to Instrument Codes Reported by Participants

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
27HUNJ	33.4	31.9 L	31.8	33.2	32.6	-0.30	1.8	0.8	33.2	0.05	2.1	0.9	8	XX
4BN4RW_AL	31.6	33.1	32.6	32.8 H	32.5	-0.33	2.2	0.6	33.3	0.12	2.1	1.1	8	XX
6GUXLT	33.5 H	32.5 H	33.1	33.2	33.1	-0.01	2.7	0.4	33.6	0.34	2.5	0.8	12	LH
6YPTYF	52.4 XL	56.3 XL	54.9 XL	55.2 XL	54.7	12.90 X	0.4	1.6	54.7	14.69 X	0.4	1.6	4	XX
7LH3W9	32.3	32.9	32.5	32.9	32.7	-0.25	2.0	0.3	32.2	-0.68	2.0	0.6	12	LH
8GJ8AQ	34.0	35.3	34.8	34.5	34.6	0.94	2.3	0.6	31.3	-1.23	2.1	5.0 H	12	LU
8TYXC3	34.4	36.0 H	33.5	34.1	34.5	0.86	2.8	1.1	34.9	1.21	2.5	1.1	12	LH
AACFXY	33.7 L	34.1 L	34.0 L	33.4 L	33.8	0.42	0.0	0.3	34.2	0.71	0.0	1.1	8	LH
AERNLX	32.9	33.5	33.1	33.2	33.2	0.07	2.5	0.3	33.0	-0.09	2.5	0.3 L	12	LZ
B76GZB	32.4	33.1	33.1	32.4	32.8	-0.18	2.4	0.4	32.5	-0.45	2.2	0.6	12	LU
BK8Q4K	32.7	33.3	33.5	32.5	33.0	-0.04	1.8	0.5	33.0	-0.07	2.2	1.2	12	BK
CUV2QK_AL	33.6	32.7	34.0	34.1	33.6	0.31	2.4	0.6	33.1	-0.02	2.1	0.8	11	AL
D6LDF4	33.7	33.3	32.9	32.4	33.1	0.00	2.0	0.5	33.5	0.26	2.1	0.9	6	LA
D6LDF4_AL	37.6 *	32.9	34.7	35.7	35.2	1.28	2.3	1.9	34.9	1.19	2.3	1.7	6	AL
D8D96X	36.7	36.6	34.4	35.6	35.8	1.64	2.4	1.1	34.8	1.16	2.3	1.3	8	LH
DH9MZN	32.5	32.6	32.1	32.2	32.3	-0.43	2.5	0.2	32.7	-0.27	2.6	0.5	12	LW
E276T4	31.2	31.2	31.0	31.4	31.2	-1.13	1.9	0.1 L	31.2	-1.33	1.9	0.6	8	LH
E276T4_AL	29.6 L	28.1 *	29.9	29.7 *	29.3	-2.24 *	1.6	0.8	29.6	-2.40 *	1.5	0.7	8	AL
EGYWD6	31.6 L	33.4	35.1 H	33.5	33.4	0.19	2.6	1.4	32.6	-0.36	2.3	1.6	12	LA
EKHU72_AL	38.2 *	35.3	35.1	34.8	35.8	1.64	2.6	1.6	35.6	1.65	2.5	1.2	8	AL
EQNMZX	33.6	33.9	32.9	33.3	33.4	0.22	2.0	0.4	33.8	0.42	2.2	0.7	12	LU
FGEFVG	27.5 X	25.5 X	23.8 X	25.0 X	25.5	-4.54 X	2.0	1.6	27.2	-4.06 X	2.5	2.6	12	LW
FH7CKB	32.9	35.4	33.4	35.4	34.3	0.72	2.4	1.3	33.6	0.31	2.2	1.0	12	LA
GCGD9T	35.0	34.3 L	36.7 *	37.2 *H	35.8	1.63	2.3	1.4	35.8	1.82	2.3	1.4	4	LA
GN88GF	31.1	31.0	30.8	31.5	31.1	-1.18	1.9	0.3	30.8	-1.58	2.2	0.9	12	LZ
H6AAWZ	31.7	32.3	No Data	31.5	31.8	-0.77	2.2	0.4	33.1	-0.03	2.2	1.6	11	LU
HJUPYY	31.0	33.0 H	31.9	33.1	32.3	-0.48	2.6	1.0	33.1	-0.02	2.9	1.5	12	LH
HKLLNT	32.8	33.2	33.4	33.2	33.2	0.05	1.9	0.3	33.1	0.00	2.1	0.5	12	LZ
HMUZVY_AI	33.1	32.5	32.6	33.2	32.9	-0.12	2.1	0.4	32.9	-0.19	2.2	0.4	12	XX
JBFZY7	30.8	31.5	31.4	30.8	31.1	-1.17	1.7	0.4	32.1	-0.68	2.1	1.2	8	XX
JN6YP9	32.2	30.9	31.8	32.2	31.8	-0.78	2.0	0.6	31.7	-0.97	2.1	0.6	12	LY
JN6YP9_AL	31.7	30.7	32.1	31.2	31.4	-0.98	2.0	0.6	32.1	-0.71	2.0	0.7	12	AL
JQMGKX	31.6	32.6	30.5 L	30.9	31.4	-0.99	1.9	0.9	31.9	-0.87	2.2	0.9	12	LU
JRGAFG	37.5 *	36.4 H	35.3	35.9	36.3	1.91	2.8	1.0	36.4	2.20 *	2.7	1.0	7	LU
KM3PAV	31.6	30.6	30.8	31.4	31.1	-1.18	2.9	0.5	31.2	-1.32	2.8	0.6	12	LH

Containerboard Interlaboratory Testing Program

Analysis 224

STFI, 52 lb Linerboard - 52J1

TAPPI Official Test Method T826

Report #658
July 2024

	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
L49DXF_AL	35.3	34.1 H	33.6 H	35.1	34.5	0.86	2.8	0.8	34.1	0.65	2.5	0.7	12	AL
LZA22F	32.2	33.2	31.8 L	33.7	32.7	-0.22	2.0	0.9	32.6	-0.34	2.2	0.5	12	LW
M2DCBP_AL	34.0	34.0	34.9	35.0	34.5	0.83	2.1	0.6	34.5	0.90	2.1	0.6	4	AL
M7QXHB_AL	30.1	30.4	32.0	31.5	31.0	-1.23	2.3	0.9	31.7	-0.96	2.2	1.0	12	AL
NG4GEC	32.6	34.7	33.0	31.6	32.9	-0.08	1.9	1.3	32.2	-0.65	2.4	1.1	12	LW
NWW4MP	34.5	35.0	34.7	36.1	35.1	1.18	2.2	0.7	35.3	1.47	1.9	0.9	12	LH
PVJUAH	37.2 *	35.9	36.3 *	39.0 XH	37.1	2.40 *	2.6	1.4	35.2	1.38	2.1	1.8	12	LA
QB8NWT	32.8	33.2	34.3 H	35.3	33.9	0.50	2.6	1.1	33.4	0.16	2.3	0.8	12	LZ
QHD7T9	34.2	33.6	33.6 L	33.1	33.6	0.33	1.6	0.5	33.9	0.51	2.1	1.2	12	LA
T6F44W	32.5	31.9	29.9	32.1	31.6	-0.88	2.4	1.1	32.2	-0.64	2.3	1.3	12	LZ
T6F44W_AL	41.5 XL	41.6 XL	40.7 XL	40.8 XL	41.2	4.83 X	0.0	0.5	41.6	5.75 X	0.0	1.4	12	XX
U4FM66	33.8	35.4	34.2 H	33.3	34.2	0.66	2.6	0.9	33.9	0.54	2.3	0.8	12	LU
VAKJQQ	29.3 *	29.6	29.9	29.2 *	29.5	-2.14 *	2.1	0.3	29.8	-2.27 *	2.0	1.5	12	LH
VCPCH4	35.3 H	33.3	21.7 X	34.7	31.2	-1.09	2.5	6.4 H	32.0	-0.78	3.8	4.7 H	11	LZ
VD24BK_AL	42.1 XH	40.8 X	41.0 X	41.5 X	41.3	4.92 X	2.4	0.6	41.0	5.39 X	2.6	1.1	12	AL
VYYEG7	33.0	36.2	34.6	33.8	34.4	0.80	2.1	1.4	35.3	1.47	2.3	1.3	12	LA
W3F3VB	35.3	34.3 L	34.2 L	32.9 L	34.2	0.65	1.3	1.0	34.9	1.22	1.6	1.6	12	LA
WF62LD_AL	33.9	34.6	32.2	34.6	33.8	0.45	2.3	1.1	33.5	0.28	2.3	1.0	11	AL
WPTUU4_AL	33.5	34.2	34.1	33.5	33.8	0.43	1.7	0.4	33.4	0.20	1.7	0.8	12	XX
WTUXLQ_AI	33.4	33.5	31.1 L	34.3	33.1	0.00	2.1	1.4	33.2	0.02	2.2	1.8	12	AL
WU6ZAA	40.2 X	39.8 X	41.2 X	40.4 X	40.4	4.37 X	1.9	0.6	40.4	4.95 X	1.9	0.6	4	XX
YA8G7L	31.6	30.6	31.6	32.5	31.6	-0.89	2.4	0.8	33.1	0.00	2.1	1.3	12	LZ
YARWLP	30.6 H	29.2 *	29.7 *	30.8	30.1	-1.79	2.9	0.8	30.2	-2.00 *	2.4	0.6	8	XX
YR94XL	32.1	31.0	31.8	32.1	31.8	-0.78	2.3	0.5	32.1	-0.71	2.1	0.9	12	LU
YWHK8A	33.6 L	33.8 L	32.5 L	No Data	33.3	0.13	0.8	0.7	33.9	0.53	0.7	0.9	11	XX
Z33YB8	34.1	34.3	34.0	35.4	34.5	0.83	2.3	0.6	33.8	0.46	2.3	1.1	12	LA
ZCPX2C	31.4	31.8	32.1	No Data	31.8	-0.78	2.2	0.4	32.4	-0.48	3.0	1.1	7	TT
ZDMBKY	35.4	37.5 *	36.3 *L	35.7	36.2	1.88	2.3	0.9	36.0	1.96 *	2.2	0.7	11	LA
ZH3J9X	31.7	32.4	31.5	33.2	32.2	-0.53	2.3	0.7	32.5	-0.44	2.4	1.0	12	LU
ZKMPA7	33.3 L	33.5 L	33.6 L	No Data	33.4	0.21	0.5	0.2 L	33.3	0.10	0.5	0.2 L	7	LZ
ZURHYZ_AL	31.4	30.9	32.0	30.9	31.3	-1.07	1.9	0.5	32.1	-0.70	2.2	1.1	12	AL

Containerboard Interlaboratory Testing Program

Analysis 224

STFI, 52 lb Linerboard - 52J1

TAPPI Official Test Method T826

Consensus (All Labs) Results

Wk Mean	33.11	33.15	32.95	33.20	Month Mean	33.07	Grand Mean	33.14
Avg SDr	2.12	2.33	2.16	2.25	Avg SD	2.21	Avg SD	2.26
SD btwn Labs	1.90	1.91	1.66	1.71	SD btwn Labs	1.68	SD btwn Labs	1.47
Labs Incld	61	61	59	57	SD btwn Wks	1.17	SD btwn Wks	1.35
Labs Excld	5	5	6	6	Labs Incld	61	Labs Incld	61
Labs not Rcvd	0	0	1	3				

Key to Instrument Codes Reported by Participants

AL	L & W Autoline 400	BK	Buchel Strip Compression Tester BK-155
LA	L&W Autoline (224 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 with 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

	Monthly Results				Cumulative Results				
WebCode	Mean	CPV	SD		Mean	CPV	SD Months	Months	Inst
4BN4RW_AL	168.2	-1.10	18.63		168.2	-1.10	0.00	1	AL
8TYXC3	256.6	0.62	18.17		256.6	0.62	0.00	1	EV
D6LDF4_AL	163.2	-1.20	15.53		163.2	-1.20	0.00	1	AL
DH9MZN	116.5	-2.11 *	3.45	L	116.5	-2.11 *	0.00	1	XX
E276T4_AL	246.1	0.41	23.23		246.1	0.41	0.00	1	AL
EKHU72_AL	273.5	0.95	30.98		273.5	0.95	0.00	1	AL
FGEFVG	223.3	-0.03	11.37	L	223.3	-0.03	0.00	1	LS
FH7CKB	273.4	0.95	55.40	H	273.4	0.95	0.00	1	LA
GN88GF	291.0	1.29	20.29		291.0	1.29	0.00	1	EV
H6AAWZ	153.0	-1.40	18.73		153.0	-1.40	0.00	1	EV
HKLLNT	260.6	0.70	30.29		260.6	0.70	0.00	1	LS
JN6YP9	168.3	-1.10	32.48		168.3	-1.10	0.00	1	XX
JN6YP9_AL	248.4	0.46	33.31		248.4	0.46	0.00	1	AL
JQMGKX	188.4	-0.71	16.22		188.4	-0.71	0.00	1	EV
L49DXF	248.8	0.47	34.74		248.8	0.47	0.00	1	LS
L49DXF_AL	253.6	0.56	16.66		253.6	0.56	0.00	1	AL
LZA22F	260.5	0.69	24.30		260.5	0.69	0.00	1	LA
M2DCBP_AL	270.2	0.88	18.17		270.2	0.88	0.00	1	AL
M7QXHB_AL	171.6	-1.04	37.51		171.6	-1.04	0.00	1	AL
PVJUAH	269.4	0.87	17.40		269.4	0.87	0.00	1	LA
QB8NWT	198.5	-0.51	18.35		198.5	-0.51	0.00	1	EV
QHD7T9	153.2	-1.40	9.99	L	153.2	-1.40	0.00	1	EV
RCHQJR	305.0	1.56	36.11		305.0	1.56	0.00	1	LS
T6F44W	188.9	-0.70	16.28		188.9	-0.70	0.00	1	LA
T6F44W_AL	184.5	-0.79	20.60		184.5	-0.79	0.00	1	AL
VD24BK_AL	196.7	-0.55	22.19		196.7	-0.55	0.00	1	AL
VYYEG7	168.5	-1.10	20.68		168.5	-1.10	0.00	1	LA
WF62LD_AL	236.8	0.23	24.06		236.8	0.23	0.00	1	AL
WTUXLQ_AL	268.1	0.84	36.45		268.1	0.84	0.00	1	AL
YA8G7L	252.0	0.53	39.59		252.0	0.53	0.00	1	LS
Z33YB8	280.6	1.09	18.28		280.6	1.09	0.00	1	LA
ZDMBKY	268.3	0.85	32.21		268.3	0.85	0.00	1	LA
ZH3J9X	289.4	1.26	28.30		289.4	1.26	0.00	1	EV
ZURHYZ_AL	150.2	-1.45	34.40		150.2	-1.45	0.00	1	AL

Consensus (All Labs) Results

Month Mean	224.86	Grand Mean	224.86
Avg SD	26.59	Avg SD Months	0.00
SD btwn Labs	51.34	SD btwn Labs	51.34
Labs Incld	34	Labs Incld	34

Key to Instrument Codes Reported by Participants

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 - 42L1

TAPPI Official Test Method T538

	Monthly Results				Cumulative Results				
WebCode	Mean	CPV	SD		Mean	CPV	SD Months	Months	Inst
4BN4RW_AL	376.3	-0.08	4.45		376.3	-0.08	0.00	1	XX
B76GZB	387.0	0.69	4.76		387.0	0.69	0.00	1	XX
CUV2QK_AL	381.7	0.31	10.69	H	381.7	0.31	0.00	1	AL
E276T4_AL	369.8	-0.55	3.91		369.8	-0.55	0.00	1	AL
EGYWD6	389.0	0.83	8.72		389.0	0.83	0.00	1	XX
EKHU72_AL	392.4	1.08	3.66		392.4	1.08	0.00	1	AL
HEW9M6	348.5	-2.09 *	4.79		348.5	-2.09 *	0.00	1	TS
HJUPYY	355.3	-1.60	2.61	L	355.3	-1.60	0.00	1	LA
HKLLNT	403.2	1.86 *	8.97		403.2	1.86 *	0.00	1	XX
HMUZVY_AL	380.4	0.21	5.62		380.4	0.21	0.00	1	XX
JN6YP9_AL	374.5	-0.21	7.53		374.5	-0.21	0.00	1	AL
L49DXF_AL	425.7	3.48 X	7.06		425.7	3.48 X	0.00	1	AL
T6F44W_AL	371.7	-0.41	3.92		371.7	-0.41	0.00	1	AL
WF62LD_AL	368.5	-0.64	3.06		368.5	-0.64	0.00	1	AL
WPTUU4_AL	383.4	0.43	4.90		383.4	0.43	0.00	1	AL
WTUXLQ_AL	379.8	0.17	8.89		379.8	0.17	0.00	1	AL

Consensus (All Labs) Results

Month Mean	377.43	Grand Mean	377.43
Avg SD	6.26	Avg SD Months	0.00
SD btwn Labs	13.87	SD btwn Labs	13.87
Labs Incld	15	Labs Incld	15

Key to Instrument Codes Reported by Participants

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

Containerboard Interlaboratory Testing Program

Analysis 231

Internal Bond, 42 lb Linerboard - 42L

TAPPI Official Test Method T569

	Monthly Results			Cumulative Results				
WebCode	Mean	CPV	SD	Mean	CPV	SD Months	Months	Inst
8TYXC3	152.0	0.80	3.67	152.0	0.80	0.00	1	TM
B76GZB	168.4	1.78	12.53	168.4	1.78	0.00	1	HY
CUV2QK	142.3	0.22	8.12	142.3	0.22	0.00	1	TM
EGYWD6	115.1	-1.41	2.95	115.1	-1.41	0.00	1	SC
H6AAWZ	114.2	-1.46	4.32	114.2	-1.46	0.00	1	TM
HMUZVY	153.4	0.88	7.37	153.4	0.88	0.00	1	HY
JN6YP9	123.6	-0.90	4.62	123.6	-0.90	0.00	1	TM
JQMGKX	125.8	-0.77	6.10	125.8	-0.77	0.00	1	TM
KM3PAV	137.0	-0.10	10.51	137.0	-0.10	0.00	1	HY
L49DXF	130.8	-0.47	5.24	130.8	-0.47	0.00	1	TM
LZA22F	151.2	0.75	7.66	151.2	0.75	0.00	1	HY
QB8NWT	167.2	1.71	10.23	167.2	1.71	0.00	1	HZ
QHD7T9	134.2	-0.27	7.12	134.2	-0.27	0.00	1	TM
RCHQJR	147.4	0.52	5.59	147.4	0.52	0.00	1	HY
ULVW77	130.4	-0.49	3.71	130.4	-0.49	0.00	1	TM
WF62LD	114.8	-1.43	6.42	114.8	-1.43	0.00	1	TM
WPTUU4	151.2	0.75	8.79	151.2	0.75	0.00	1	LZ
YR94XL	162.4	1.42	8.62	162.4	1.42	0.00	1	HZ
ZCPX2C	125.2	-0.80	13.98	125.2	-0.80	0.00	1	TM
ZH3J9X	135.4	-0.19	4.62	135.4	-0.19	0.00	1	TM
ZURHYZ	129.8	-0.53	3.77	129.8	-0.53	0.00	1	TM

Consensus (All Labs) Results

Month Mean	138.66	Grand Mean	138.66
Avg SD	7.55	Avg SD Months	0.00
SD btwn Labs	16.73	SD btwn Labs	16.73
Labs Incld	21	Labs Incld	21

Consensus By Method

Test Method	Group Mean	SD btwn Group	Difference from Grand Mean	Labs Included
Scott Bond Type	136.03	16.74	2.63	16
Modified Scott Bond Mechanics	156.92	9.91	18.26	3

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		

	Monthly Results			Cumulative Results			
WebCode	Mean	CPV	SD	Mean	CPV	SD Months	Months
8TYXC3	31.2	1.00	1.77	31.2	1.00	0.00	1
AACFXY	21.7	-1.35	2.08	21.7	-1.35	0.00	1
AERNLX	27.4	0.07	0.89	27.4	0.07	0.00	1
B76GZB	25.3	-0.46	1.71	25.3	-0.46	0.00	1
D6LDF4	30.8	0.91	0.84	30.8	0.91	0.00	1
DH9MZN	29.4	0.57	3.13	29.4	0.57	0.00	1
DJNLKD	30.8	0.91	0.97	30.8	0.91	0.00	1
EGYWD6	23.2	-0.97	3.35	23.2	-0.97	0.00	1
EKHU72	27.6	0.12	2.41	27.6	0.12	0.00	1
FGEFVG	29.8	0.67	1.79	29.8	0.67	0.00	1
GN88GF	22.2	-1.22	1.22	22.2	-1.22	0.00	1
H6AAWZ	29.8	0.67	3.35	29.8	0.67	0.00	1
HKLLNT	34.2	1.76	1.44	34.2	1.76	0.00	1
HMUZVY	26.4	-0.18	2.41	26.4	-0.18	0.00	1
JN6YP9	25.4	-0.43	2.19	25.4	-0.43	0.00	1
JQMGKX	36.0	2.21 *	1.22	36.0	2.21 *	0.00	1
JRGAFG	26.6	-0.13	1.67	26.6	-0.13	0.00	1
KM3PAV	26.7	-0.11	1.15	26.7	-0.11	0.00	1
L49DXF	23.4	-0.92	2.61	23.4	-0.92	0.00	1
LZA22F	31.4	1.06	2.41	31.4	1.06	0.00	1
M2APUB	27.8	0.17	1.92	27.8	0.17	0.00	1
M7QXHB	21.6	-1.37	3.78	21.6	-1.37	0.00	1
QB8NWT	16.7	-2.59 *	1.20	16.7	-2.59 *	0.00	1
QGYY8Q	24.4	-0.68	2.07	24.4	-0.68	0.00	1
RCHQJR	29.8	0.67	0.84	29.8	0.67	0.00	1
U6VKW6	29.6	0.62	2.70	29.6	0.62	0.00	1
VD24BK	25.5	-0.40	1.27	25.5	-0.40	0.00	1
WF62LD	29.4	0.57	3.78	29.4	0.57	0.00	1
WPTUU4	21.5	-1.40	1.58	21.5	-1.40	0.00	1
WTUXLQ	27.8	0.16	2.09	27.8	0.16	0.00	1
YA8G7L	22.6	-1.12	0.55	22.6	-1.12	0.00	1
Z33YB8	26.8	-0.08	1.30	26.8	-0.08	0.00	1
ZH3J9X	29.4	0.57	2.41	29.4	0.57	0.00	1
ZURHYZ	30.1	0.73	3.17	30.1	0.73	0.00	1

Consensus (All Labs) Results

Month Mean	27.12	Grand Mean	27.12
Avg SD	2.16	Avg SD Months	0.00
SD btwn Labs	4.03	SD btwn Labs	4.03
Labs Incld	34	Labs Incld	34

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
2TF36Y	32.1	-0.97		2.87	32.1	-0.97		0.00	1	LP
4BN4RW_AL	35.7	0.87		2.34	35.7	0.87		0.00	1	XX
6YPTYF	38.8	2.43	*	1.23	38.8	2.43	*	0.00	1	XX
8TYXC3	33.2	-0.42		3.55	33.2	-0.42		0.00	1	LP
AERNLX	32.7	-0.65		1.64	32.7	-0.65		0.00	1	LP
B76GZB	33.8	-0.11		2.45	33.8	-0.11		0.00	1	TP
CUV2QK_AL	34.2	0.09		1.75	34.2	0.09		0.00	1	AL
D6LDF4	34.9	0.48		2.39	34.9	0.48		0.00	1	GG
D6LDF4_AL	33.8	-0.10		1.69	33.8	-0.10		0.00	1	AL
DH9MZN	29.1	-2.48	*	1.13 L	29.1	-2.48	*	0.00	1	LP
E276T4_AL	38.1	2.09	*	3.10	38.1	2.09	*	0.00	1	AL
EKHU72_AL	33.6	-0.22		1.97	33.6	-0.22		0.00	1	AL
FGEFVG	20.8	-6.66	X	2.04	20.8	-6.66	X	0.00	1	XX
FH7CKB	32.8	-0.59		2.37	32.8	-0.59		0.00	1	LA
FRV384	35.2	0.63		2.64	35.2	0.63		0.00	1	LP
H6AAWZ_AL	33.3	-0.36		2.46	33.3	-0.36		0.00	1	AL
HJUPYY	35.8	0.90		3.32	35.8	0.90		0.00	1	LA
HKLLNT	34.2	0.08		3.95	34.2	0.08		0.00	1	GA
HMUZVY	35.0	0.49		2.35	35.0	0.49		0.00	1	TP
HMUZVY_AL	33.2	-0.43		2.86	33.2	-0.43		0.00	1	XX
JN6YP9	33.7	-0.14		1.63	33.7	-0.14		0.00	1	LP
JN6YP9_AL	37.3	1.68		2.47	37.3	1.68		0.00	1	AL
JQMGKX_AL	34.9	0.45		2.21	34.9	0.45		0.00	1	AL
JRGAFG	35.4	0.69		1.81	35.4	0.69		0.00	1	GG
L49DXF_AL	33.0	-0.50		2.86	33.0	-0.50		0.00	1	AL
LZA22F	33.8	-0.10		1.75	33.8	-0.10		0.00	1	LP
M2DCBP_AL	34.4	0.22		1.08 L	34.4	0.22		0.00	1	AL
M7QXHB_AL	32.5	-0.76		1.32	32.5	-0.76		0.00	1	AL
MT6K7Z	33.6	-0.20		3.17	33.6	-0.20		0.00	1	GG
PVJUAH	34.6	0.29		2.43	34.6	0.29		0.00	1	XX
QB8NWT	32.9	-0.54		1.88	32.9	-0.54		0.00	1	LP
QGYY8Q_AL	34.8	0.39		2.15	34.8	0.39		0.00	1	AL
RCHQJR	33.2	-0.41		2.21	33.2	-0.41		0.00	1	LP
T6F44W_AL	33.1	-0.46		3.38	33.1	-0.46		0.00	1	XX
U6VKW6	31.8	-1.13		3.32	31.8	-1.13		0.00	1	TD
VAKJQQ	36.2	1.11		3.61	36.2	1.11		0.00	1	XX
VD24BK_AL	39.3	2.65	*	2.59	39.3	2.65	*	0.00	1	AL
VYYEG7	32.9	-0.58		2.68	32.9	-0.58		0.00	1	LA
WF62LD_AL	35.6	0.80		3.14	35.6	0.80		0.00	1	AL

Containerboard Interlaboratory Testing Program

Analysis 237

Air Resistance, 42 lb Linerboard - 42L1

TAPPI Official Test Method T460

	Monthly Results				Cumulative Results				
WebCode	Mean	CPV	SD		Mean	CPV	SD Months	Months	Inst
WPTUU4_AL	35.1	0.54	1.51		35.1	0.54	0.00	1	AL
WTUXLQ_AL	30.0	-2.02 *	2.02		30.0	-2.02 *	0.00	1	AL
YA8G7L	30.9	-1.55	3.74		30.9	-1.55	0.00	1	TD
Z33YB8	32.4	-0.79	1.19		32.4	-0.79	0.00	1	LA
ZCPX2C	31.5	-1.26	4.66	H	31.5	-1.26	0.00	1	GA
ZDMBKY	34.1	0.05	1.83		34.1	0.05	0.00	1	LA
ZH3J9X	33.7	-0.13	4.03		33.7	-0.13	0.00	1	LW
ZR7V7D	33.8	-0.09	1.46		33.8	-0.09	0.00	1	XX
ZURHYZ_AL	34.1	0.07	3.34		34.1	0.07	0.00	1	AL

Consensus (All Labs) Results

Month Mean	34.00	Grand Mean	34.00
Avg SD	2.60	Avg SD Months	0.00
SD btwn Labs	1.98	SD btwn Labs	1.98
Labs Incld	47	Labs Incld	47

Key to Instrument Codes Reported by Participants

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	LW	L&W Gurley Densometer, Oil Flotation
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
2TF36Y	58.6 L	57.5	58.1	57.9	58.0	0.07	2.8	0.5	58.2	0.20	2.9	1.1	16	LD
6GUXLT	60.3	61.3	60.7	59.1	60.3	1.00	4.5	0.9	59.3	0.68	4.2	1.9	16	LD
7LH3W9	58.1	55.7	55.2	56.0	56.2	-0.65	3.1	1.3	56.5	-0.47	2.9	0.9	16	EM
8GJ8AQ	61.0	59.3 H	58.8	59.4	59.6	0.71	5.0	1.0	58.5	0.36	4.4	2.2	16	LD
AACFXY	61.5	62.3	58.2	59.6	60.4	1.02	2.6	1.8	61.0	1.33	3.3	1.9	16	LD
AERNLX	58.5 L	57.3	58.0	57.1	57.7	-0.05	1.9	0.6	57.9	0.09	2.0	0.4 L	16	LD
B76GZB	57.9 H	57.8	61.2	60.9	59.4	0.64	4.1	1.9	57.7	0.01	3.7	4.5 H	16	LC
BFV34N	54.8	54.8	56.4	55.1	55.3	-1.04	3.5	0.8	56.5	-0.46	3.6	1.1	16	LD
BK8Q4K	57.0	58.7 L	58.8	57.8	58.1	0.10	3.0	0.9	58.1	0.19	3.6	1.0	16	LZ
CFP9Y9	61.4 L	61.2 L	60.9 L	61.0	61.1	1.32	1.7	0.3 L	61.6	1.61	2.3	1.1	16	TB
D8D96X	60.3	59.9	62.5	59.5	60.5	1.09	2.6	1.3	59.5	0.76	3.6	1.1	12	LD
DH9MZN	61.5 H	61.8	62.9	62.1	62.1	1.71	4.4	0.6	61.8	1.67	4.3	1.5	16	LD
FP44T6	58.4	57.6	57.8	58.7	58.1	0.11	3.5	0.5	58.5	0.34	3.1	1.0	16	LD
FRV384	56.6	57.5	56.4	56.5	56.8	-0.43	3.0	0.5	58.1	0.18	3.8	1.9	16	LD
GN88GF	56.1	54.4	57.4	56.8	56.2	-0.67	3.4	1.3	53.5	-1.66	4.0	2.0	16	EN
H6AAWZ	64.0 *	No Data	60.9	60.4 H	61.8	1.59	4.6	2.0	61.2	1.42	4.5	1.8	11	LC
HJUPYY	53.6	54.1	55.5	56.2	54.9	-1.21	4.1	1.2	53.2	-1.81	4.5	2.6	16	LD
HKLLNT	57.0	55.9	60.6	60.2	58.4	0.23	3.6	2.3	56.8	-0.35	3.1	2.0	16	LZ
HMUZVY	53.1	56.2	55.7	56.1	55.3	-1.04	3.4	1.4	57.0	-0.25	3.7	1.5	16	LD
HNLWJT	56.6 L	57.7	57.6	57.2	57.3	-0.23	2.0	0.5	56.8	-0.33	2.1	0.6	12	TH
J4BJ3Q	58.0	60.1	61.3	57.1	59.1	0.52	4.0	1.9	59.5	0.75	4.4	2.4	14	LD
JBFZY7	58.3 L	62.4 L	61.8 L	60.9 L	60.9	1.22	1.0	1.8	60.4	1.10	0.8	1.3	12	XX
JN6YP9	56.5 H	54.7 H	54.4	55.2	55.2	-1.06	5.5	0.9	55.0	-1.05	4.5	1.1	16	LD
L9HT74	51.9	51.2 *	52.3 *	51.9 *	51.8	-2.44 *	4.1	0.5	51.3	-2.54 *	4.2	2.1	16	TH
LUWGUU	59.6	56.3	59.6	59.2	58.7	0.34	3.9	1.6	59.0	0.56	4.1	2.7	16	LD
LZA22F	58.7	57.9	57.9	58.8	58.3	0.19	3.9	0.5	58.8	0.47	4.5	1.5	16	XX
M7QXHB	52.3	54.1	55.2	56.9	54.6	-1.31	3.1	1.9	55.2	-0.98	3.6	1.6	16	LZ
NWW4MP	54.9	55.3	54.1	56.1	55.1	-1.10	3.6	0.8	54.1	-1.44	3.7	1.4	16	LD
QB8NWT	56.6	58.8	54.4	56.3	56.5	-0.53	3.7	1.8	55.5	-0.85	4.2	2.0	16	LZ
QHD7T9	58.9	60.2	62.2 H	60.8	60.5	1.09	4.1	1.4	59.5	0.74	2.8	1.5	16	LC
RCHQJR	No Data	No Data	No Data	58.2 L	58.2	0.13	1.2	0.0	57.8	0.05	2.5	1.3	13	LD
RP9MKP	44.0 X	38.4 X	36.6 X	41.1 XH	40.0	-7.20 X	4.6	3.3	44.0	-5.47 X	4.2	5.0 H	8	TC
T6F44W	53.3	55.6	54.9	55.0	54.7	-1.28	3.2	1.0	55.9	-0.69	3.4	1.7	16	LD
U4FM66	55.8	58.7 H	58.8	58.4	57.9	0.03	4.9	1.4	59.4	0.72	4.5	2.1	16	LD
U6VKW6	58.2	55.6	56.2	56.4	56.6	-0.51	4.4	1.1	56.3	-0.53	3.9	1.6	16	LZ

Containerboard Interlaboratory Testing Program

Analysis 240

Flat Crush Strength (CMT), 26 lb Corrugating Medium - CM13

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
UZHYQJ	57.6 L	57.9 L	58.0 L	57.8 L	57.8	0.00	0.5	0.2 L	58.3	0.26	0.6	0.3 L	16	LD
VCPCH4	57.9	54.3	62.1	64.3 *	59.6	0.73	3.4	4.5 H	58.9	0.52	3.7	2.9	16	LD
W8BT2M	62.5	61.9	61.7	61.6	61.9	1.64	2.2	0.4	61.0	1.34	2.1	1.0	8	LD
WF62LD	52.5	56.9	58.3	58.3	56.5	-0.54	4.4	2.7	56.8	-0.34	4.0	1.9	16	LD
WPTUU4	53.4	53.8	54.2	51.3 *	53.2	-1.89	3.1	1.3	52.8	-1.94 *	2.7	1.1	16	LD
WULUAK	55.0	60.7	63.3	62.2	60.3	0.99	3.7	3.7 H	59.9	0.90	3.9	2.4	16	LD
YARWLP	59.2 L	58.5 L	58.9 L	59.3 L	58.9	0.45	0.9	0.4	56.0	-0.65	1.0	2.2	12	TU
YR94XL	56.5	54.9	56.5	55.0	55.8	-0.84	2.7	0.9	55.4	-0.92	2.7	0.7	16	LD
YWHK8A	57.1 L	58.3 L	59.2 L	No Data	58.2	0.14	1.2	1.0	57.7	0.02	1.5	0.7	15	XX
Z33YB8	55.1	53.8 H	52.9 H	52.8 *H	53.7	-1.69	7.8	1.1	55.5	-0.87	5.9	2.2	16	MB
ZDMBKY	67.5 X	58.7	57.1	57.3	60.2	0.94	4.6	5.0 H	60.7	1.21	5.0	3.6	16	TU
ZH3J9X	53.8	55.4	57.2	58.5	56.2	-0.65	3.6	2.1	55.6	-0.84	3.4	1.7	16	LD
ZQR86L	60.0	60.1	61.5	61.3	60.7	1.16	2.1	0.8	61.3	1.48	2.7	1.0	16	LC

Consensus (All Labs) Results

Wk Mean	57.33	57.48	58.20	58.01	Month Mean	57.84	Grand Mean	57.65
Avg SDr	3.72	3.39	3.65	3.72	Avg SD	3.60	Avg SD	3.57
SD btwn Labs	2.88	2.69	2.86	2.68	SD btwn Labs	2.47	SD btwn Labs	2.49
Labs Incld	45	45	46	46	SD btwn Wks	1.68	SD btwn Wks	1.84
Labs Excld	2	1	1	1	Labs Incld	47	Labs Incld	47
Labs not Rcvd	1	2	1	1				

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
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 250

Fluted Edge Crush Strength (CFC), 26 lb Corrugating Medium - CM13

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
2TF36Y	69.1 L	68.4	68.6	69.7	69.0	0.70	2.9	0.6	70.6	1.35	3.5	1.5	16	LD
6YPTYF	66.7	68.4 L	65.2	64.7 L	66.3	0.07	1.6	1.6	65.6	-0.67	1.7	1.1	16	LZ
8GJ8AQ	68.5	72.2	71.2	69.8	70.4	1.05	3.3	1.6	67.1	-0.08	6.0	2.5	16	LD
AERNLX	66.1	66.8	66.3	67.0 L	66.6	0.13	2.2	0.4	67.1	-0.07	2.2	0.6	16	LD
B76GZB	68.7	70.1	67.5	70.1 L	69.1	0.73	3.2	1.3	68.6	0.54	3.2	1.7	16	LC
BK8Q4K	65.3	64.9	66.0	63.7	65.0	-0.24	4.2	0.9	65.5	-0.71	4.1	1.7	16	LZ
DH9MZN	69.7	67.0	63.5	66.5	66.7	0.16	3.2	2.5	66.9	-0.13	3.9	2.0	16	LD
FRV384	65.7	70.1	68.0	68.5	68.1	0.48	3.0	1.8	66.3	-0.37	3.5	1.8	16	LD
H6AAWZ	69.5	No Data	67.5	72.5	69.8	0.90	4.0	2.5	70.8	1.42	4.1	2.3	11	LC
HJUPYY	55.6 *	54.8 *H	54.8 *H	56.0 *H	55.3	-2.52 *	8.1	0.6	54.7	-5.01 X	7.7	0.8	16	LD
HMUZVY	64.6	66.2	65.7	69.7	66.5	0.13	3.9	2.2	67.1	-0.05	4.9	2.4	16	LD
JBFZY7	69.3 L	71.6 L	70.5 L	69.8 L	70.3	1.01	1.0	1.0	70.6	1.31	0.9	1.3	12	XX
JN6YP9	57.1	56.1 *	55.4 *	58.3 *	56.7	-2.19 *	5.0	1.2	56.8	-4.18 X	5.4	1.2	16	LD
LZA22F	68.5	66.1	67.5	66.6	67.2	0.28	3.3	1.1	68.5	0.51	3.9	1.5	16	XX
M7QXHB	54.5 *H	64.6	61.9	63.5	61.1	-1.15	4.0	4.5 H	62.2	-2.02 *	4.0	3.5	16	LZ
T6F44W	66.3	63.9	60.9	63.1	63.6	-0.58	3.9	2.2	64.0	-1.30	3.8	1.5	16	XX
W8BT2M	71.3	72.1	71.2	71.5	71.5	1.30	2.4	0.4	71.0	1.49	2.3	0.9	8	LD
WF62LD	67.7	66.4	63.8	68.6	66.6	0.15	4.3	2.1	67.2	-0.04	3.8	1.8	16	LD
WPTUU4	65.3	65.4	66.0	65.5	65.6	-0.11	3.0	0.3	67.6	0.12	3.1	1.8	16	LD
YWHK8A	65.2 L	64.7 L	64.2 L	No Data	64.7	-0.30	0.7	0.5	63.9	-1.33	1.2	1.3	15	XX

Consensus (All Labs) Results

Wk Mean	65.74	66.30	65.28	66.59	Month Mean	66.00	Grand Mean	67.26
Avg SDr	3.43	3.56	4.06	3.75	Avg SD	3.69	Avg SD	3.56
SD btwn Labs	4.70	4.62	4.46	4.32	SD btwn Labs	4.24	SD btwn Labs	2.51
Labs Incld	20	19	20	19	SD btwn Wks	1.78	SD btwn Wks	1.85
Labs Excld	0	0	0	0	Labs Incld	20	Labs Incld	18
Labs not Rcvd	0	1	0	1				

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)	XX	Instrument make/model not specified by lab

Containerboard Interlaboratory Testing Program

Analysis 255

Ring Crush (RCT), 26 lb Corrugating Medium - CM13

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
2TF36Y	40.9	42.3	40.9	41.9	41.5	0.19	2.7	0.7	41.3	-0.03	2.9	1.2	16	LD
6GUXLT	44.0	39.2	44.2	43.7	42.8	0.74	2.9	2.4	42.4	0.53	2.8	2.4	16	LD
AACFXY	32.5 *	31.5 XH	43.1	33.6 X	35.2	-2.48 *	4.1	5.4 H	36.9	-2.35 *	3.7	3.4	16	XX
B76GZB	40.3	40.9	39.9	42.9	41.0	-0.02	3.1	1.4	41.8	0.22	3.6	2.2	16	LC
BFV34N	41.5	42.2	43.6	44.1	42.9	0.78	2.6	1.2	43.2	1.00	2.6	1.1	16	LC
CFP9Y9	40.3 L	40.7	39.5	42.0 L	40.6	-0.17	1.3	1.0	40.6	-0.43	2.3	1.1	16	XX
FP44T6	41.0	40.2 H	40.9	41.8	41.0	-0.03	3.5	0.7	41.8	0.23	3.4	1.0	16	LD
FRV384	36.9	39.2	39.3	41.8	39.3	-0.73	3.3	2.0	39.8	-0.85	3.2	1.8	16	LD
HKLLNT	40.4	38.9	37.9	39.6	39.2	-0.77	2.6	1.1	39.5	-0.99	2.9	1.9	16	LD
HMUZVY	41.4	41.5	42.0	41.9 H	41.7	0.27	3.5	0.3	42.0	0.32	3.3	1.5	16	LD
HNLWJT	37.2	37.3	37.5	37.0 *	37.2	-1.60	2.5	0.2 L	33.8	-4.01 X	2.5	3.1	12	TH
J26XD6	41.7	40.0	40.3	41.2	40.8	-0.10	2.9	0.8	40.8	-0.31	2.8	1.5	16	TH
J4BJ3Q	36.5	37.4	40.3	36.4 *	37.7	-1.43	3.3	1.8	39.8	-0.83	3.4	3.1	14	LD
LUWGUU	39.7	42.1 H	44.6	41.2	41.9	0.36	3.6	2.0	41.5	0.09	3.5	1.4	16	LD
LZA22F	41.4	41.8	40.4	41.0	41.1	0.04	2.8	0.6	40.9	-0.24	3.2	0.8	16	XX
RP9MKP	20.1 XH	22.0 X	24.8 XH	19.5 XH	21.6	-8.23 X	5.9	2.4	31.3	-5.38 X	5.7	10.5 H	8	TC
T6F44W	41.0 H	40.5	39.8	41.7	40.8	-0.12	4.0	0.8	41.1	-0.12	3.6	1.3	16	LD
UZHYQJ	43.7 L	43.3 L	43.5 L	43.4 L	43.5	1.05	0.5	0.2 L	44.2	1.53	0.6	0.9	16	LD
VAKJQQ	45.8	45.6 *	46.2	43.0	45.1	1.74	3.2	1.5	44.9	1.88	3.0	1.4	16	LD
VCPCH4	35.6	45.7 *	46.1	42.2	42.4	0.58	4.4	4.9 H	42.7	0.71	4.3	4.1 H	16	LZ
VKHK4U	35.3 H	38.4	35.7 *	38.5 H	37.0	-1.72	4.8	1.7	37.1	-2.25 *	4.9	1.5	16	XX
W3F3VB	43.1	43.9	43.2	44.0	43.5	1.06	4.0	0.5	41.3	-0.04	3.4	1.6	16	LD
WPTUU4	44.4	44.8	43.0	42.9	43.7	1.15	2.7	1.0	43.1	0.90	3.1	1.1	16	LD
WULUAK	38.2	38.4	37.6	38.0 L	38.0	-1.28	2.3	0.3	39.1	-1.20	2.6	1.9	16	LD
YARWLP	41.7 L	41.6 L	42.3 L	42.1 L	41.9	0.39	1.0	0.3	41.6	0.14	0.8	0.4 L	12	TU
YR94XL	41.9	42.3	42.0	41.5	41.9	0.38	2.4	0.4	43.0	0.89	2.5	1.1	16	LD
YWHK8A	42.6 L	41.6 L	42.6 L	No Data	42.3	0.52	0.9	0.6	42.7	0.69	1.0	0.8	15	MZ
Z33YB8	44.3	43.5	43.6	44.5	44.0	1.24	3.3	0.5	43.2	0.99	3.3	1.3	16	MB
ZQR86L	40.3	40.0	41.9	41.5	40.9	-0.04	1.7	0.9	40.4	-0.49	2.1	1.1	16	XX

Consensus (All Labs) Results

Wk Mean	40.47	41.23	41.49	41.53	Month Mean	41.03	Grand Mean	41.36
Avg SDr	3.08	3.05	2.89	3.00	Avg SD	3.03	Avg SD	3.07
SD btwn Labs	3.11	2.31	2.58	2.10	SD btwn Labs	2.36	SD btwn Labs	1.88
Labs Incld	28	27	28	26	SD btwn Wks	1.75	SD btwn Wks	1.80
Labs Excld	1	2	1	2	Labs Incld	28	Labs Incld	27
Labs not Rcvd	0	0	0	1				

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
MZ	Messmer Buchel (model not specified)	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		

	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
2UP8HN	13.2	13.4	13.0	13.0	13.2	-0.31	1.1	0.2	13.3	-0.37	1.1	0.3	16	TX
6GUXLT	13.7	13.1	13.5	13.4	13.4	0.08	1.3	0.2	13.7	0.21	1.1	0.3	16	XX
7LH3W9	13.5	13.4	12.8	13.3	13.3	-0.17	1.1	0.3	13.1	-0.78	1.0	0.4	16	LH
AACFXY	13.6 L	13.5 L	14.1 L	14.0 L	13.8	0.58	0.0	0.3	13.7	0.29	0.0	0.4	16	LH
AERNLX	13.5	13.9	13.6	13.8	13.7	0.46	1.1	0.2	13.7	0.32	1.1	0.2	16	LA
B76GZB	14.0	13.5	13.7	13.6	13.7	0.42	1.1	0.2	13.5	0.01	1.1	0.3	16	LU
BFV34N	13.6	13.5	13.7	13.3	13.5	0.18	1.1	0.2	14.0	0.72	1.1	0.4	16	LH
DJNLKD	12.9	11.8 *	12.3	12.4	12.3	-1.43	1.3	0.4	13.2	-0.52	1.2	0.8	16	TX
EQNMZX	14.0	13.4	13.1	13.6	13.5	0.24	1.1	0.4	13.9	0.59	1.1	0.5	16	LU
FH7CKB	13.8	13.1	13.0	12.7	13.2	-0.29	1.3	0.4	13.2	-0.61	1.2	0.3	16	LA
GCGD9T	14.1	13.4 L	13.9	14.3	13.9	0.73	0.9	0.4	14.2	1.13	1.2	0.6	8	LA
HKLLNT	13.1	13.7	14.1	13.4	13.6	0.26	1.0	0.4	13.5	-0.12	1.1	0.4	16	LB
JBFZY7	11.3 X	11.4 *	11.6 *L	12.2	11.6	-2.44 *	0.9	0.4	12.5	-1.71	0.9	0.8	12	XX
JN6YP9	13.0	12.6	13.1	12.7	12.9	-0.71	1.2	0.2	12.8	-1.16	1.6	0.6	16	LB
L49DXF	14.0	14.3	14.2	14.2	14.2	1.11	1.3	0.1	14.4	1.33	1.2	0.3	16	LA
PVJUAH	14.3	13.6	14.0	14.3	14.0	0.91	1.1	0.3	14.2	1.04	1.2	0.6	16	XX
QHD7T9	13.6	12.9	12.8	13.3	13.2	-0.31	1.0	0.4	13.6	0.07	0.9	0.7	8	XX
RCHQJR	No Data	No Data	No Data	12.8	12.8	-0.74	0.8	0.0	13.3	-0.42	0.9	0.2	13	LH
RP9MKP	22.6 X	21.7 XH	21.0 XH	21.7 X	21.8	11.60 X	1.5	0.7	17.3	6.08 X	1.3	4.8 H	8	TS
T6F44W	13.3	13.4	13.0 L	12.8	13.1	-0.33	1.1	0.3	13.3	-0.43	1.4	0.5	16	LZ
VCPCH4	11.8 *L	12.5 L	12.8	10.8 XH	12.0	-1.92 *	1.5	0.9 H	12.2	-2.13 *	1.3	0.8	14	LZ
W3F3VB	14.5	14.6	15.2 *	15.2 *	14.9	2.07 *	1.1	0.4	14.6	1.77	1.2	0.5	16	LH
W8BT2M	12.9	14.1	15.4 *	13.9 L	14.1	0.96	0.8	1.0 H	14.1	0.87	0.8	1.0 H	4	LA
WF62LD	13.3	13.8	13.6	13.7	13.6	0.31	1.2	0.2	13.8	0.35	1.2	0.5	16	LA
WPTUU4	14.9 *	13.8	13.5	13.7	14.0	0.83	1.2	0.6	13.7	0.29	0.9	0.5	16	LA
YARWLP	12.1 *	11.8 *	11.6 *	12.3	12.0	-1.97 *	1.0	0.3	11.9	-2.63 *	1.1	0.3	12	XX
YR94XL	13.6	14.0	13.8	13.3	13.7	0.38	1.0	0.3	13.7	0.29	1.4	0.3	16	XX
YWHK8A	13.5 L	13.5 L	13.2 L	No Data	13.4	0.02	0.3	0.1	13.5	-0.11	0.4	0.2	15	XX
Z33YB8	13.5	13.2	13.2	13.4 H	13.3	-0.06	1.2	0.2	13.9	0.59	1.1	0.6	16	LA
ZDMBKY	14.6	14.3	14.7	14.2 H	14.5	1.49	1.4	0.2	14.3	1.30	1.2	0.4	16	LA
ZH3J9X	12.8	13.6	13.3	12.7	13.1	-0.36	1.1	0.4	13.4	-0.16	1.1	0.4	16	LU

Containerboard Interlaboratory Testing Program

Analysis 261

STFI, 26 lb Corrugating Medium - CM13

TAPPI Official Test Method T826

Consensus (All Labs) Results

Wk Mean	13.52	13.34	13.45	13.41	Month Mean	13.37	Grand Mean	13.53
Avg SDr	1.05	1.10	1.17	1.11	Avg SD	1.11	Avg SD	1.13
SD btwn Labs	0.69	0.74	0.87	0.69	SD btwn Labs	0.72	SD btwn Labs	0.62
Labs Incld	28	29	29	28	SD btwn Wks	0.40	SD btwn Wks	0.51
Labs Excld	2	1	1	2	Labs Incld	30	Labs Incld	30
Labs not Rcvd	1	1	1	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
TX	TMI (model not specified)	XX	Instrument make/model not specified by lab

End of Report