Collaborative Testing Services, Inc.

Containerboard Interlaboratory Testing Program

Participant Summary Report #682 - July 2026

Introduction to the Containerboard Program

Explanation of Tables and Definitions of Terms

Analysis	Sample	Analysis Name
201	BX20	Top to Bottom Box Compression Strength, Corrugated Boxes
202	EC17	Edgewise Compressive Strength, by T811, Corrugated Board
203	EC17	Edgewise Compressive Strength by T839, Corrugated Board
205	42N1	Bursting Strength (Mullen), 42 lb Linerboard
206	52M1	Bursting Strength (Mullen), 52 lb Linerboard
215	42N1	Ring Crush, 42 lb Linerboard
216	52M1	Ring Crush, 52 lb Linerboard
223	42N1	STFI, 42 lb Linerboard
224	52M1	STFI, 52 lb Linerboard
228	42N1	Roughness - Stylus Method, 42 lb Linerboard
229	42N	Roughness - Sheffield Method, 42 lb Linerboard
231	42N1	Internal Bond, 42 lb Linerboard
234	42N	COF Inclined Plane (Slide Angle), 42 lb Linerboard
237	42N	Air Resistance, 42 lb Linerboard
240	CM61	Flat Crush Strength (CMT), 26 lb Corrugating Medium
250	CM61	Fluted Edge Crush Strength (CFC), 26 lb Corrugating Medium
255	CM61	Ring Crush (RCT), 26 lb Corrugating Medium
261	CM61	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; 31 lb. and 52 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	CM61	December 2025 - Current
	CM13	September 2023 - November 2025
31# Linerboard	31K1	August 2024 - Current
	35E3	June 2022 - June 2024
42# Linerboard	42N1	December 2025 - Current
	42L4	August 2025 - November 2025
52# Linerboard	52M1	July 2025 - Current
	52J2	September 2024 - May 2025

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
2CEEZQ	618.0	0.40	24.26		621.1	0.54	21.67	3	EX
3V96ZQ	605.4	0.11	52.30		576.7	-0.41	27.71	4	LG
4U8RRN	608.6	0.18	49.91		621.2	0.54	17.31	4	LO
4WEAQK	483.8	-2.65 *	26.58		483.8	-2.40 *	0.00	1	ES
6CMP7K	644.7	1.00	11.94		647.3	1.10	14.75	4	ET
6YWT6M	612.9	0.28	77.97		626.8	0.66	15.07	4	EX
72ZNNP	609.0	0.19	68.54		623.6	0.59	12.27	4	EX
7BR86J	671.4	1.61	20.41		665.1	1.48	11.30	4	LG
7W9EKJ	600.8	0.01	25.86		598.5	0.06	23.84	4	ER
83QAUL	564.3	-0.82	49.54		524.4	-1.53	51.30	4	TB
8RAPAP	499.4	-2.29 *	3.73	L	497.9	-2.10 *	2.13	2	LL
936DLJ	647.0	1.05	69.28		657.3	1.32	8.06	4	LM
9DMWYN	588.5	-0.27	71.57		585.5	-0.22	12.14	4	XX
9TYBGL	612.6	0.27	23.86		604.6	0.19	26.63	4	ER
A8WMPP	599.1	-0.03	6.64	L	591.1	-0.10	8.90	4	EX
ANYJME	624.2	0.54	35.01		645.2	1.05	22.89	4	LS
AZF7WF	594.0	-0.15	69.23		613.5	0.38	29.76	4	LS
CXYT8A	552.7	-1.08	26.35		534.3	-1.32	31.33	4	LL
D4J9ED	655.4	1.24	6.91	L	599.5	0.08	46.91	4	EX
D78MYG	638.1	0.85	36.42		601.2	0.11	40.91	3	LM
DN8UTA	634.6	0.77	20.72		608.8	0.28	18.40	4	LS
E77ARE	616.4	0.36	38.56		601.2	0.11	17.37	3	LG
HTPNWB	583.9	-0.38	4.24	L	583.9	-0.26	0.00	1	EX
MCLKK8	623.4	0.52	37.93		625.9	0.64	26.54	4	EX
NRWLU3	610.0	0.22	43.61		615.6	0.42	5.46	4	ER
R27H8W	491.5	-2.47 *	39.57		491.5	-2.24 *	0.00	1	ES
U2JTUU	587.7	-0.29	63.08		571.1	-0.53	40.45	4	LG
UMYB2P	624.8	0.55	47.29		618.6	0.49	24.52	4	LG
UNCM42	591.2	-0.21	72.73		575.3	-0.44	31.77	4	ER
VEYDQR	594.2	-0.14	78.11		630.5	0.74	32.60	4	EX
Z7DFCV	628.1	0.62	22.68		633.0	0.80	10.60	4	EX

Consensus (All Labs) Results

Month Mean	600.51	Grand Mean	595.93
Avg SD	45.64	Avg SD Months	25.72
SD btwn Labs	44.11	SD btwn Labs	46.65
Labs Incld	31	Labs Incld	31

Consensus By Method

Test Method	Group Mean	SD btwn Group	Difference from Grand Mean	Labs Included
Hot melt adhesive sealing	600.76	25.14	0.25	10
Water based adhesive sealing	624.20	0.00	23.69	1
Clip sealing	598.62	53.72	1.88	19
Staple sealing	610.00	0.00	9.49	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	LO	Lansmont 152-30k
LS	Lansmont Squeezer	TB	TMI Monitor/Compression Tester, Model 17-70
XX	Instrument make/model not specified by lab		

Containerboard Interlaboratory Testing Program

Analysis 202

Edgewise Compressive Strength, by T811, Corrugated Board - EC17

TAPPI Official Test Method T811

	Monthly Results				Cumulative Results				
WebCode	Mean	CPV	SD		Mean	CPV	SD Months	Months	Inst
2GUKYL	42.1	0.05	0.90	L	41.8	0.07	2.95	4	TD
7W9EKJ	34.6	-1.38	4.25	H	32.9	-1.48	2.01	4	EN
D4J9ED	42.7	0.17	0.88	L	43.2	0.31	0.46	4	EX
DN8UTA	43.4	0.30	2.56		41.2	-0.04	1.87	4	LD
GJ6TLB	33.5	-1.59	1.61		33.0	-1.46	3.94	4	TH
HTPNWB	49.0	1.35	0.62	L	49.0	1.30	0.00	1	TL
VEYDQR	44.4	0.48	2.01		44.7	0.56	1.07	4	LC
Z7DFCV	45.1	0.62	1.66		45.7	0.74	0.53	4	LC

Consensus (All Labs) Results

Month Mean	41.85	Grand Mean	41.45
Avg SD	2.12	Avg SD Months	2.18
SD btwn Labs	5.28	SD btwn Labs	5.79
Labs Incld	8	Labs Incld	8

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
TD	TMI Digital Crush Tester, Model 17-09	TH	TMI Monitor/Compression Tester, Model 17-76
TL	Tech-Lab Systems Compression		

	Monthly Results				Cumulative Results				
WebCode	Mean	CPV	SD		Mean	CPV	SD Months	Months	Inst
2CEEZQ	41.5	-0.89	2.94	H	42.0	-1.02	0.57	3	CT
4U8RRN	42.9	-0.50	2.77		42.9	-0.71	0.55	4	LD
4WEAQK	46.4	0.47	1.80		46.4	0.44	0.00	1	LD
6CMP7K	42.3	-0.67	1.92		43.1	-0.66	0.88	4	TD
7BR86J	46.9	0.62	1.35		46.4	0.47	1.40	4	BU
7W9EKJ	42.2	-0.71	2.12		42.6	-0.81	0.50	4	EN
83QAUL	44.6	-0.02	1.07		45.4	0.12	0.86	3	LD
8RAPAP	48.9	1.18	0.61	L	48.6	1.19	0.40	2	EX
936DLJ	45.4	0.19	1.30		46.3	0.41	0.71	4	EM
9TYBGL	45.2	0.15	1.86		45.9	0.28	1.22	4	LD
ANYJME	43.7	-0.28	2.21		44.2	-0.30	1.07	4	EM
AZF7WF	41.9	-0.79	1.31		43.0	-0.68	0.96	4	EM
C8PED8	39.9	-1.35	0.74	L	39.7	-1.80	0.83	4	BU
D4J9ED	45.6	0.25	1.23		45.7	0.21	0.28	L 4	LY
D78MYG	43.8	-0.25	1.60		43.6	-0.48	1.31	3	TG
DE3P4D	43.8	-0.26	3.79	H	44.6	-0.16	1.82	3	TE
DN8UTA	45.1	0.12	2.54		45.7	0.23	0.65	4	LD
E77ARE	46.2	0.43	0.71	L	45.2	0.04	1.23	3	EM
GJ6TLB	35.6	-2.56 *	1.84		37.9	-2.38 *	3.44	H 4	TH
GKXQV3	50.4	1.60	1.13		48.9	1.30	1.37	4	EM
GLU77E	52.5	2.20 *	1.59		52.0	2.33 *	1.43	4	TG
GNW3R3	44.5	-0.04	1.69		45.5	0.14	3.96	H 4	TU
HTPNWB	48.8	1.16	0.85		48.8	1.26	0.00	1	TL
MCLKK8	45.0	0.09	1.43		45.5	0.14	0.84	4	LD
NRWLU3	51.3	1.86	1.82		47.1	0.68	4.22	H 4	LD
R27H8W	41.6	-0.86	1.87		41.6	-1.15	0.00	1	LD
RV2LG6	39.7	-1.41	0.87		40.3	-1.59	2.44	4	XX
TAF97T	39.8	-1.37	3.55	H	41.7	-1.12	2.54	4	TS
TTA2VX	42.1	-0.73	1.36		43.6	-0.50	2.07	3	LD
U2JTUU	47.3	0.74	1.09		49.0	1.31	1.59	4	MK
UNCM42	46.1	0.39	1.09		46.7	0.55	0.79	4	EM
VEYDQR	46.2	0.43	1.40		47.0	0.67	1.06	4	LC
WE4UPQ	43.7	-0.27	1.14		46.4	0.47	2.05	4	EM
Z7DFCV	48.5	1.07	1.37		48.4	1.11	0.41	4	LC

Consensus (All Labs) Results

Month Mean	44.68	Grand Mean	45.05
Avg SD	1.81	Avg SD Months	1.72
SD btwn Labs	3.56	SD btwn Labs	2.99
Labs Incld	34	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
EX	Emerson (model not specified)	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	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		

	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
2CEEZQ	114.5	114.0	120.5	124.0	118.3	0.54	10.6	4.8	118.6	0.70	10.8	3.1	12	XX
32BFPV_AL	108.4	109.6	105.3	106.2	107.4	-1.41	6.7	1.9	108.7	-1.31	8.6	1.8	16	XX
48T9GL	102.5 *	101.8 *	103.0 *	103.8	102.8	-2.23 *	7.5	0.8	105.1	-2.03 *	7.2	4.1	16	TP
4WEAQK	114.7	114.3	113.4	115.7	114.5	-0.13	7.6	0.9	114.5	-0.12	7.6	0.9	4	LA
83QAUL	105.3	113.6	109.0	105.8	108.4	-1.22	7.2	3.8	109.2	-1.19	8.9	4.2	16	XX
8TKLGF	108.2 L	107.9 L	109.2	109.0	108.6	-1.19	4.4	0.6	108.9	-1.26	4.0	1.3	16	XX
8UF89K	127.9	127.4 *	126.1 *	129.6 *	127.8	2.24 *	10.8	1.4	126.5	2.31 *	10.8	4.7	16	XX
9TYBGL	111.8	114.7	109.0	107.6	110.8	-0.80	10.2	3.2	111.6	-0.71	8.9	2.8	8	LZ
9XVYYD	114.2	109.4	108.1	106.8	109.6	-1.01	8.8	3.2	111.1	-0.83	8.3	2.9	16	LA
AHFDVE_AL	115.6	112.9	116.2	117.8	115.6	0.07	8.9	2.0	119.8	0.95	9.7	3.5	16	AL
AWE6WH	119.8	122.3	120.6	120.6	120.8	1.00	8.9	1.1	122.4	1.47	8.4	3.3	16	XX
B3YHEH	121.7	115.6	111.7	116.0	116.3	0.18	7.4	4.1	115.3	0.03	8.6	2.7	16	ME
B4QGPA	126.6	120.6	121.8	122.2 H	122.8	1.35	12.3	2.6	121.1	1.21	9.5	2.5	16	XX
B6MWYL	114.3	114.9	115.1	114.1	114.6	-0.11	5.3	0.4 L	114.2	-0.18	5.4	0.9	16	LJ
B96CAD	109.1	114.5	118.8	117.4	114.9	-0.06	8.3	4.3	116.2	0.21	8.1	3.5	16	LA
B96CAD_AL	117.4	117.0	114.3	118.4	116.8	0.28	7.9	1.7	116.8	0.34	9.4	4.0	16	AL
BNHPKJ	117.3	119.7	121.6	123.6	120.5	0.95	7.0	2.7	119.7	0.93	8.5	3.8	16	LJ
CDEPQC	107.6	110.4	108.2	108.3	108.6	-1.18	7.6	1.2	111.5	-0.74	7.7	5.5	16	TB
CGEZMC	110.9	113.3	116.3	112.5	113.2	-0.36	5.7	2.3	109.8	-1.09	7.6	3.0	16	LC
CHAJND_AL	102.9	109.2	106.8	105.1	106.0	-1.65	7.9	2.7	104.7	-2.13 *	7.6	3.0	16	AL
DE3P4D	118.6	112.0 H	116.5	119.6	116.7	0.26	11.2	3.4	115.7	0.12	10.2	3.9	16	LC
DN8UTA	115.3	114.0	116.8	115.1	115.3	0.01	8.5	1.1	115.7	0.12	8.7	2.7	16	LA
DN8WJD_AL	114.1	113.5	112.0	111.3	112.7	-0.45	7.6	1.3	114.3	-0.17	8.5	1.9	16	AL
DXTY29_AL	113.9	117.3	111.1	111.5	113.5	-0.32	7.7	2.8	113.0	-0.42	7.6	3.0	16	AL
EAMEQA	110.8	106.9	106.7	105.2	107.4	-1.40	10.4	2.4	108.3	-1.39	9.5	2.1	16	LZ
EJDZV8	113.0	113.3	111.5	No Data	112.6	-0.47	5.2	1.0	111.6	-0.72	5.7	1.7	10	TX
FEBG8E	116.3	119.6	115.5	118.6	117.5	0.40	11.7	1.9	115.5	0.07	9.3	3.9	16	LC
FEVF4C	120.8	126.5 *	125.8 *	125.4	124.6	1.68	7.7	2.6	122.8	1.56	6.5	4.1	16	LA
FQ9GJJ_AL	111.5	120.5	No Data	No Data	116.0	0.14	6.1	6.4	116.5	0.28	7.7	3.4	8	AL
GJ6TLB	120.2	119.4	115.0	118.0	118.2	0.52	9.4	2.3	118.3	0.65	8.0	3.1	16	TX
GKXQV3_AL	112.6	110.6	106.9	107.4	109.4	-1.05	8.6	2.7	110.2	-1.00	8.7	3.0	16	AL
GPRKT6_AL	126.0	122.0	119.4	118.2	121.4	1.10	9.0	3.5	121.9	1.37	11.1	4.5	16	AL
GQ76H9	115.3	112.5	116.8	122.1	116.7	0.25	8.8	4.0	115.2	0.02	8.6	3.7	16	LA
H6H6R4_AL	122.7	121.3	119.1	118.6	120.4	0.92	9.5	1.9	120.7	1.13	9.3	1.9	16	AL
MCLKK8	120.0	115.2	116.0	116.8	117.0	0.31	7.2	2.1	120.0	0.98	6.1	3.0	16	AH

Containerboard Interlaboratory Testing Program

Analysis 205

Bursting Strength (Mullen), 42 lb Linerboard - 42N1

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
MDZ8WU_AI	106.6	116.0	109.0	106.9	109.6	-1.00	8.2	4.4	112.8	-0.47	8.7	3.5	16	AL
NRWLU3	113.7	108.8	114.8	119.5	114.2	-0.19	10.0	4.4	113.1	-0.40	9.4	3.0	16	LA
NRWLU3_AL	112.5	115.4	115.5	107.1	112.6	-0.47	8.9	3.9	114.9	-0.04	9.5	3.5	16	AK
PG6MG3_AL	118.9	120.8	116.5	122.1	119.6	0.77	8.1	2.4	119.3	0.85	8.7	4.1	16	AL
QPYARY_AL	115.7 H	118.2	114.9	113.6	115.6	0.06	10.2	1.9	114.8	-0.06	8.6	2.2	16	AL
R27H8W	116.0	116.5	116.5	112.5	115.4	0.02	7.7	1.9	115.4	0.05	7.7	1.9	4	AH
T9JTTV	133.0 *	129.6 *	124.3	127.5	128.6	2.39 *	11.1	3.7	130.1	3.03 X	9.6	4.3	12	AX
W4X8AY	129.8 *	123.7	124.9	122.5	125.2	1.79	9.1	3.2	124.7	1.95 *	7.0	4.6	16	LA
WWXPYT	123.3	116.6	115.9	121.8	119.4	0.74	10.3	3.7	118.7	0.72	9.5	2.7	16	LZ
X68EDR	116.3	115.4	117.4	117.6	116.7	0.25	6.1	1.0	114.0	-0.22	7.0	3.4	12	AH
XCBFHT	107.6	107.3	108.0	108.3	107.8	-1.33	6.5	0.4 L	108.2	-1.41	8.2	1.6	14	LC
YFNHXW_AI	119.6	115.7	120.2	118.0	118.3	0.55	7.6	2.0	118.1	0.61	8.6	3.2	16	AL
Z7DFCV	116.5	114.8	112.9	115.1	114.8	-0.07	9.3	1.5	115.5	0.08	8.8	1.7	16	AH
Z7T2LX_AL	106.4	111.7	112.9	114.4 L	111.4	-0.70	6.2	3.5	111.1	-0.83	7.2	4.4	16	AL

Consensus (All Labs) Results

Wk Mean	115.46	115.47	114.74	115.30	Month Mean	115.24	Grand Mean	115.13
Avg SDr	8.35	8.71	8.36	8.82	Avg SD	8.52	Avg SD	8.45
SD btwn Labs	6.71	5.51	5.56	6.60	SD btwn Labs	5.59	SD btwn Labs	4.93
Labs Incld	49	49	48	47	SD btwn Wks	2.83	SD btwn Wks	3.24
Labs Excld	0	0	0	0	Labs Incld	49	Labs Incld	48
Labs not Rcvd	0	0	1	2				

Key to Instrument Codes Reported by Participants

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	TB	TMI Monitor/Burst 1000
TP	Technidyne PROFILE/Plus	TX	TMI Monitor/Burst (model not specified)
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
2CEEZQ	129.0	133.5	131.0	136.0	132.4	0.26	15.3	3.0	132.4	0.33	15.3	3.0	4	XX
32BFPV_AL	125.5	119.0	120.8	124.9	122.5	-1.35	8.3	3.2	122.1	-1.60	9.8	4.8	12	XX
48T9GL	119.8	111.6 *	117.3 *	116.3 *	116.3	-2.37 *	9.1	3.4	119.1	-2.16 *	9.6	3.4	12	TP
4WEAQK	138.5	131.5	131.9	130.5	133.1	0.38	12.4	3.6	133.1	0.46	12.4	3.6	4	LA
83QAUL	124.1	121.8	131.1	124.9	125.5	-0.87	8.6	4.0	124.4	-1.17	10.6	3.9	12	XX
8TKLGF	124.2 L	120.2 L	124.7	124.3	123.4	-1.22	6.9	2.1	125.1	-1.03	7.0	2.3	12	XX
9TYBGL	129.3	132.3	128.6	128.6	129.7	-0.18	11.9	1.7	127.2	-0.65	11.8	3.9	8	LZ
9XVYYD	131.3	125.5	125.8	123.0	126.4	-0.72	11.4	3.5	127.8	-0.54	11.6	3.5	12	LA
AHFDVE_AL	130.3	137.5	135.5 H	129.5	133.2	0.39	13.1	3.9	137.5	1.29	12.9	4.5	12	AL
AWE6WH	138.5	132.3	133.1	137.2	135.3	0.73	13.2	3.0	138.6	1.49	11.3	4.7	12	XX
B3YHEH	133.2	130.5	134.7	135.6	133.5	0.44	13.4	2.2	130.3	-0.06	12.3	4.5	12	ME
B4QGPA	134.4	129.6	129.4	135.2	132.2	0.22	10.9	3.1	133.9	0.61	11.3	3.5	8	XX
B6MWYL	128.2 L	130.6	130.1	128.0	129.2	-0.26	6.7	1.3	130.0	-0.11	7.5	1.3 L	12	LJ
B96CAD	132.2	135.0	136.1	134.6	134.5	0.60	10.3	1.6	135.0	0.81	10.5	2.7	12	LA
B96CAD_AL	129.4	130.0	133.9 L	133.0	131.6	0.12	7.1	2.2	133.9	0.60	8.4	4.5	12	AL
BNHPKJ	129.0	137.9	142.7	140.4	137.5	1.10	11.7	6.0	136.0	1.01	11.8	4.2	12	LZ
CDEPQC	118.9	123.8	120.2	121.8	121.2	-1.57	7.7	2.1	127.5	-0.59	10.4	6.0	10	TB
CGEZMC	130.0	135.8	124.1	133.2	130.8	0.00	10.2	5.0	128.9	-0.32	9.9	4.5	12	LC
CHAJND_AL	116.6 *	132.2	121.8	123.3	123.5	-1.20	10.4	6.5	123.2	-1.38	10.8	3.6	12	XX
DE3P4D	124.7	129.1	126.2	131.3	127.8	-0.48	13.3	2.9	128.3	-0.43	11.6	2.8	12	LC
DN8UTA	138.3	129.2	142.6 H	135.0	136.3	0.89	14.7	5.7	134.3	0.69	12.2	4.2	12	LA
DN8WJD_AL	124.3 L	125.9	124.7 L	125.7	125.1	-0.92	5.0	0.8	125.7	-0.93	5.1	1.6	12	AL
DXTY29_AL	122.2	124.9	122.5	128.4	124.5	-1.03	10.2	2.9	124.2	-1.20	9.9	2.6	12	AL
EAMEQA	127.1	124.9	125.1	123.4	125.1	-0.93	8.8	1.5	122.9	-1.45	9.7	3.8	8	LC
EJDZV8	124.9	125.7	127.0 L	No Data	125.9	-0.80	7.9	1.1	126.2	-0.83	7.8	1.8	11	TX
FEBG8E	126.2	146.4	132.9	135.2	135.2	0.72	14.7	8.4 H	137.0	1.19	15.0	6.4	12	LC
FEVF4C	144.1 *	142.4	141.5	140.0	142.0	1.83	8.8	1.7	138.2	1.42	7.7	3.4	12	LA
FQ9GJJ_AL	129.7 L	135.0 L	No Data	No Data	132.4	0.25	4.8	3.7	129.3	-0.24	6.2	4.1	8	AL
GJ6TLB	137.9	130.7	130.6	137.1	134.1	0.54	13.0	3.9	136.0	1.01	11.7	3.2	12	TX
GKXQV3_AL	124.9	124.4	124.3	129.1	125.7	-0.83	10.5	2.3	127.1	-0.66	10.1	3.2	12	AL
GPRKT6_AL	136.4	134.3	132.4	133.4	134.1	0.55	14.0	1.7	143.5	2.41	*66.5	21.5 H	12	AL
GQ76H9	130.2	142.5	136.0	127.5	134.0	0.53	12.7	6.7	132.4	0.33	12.3	4.9	12	LA
H6H6R4_AL	134.7	130.0	133.7	130.7	132.3	0.24	13.1	2.3	134.7	0.76	11.7	3.8	12	AL
MCLKK8	131.2	130.8	133.6	124.0	129.9	-0.15	10.5	4.1	132.8	0.40	10.6	6.3	12	AH
MDZ8WU_AI	129.6 H	126.8	131.7	127.1	128.8	-0.33	14.0	2.3	129.0	-0.30	13.4	3.9	12	AL

Containerboard Interlaboratory Testing Program

Analysis 206

Bursting Strength (Mullen), 52 lb Linerboard - 52M1

TAPPI Official Test Method T807

Report #682
July 2026

	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
NRWLU3	123.4	124.4	131.7	124.7	126.1	-0.77	9.6	3.8	128.0	-0.49	10.8	3.5	12	LA
NRWLU3_AL	141.9	144.1	137.4	143.2	141.7	1.78	7.8	3.0	135.7	0.95	10.8	5.5	12	XX
PG6MG3_AL	139.8	138.4	138.2	143.1	139.9	1.49	11.4	2.3	137.0	1.19	11.1	3.6	12	AL
QPYARY_AL	132.9	133.7	124.2	135.6	131.6	0.13	12.5	5.1	132.0	0.25	12.3	4.3	8	AL
R27H8W	130.0	132.0	124.5	131.5	129.5	-0.21	10.7	3.4	129.5	-0.21	10.7	3.4	4	AH
T9JTTV	140.7	149.5 *	148.0 *	147.4 *	146.4	2.55 *	16.2	3.9	147.9	3.24	X13.6	7.1	12	AX
W4X8AY	138.5	141.3	132.6	138.2	137.7	1.12	11.7	3.6	135.9	0.98	7.2	6.7	12	LA
WWXPYT	132.2	145.9	137.9	134.0	137.5	1.10	12.3	6.1	136.5	1.10	11.3	4.8	12	LZ
X68EDR	125.1	122.4	125.1	127.7	125.0	-0.94	12.1	2.2	127.3	-0.62	10.9	4.0	12	AH
XCBFHT	120.4	123.0	129.1	125.6	124.5	-1.02	9.8	3.7	125.2	-1.01	11.2	3.2	12	LA
YFNHXW_AI	137.1	140.1	139.5	132.5	137.3	1.06	11.2	3.5	131.3	0.12	13.6	13.1 H	12	AL
Z7DFCV	136.3	126.1	135.9	135.2 H	133.4	0.43	14.7	4.9	132.1	0.28	13.7	4.5	12	AH
Z7T2LX_AL	119.0	121.8	121.9	128.8 L	122.9	-1.29	7.5	4.2	121.5	-1.70	7.0	3.6	12	AL

Consensus (All Labs) Results

Wk Mean	130.12	131.17	130.71	131.21	Month Mean	130.79	Grand Mean	130.63
Avg SDr	11.06	11.58	11.24	11.29	Avg SD	11.21	Avg SD	14.49
SD btwn Labs	6.66	7.92	6.73	6.42	SD btwn Labs	6.12	SD btwn Labs	5.35
Labs Incld	48	48	47	46	SD btwn Wks	3.75	SD btwn Wks	5.41
Labs Excld	0	0	0	0	Labs Incld	48	Labs Incld	47
Labs not Rcvd	0	0	1	2				

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
LC	L&W Autoline (206 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
TX	TMI Monitor/Burst (model not specified)	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
32BFPV	98.1	99.0	98.5	98.0	98.4	0.23	2.6	0.5 L	97.7	-0.25	2.4	1.3	16	LD
48T9GL	100.4	99.4	104.6	99.0	100.9	0.95	2.8	2.6	99.1	0.40	2.6	1.9	16	TX
7W9EKJ	96.1	93.4	97.2 L	95.1	95.4	-0.65	2.8	1.6	93.2	-2.20 *	2.7	1.9	16	LC
83QAUL	95.3 H	98.2	95.1	95.9	96.1	-0.45	6.8	1.4	96.5	-0.75	4.9	1.6	16	XX
8TKLGF	72.8 X	75.9 X	76.6 X	76.4 X	75.4	-6.55 X	4.1	1.8	75.8	-9.76 X	4.2	2.3	16	MZ
92QTWF	98.2 L	98.0 L	98.0 L	98.2 L	98.1	0.14	0.4	0.1 L	97.7	-0.25	0.4	1.6	16	RS
9TYBGL	99.3	99.5	100.2	98.4	99.3	0.50	2.7	0.7	98.3	0.02	3.3	1.6	16	LD
AWE6WH	102.4	99.4	104.6	97.7	101.0	1.00	5.0	3.1	99.5	0.56	4.6	2.4	16	LD
B3YHEH	104.8	105.3 *	105.0	105.5 *	105.1	2.22 *	2.9	0.3 L	100.8	1.13	2.8	3.7	16	LD
B6MWYL	90.6 *	90.8 *	90.0 *	91.2 *	90.7	-2.06 *	2.5	0.5 L	95.8	-1.07	2.8	3.2	16	LD
B96CAD	99.7	100.6	97.0	97.6	98.7	0.32	3.5	1.7	99.2	0.43	3.3	2.9	16	LD
CDEPQC	97.5	95.3	97.4	97.5	96.9	-0.21	3.0	1.1	99.2	0.44	2.9	1.6	16	LD
CF43BF	92.6	96.3 H	97.0	95.1	95.2	-0.71	4.1	1.9	93.0	-2.26 *	4.2	3.6	16	EM
CGEZMC	96.4	97.4	97.7	99.5	97.8	0.03	4.6	1.3	96.3	-0.83	3.6	2.3	16	LD
CHAJND	101.6	101.1	101.6	101.3	101.4	1.11	2.3	0.2 L	100.2	0.85	2.4	1.1	16	LD
D4J9ED	97.3	96.4	97.3	98.5	97.4	-0.09	3.1	0.9	98.8	0.26	2.8	1.5	14	LG
DE3P4D	101.6	102.3	98.4	97.1 H	99.9	0.65	4.2	2.5	102.3	1.77	3.9	3.1	16	MB
DN8UTA	102.0	99.3	97.8	102.5	100.4	0.81	3.1	2.2	99.8	0.69	2.6	1.7	16	LD
DN8WJD	75.9 XH	75.0 XH	75.3 XH	75.6 XH	75.5	-6.55 X	8.5	0.4 L	71.8	-11.49 X	5.9	3.3	16	LD
EAMEQA	93.0	93.8	93.5	93.1	93.3	-1.27	2.8	0.4 L	96.9	-0.59	2.9	3.7	16	XX
EJDZV8	94.4	90.2 *H	93.1 H	No Data	92.6	-1.50	5.7	2.2	96.3	-0.86	5.5	10.9 H	10	TU
FEBG8E	103.4 L	97.0	101.0	99.6	100.3	0.77	1.8	2.7	98.4	0.07	2.2	2.4	16	LD
FEVF4C	100.5	99.9	98.2	99.4	99.5	0.55	4.1	1.0	94.9	-1.47	3.3	3.0	16	LC
FF8WJC	97.3 L	97.2 L	97.1 L	97.2 L	97.2	-0.13	0.3	0.1 L	97.7	-0.25	0.9	0.7 L	8	MZ
FQ9GJJ	96.3	95.3	96.3	96.7	96.2	-0.44	3.3	0.6	97.6	-0.29	3.2	1.2	16	LC
G2L49A	97.2 L	97.1 L	97.1 L	97.2 L	97.2	-0.14	0.3	0.0 L	97.5	-0.34	0.8	0.5 L	8	XX
G4RKL8	99.1	98.3	100.0	99.9	99.3	0.50	3.3	0.8	100.7	1.08	3.2	3.7	16	LD
GLU77E	101.3	99.1	100.2	100.3	100.2	0.76	3.5	0.9	99.2	0.43	2.9	1.3	16	TH
H6H6R4	108.1 *	74.3 XH	108.6 *	76.1 XH	91.8	-1.73	6.4	19.2 H	90.0	-3.56 X	6.9	13.8 H	16	LZ
JFY9C9	103.2	102.5	100.2	101.3	101.8	1.23	3.5	1.3	102.7	1.95 *	3.2	3.1	16	TU
PG6MG3	94.4	97.1	94.3	95.6	95.4	-0.67	3.1	1.3	96.4	-0.78	3.0	1.4	16	LD
Q9A764	101.2	102.0	99.6	99.9	100.7	0.90	2.4	1.2	102.2	1.74	2.2	2.3	16	LD
QPYARY	103.1	100.0	100.7	99.9	100.9	0.96	3.0	1.5	100.3	0.88	3.2	1.9	16	LD
R27H8W	99.8	99.6	99.6	98.3	99.3	0.49	2.6	0.7	99.3	0.46	2.6	0.7 L	4	LD
T9JTTV	89.0 *	92.0	89.4 *	92.1	90.7	-2.06 *	4.1	1.7	88.9	-4.04 X	5.5	5.4	16	LD

Containerboard Interlaboratory Testing Program

Analysis 215

Ring Crush, 42 lb Linerboard - 42N1

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
UZNCGW	96.7	89.4 *H	90.6 H	89.8 *H	91.6	-1.78	7.3	3.4	88.4	-4.28 X	5.8	7.0 H	12	TH
W4X8AY	95.1	96.9	95.9	95.5	95.8	-0.53	2.7	0.8	98.5	0.11	2.6	3.2	16	TU
WE4UPQ	95.2	94.1	94.2	94.7	94.6	-0.91	2.4	0.5 L	95.2	-1.31	3.0	1.0	16	EM
XCBFHT	100.5	99.2	99.8	99.1	99.7	0.60	2.4	0.7	98.2	0.00	3.3	1.6	14	LD
Z7DFCV	99.4	98.9	99.5	101.1	99.7	0.61	3.6	1.0	98.7	0.22	3.2	1.5	16	LC

Consensus (All Labs) Results

Wk Mean	98.48	97.60	98.06	97.74	Month Mean	97.64	Grand Mean	98.23
Avg SDr	3.86	3.32	3.46	3.28	Avg SD	3.61	Avg SD	3.11
SD btwn Labs	3.98	3.51	4.00	3.17	SD btwn Labs	3.39	SD btwn Labs	2.30
Labs Incld	38	37	38	36	SD btwn Wks	3.44	SD btwn Wks	2.89
Labs Excld	2	3	2	3	Labs Incld	38	Labs Incld	35
Labs not Rcvd	0	0	0	1				

Key to Instrument Codes Reported by Participants

EM	Emerson 1200	LC	L&W Crush Tester 48
LD	L&W Crush Tester 248	LG	L&W 753
LZ	L&W Crush Tester (model not specified)	MB	Messmer Buchel K440
MZ	Messmer Buchel (model not specified)	RS	Regmed Digital Crush Tester CT-2000
TH	TMI Compression Tester, Model 17-76	TU	TMI Universal Crush Tester (TMI K440)
TX	TMI Digital Crush Tester (model not specified)	XX	Instrument make/model not specified by lab

Containerboard Interlaboratory Testing Program

Analysis 216

Ring Crush, 52 lb Linerboard - 52M1

TAPPI Official Test Method T822

Report #682
July 2026

	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
32BFPV	129.4	129.7	130.2	128.4	129.4	-0.25	3.6	0.8	129.9	-0.59	3.4	1.7	12	LD
48T9GL	131.0	132.4	132.9	136.2	133.1	0.40	5.3	2.2	133.2	0.28	4.7	5.4	12	TX
7W9EKJ	124.4	125.1	126.1	125.1	125.2	-1.00	4.6	0.7	124.5	-1.99 *	4.3	2.0	12	LC
83QAUL	131.6	127.3	128.5 H	130.2	129.4	-0.26	5.8	1.9	131.8	-0.08	4.7	2.9	12	XX
8TKLGF	102.2 X	103.3 X	105.5 X	103.0 X	103.5	-4.82 X	5.5	1.4	106.4	-6.72 X	6.5	3.2	12	MZ
92QTWF	135.1 L	134.0 L	135.1 L	135.3 L	134.9	0.71	0.4	0.6 L	138.2	1.59	0.6	3.6	8	RS
9TYBGL	131.8	136.7	132.5	133.1	133.5	0.47	4.9	2.2	133.2	0.28	4.1	2.6	12	LD
AWE6WH	144.4 *	138.2	142.7 *	138.3	140.9	1.77	5.4	3.1	140.8	2.27 *	6.8	2.7	12	LD
B3YHEH	138.9	144.7 *	134.9	137.8	139.1	1.45	4.9	4.1	136.4	1.13	4.8	3.5	12	LD
B6MWYL	117.8 *	118.6 *	116.9 *	117.9 *	117.8	-2.29 *	2.9	0.7	128.6	-0.92	3.9	8.1	12	LD
B96CAD	139.3	138.9	129.7	127.5	133.8	0.53	4.5	6.1	135.1	0.77	4.3	3.7	12	LD
CDEPQC	136.7	132.1	140.0 L	130.8	134.9	0.72	2.8	4.2	138.3	1.62	4.4	3.9	10	LD
CF43BF	128.6	127.4	124.3	123.7	126.0	-0.85	4.3	2.4	128.4	-0.97	4.4	2.6	12	EM
CGEZMC	129.2	135.2	132.8	133.2	132.6	0.31	4.8	2.5	133.5	0.35	4.7	2.4	12	LD
CHAJND	133.0	133.8	136.9	134.9	134.6	0.67	3.9	1.7	133.1	0.25	4.0	2.2	12	LD
D4J9ED	126.2	123.0	127.3 L	122.1	124.6	-1.09	3.4	2.5	129.6	-0.65	3.9	4.7	10	LY
DE3P4D	133.4 H	136.7	139.4	131.3 H	135.2	0.77	7.7	3.6	137.4	1.37	6.8	2.7	12	MB
DN8UTA	138.7	134.9	136.6	136.8	136.7	1.04	3.3	1.5	134.8	0.71	3.7	2.4	12	LD
DN8WJD	94.9 XH	94.0 X	94.3 XH	95.7 XH	94.7	-6.36 X	9.8	0.8	95.5	-9.58 X	6.4	1.1 L	12	LD
EAMEQA	123.8	123.6	124.8	124.0	124.1	-1.19	3.8	0.5 L	130.5	-0.41	4.0	5.0	12	LZ
EJDZV8	130.1 H	123.2 H	128.3 H	No Data	127.2	-0.64	10.3	3.6	125.0	-1.86	8.7	10.7 H	11	TU
FEBG8E	135.7	130.2	131.4	130.3	131.9	0.19	3.3	2.6	132.1	-0.02	3.5	3.2	12	LD
FEVF4C	135.6	134.5	132.2	134.1	134.1	0.58	4.5	1.4	129.4	-0.71	4.2	4.2	12	LC
FF8WJC	132.2 L	131.9 L	132.0 L	132.5 L	132.1	0.23	0.3	0.3 L	133.7	0.42	1.3	2.1	8	MZ
FQ9GJJ	127.9	131.9	127.8	127.7	128.8	-0.35	4.1	2.1	128.8	-0.87	4.1	1.2 L	12	LC
G2L49A	132.4 L	132.2 L	132.5 L	132.3 L	132.3	0.27	0.4	0.1 L	134.0	0.49	1.0	1.9	8	MZ
G4RKL8	133.1	134.1 L	132.8	134.2	133.6	0.48	3.8	0.7	133.2	0.27	4.2	2.7	12	LD
GLU77E	128.7	130.9	135.2	128.5	130.8	0.00	3.5	3.1	132.2	0.02	4.2	2.5	12	TH
H6H6R4	138.6	117.2 *H	113.5 XH	93.3 XH	115.6	-2.68 *	9.2	18.6 H	131.2	-0.24	6.7	15.2 H	12	LZ
JFY9C9	136.0	136.1	137.1	131.9	135.2	0.78	4.1	2.3	136.0	1.02	4.3	3.2	12	TU
PG6MG3	124.4	127.9	125.5	127.4	126.3	-0.80	4.3	1.6	128.5	-0.95	3.4	2.5	12	LD
Q9A764	134.8	138.3	137.0	136.0	136.5	1.00	3.7	1.5	135.7	0.93	3.3	1.9	12	LD
QPYARY	133.6	131.9 L	136.6	132.4	133.6	0.50	4.5	2.1	133.9	0.46	4.4	2.1	8	LD
R27H8W	131.5	127.1 H	129.1	127.2	128.7	-0.37	8.5	2.1	128.7	-0.89	8.5	2.1	4	LD
T9JTTV	122.0	124.6 H	118.0 *H	122.7 H	121.8	-1.59	8.2	2.8	120.5	-3.04 X	9.0	3.7	12	LD

Containerboard Interlaboratory Testing Program

Analysis 216

Ring Crush, 52 lb Linerboard - 52M1

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
UZNCGW	131.9	127.5	125.1 H	117.4 *H	125.5	-0.94	7.8	6.1	125.5	-1.74	7.8	6.1	4	TH
W4X8AY	142.5	142.9	139.0	136.5	140.2	1.66	3.8	3.1	134.6	0.64	2.6	4.9	12	TU
WE4UPQ	126.6	126.7 L	125.2 L	126.0	126.1	-0.83	2.3	0.7	127.7	-1.14	3.3	2.3	12	EM
XCBFHT	132.4	137.6	130.8 L	132.1	133.2	0.42	4.4	3.0	129.2	-0.77	3.7	3.8	12	LD
Z7DFCV	131.3	131.8	132.3	132.4	132.0	0.20	4.8	0.5 L	131.8	-0.09	4.2	1.1 L	12	LC

Consensus (All Labs) Results

Wk Mean	131.97	131.33	131.33	130.22	Month Mean	130.83	Grand Mean	132.12
Avg SDr	4.60	5.54	4.67	4.54	Avg SD	5.02	Avg SD	4.68
SD btwn Labs	5.57	6.13	5.79	5.33	SD btwn Labs	5.68	SD btwn Labs	3.83
Labs Incld	38	38	37	36	SD btwn Wks	3.96	SD btwn Wks	4.54
Labs Excld	2	2	3	3	Labs Incld	38	Labs Incld	37
Labs not Rcvd	0	0	0	1				

Key to Instrument Codes Reported by Participants

EM	Emerson 1200	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)	RS	Regmed Digital Crush Tester CT-2000
TH	TMI Compression Tester, Model 17-76	TU	TMI Universal Crush Tester (TMI K440)
TX	TMI Digital Crush Tester (model not specified)	XX	Instrument make/model not specified by lab

Containerboard Interlaboratory Testing Program

Analysis 223

STFI, 42 lb Linerboard - 42N1

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
32BFPV_AL	24.0	24.3	23.7	24.9	24.2	-0.27	1.7	0.5	24.0	-0.54	3.4	0.5	16	XX
3GPPTK	23.0	23.4	23.5	24.0	23.5	-1.00	1.5	0.4	23.7	-1.03	1.6	0.5	16	LH
4KH7HJ	25.1	24.9	25.9	25.4	25.3	0.75	1.4	0.4	25.0	0.78	1.4	0.5	16	LH
4U8RRN	24.1	24.4	24.7	24.3	24.4	-0.16	2.0	0.2	24.1	-0.44	1.9	0.6	16	LH
7W9EKJ	23.6	23.8	23.5	23.2	23.5	-0.96	1.8	0.2	23.2	-1.70	1.8	0.7	16	LY
8TKLGF	23.0	23.4	22.6	23.0	23.0	-1.44	2.0	0.3	23.4	-1.43	1.9	0.7	16	XX
8UF89K	23.5	24.9	25.1	24.5	24.5	-0.02	2.2	0.7	23.3	-1.56	2.0	0.9	16	XX
94WBVB	23.6	26.0	25.3	25.2	25.0	0.47	2.0	1.0	24.7	0.36	1.8	0.9	16	LU
9TYBGL	24.7	23.8	24.3	24.6	24.4	-0.16	2.0	0.4	24.3	-0.21	1.9	0.5	16	LY
9XVYYD	26.2	25.5 H	25.8	25.1	25.7	1.06	2.1	0.5	25.1	0.92	2.2	0.6	16	LH
AHFDVE_AL	25.4	26.8 *	24.0	24.6	25.2	0.63	1.9	1.2	24.4	0.01	1.7	0.9	16	AL
ANYJME	22.3	23.1	22.5	22.2	22.5	-1.86	1.9	0.4	24.5	0.05	1.9	1.3	16	TT
ATUDKF	24.9	24.3	25.6	25.6	25.1	0.55	1.8	0.6	25.3	1.19	1.9	0.8	16	LA
AWE6WH	21.7 *	22.9	23.0	24.3 L	23.0	-1.45	1.5	1.1	31.2	9.26 X	2.3	6.2 H	12	ID
B3YHEH	26.6	27.4 X	26.0	26.9 *	26.7	2.05 *	2.3	0.6	25.6	1.64	2.0	0.8	16	LH
B96CAD_AL	25.7	24.9	25.0	25.7	25.3	0.75	1.8	0.4	24.6	0.29	1.8	0.9	16	AL
BNHPKJ	25.3	25.0	24.8 H	26.2 H	25.3	0.76	2.9	0.6	24.4	-0.04	2.4	1.7	16	LH
CDEPQC	26.9 H	24.7 H	25.9 H	25.6	25.8	1.16	3.5	0.9	24.3	-0.14	2.5	1.3	15	LW
CGEZMC	25.9	24.5	26.5	24.5	25.3	0.76	2.1	1.0	24.4	-0.11	2.1	1.3	16	LA
CHAJND_AL	24.7	24.4	24.2 L	23.9	24.3	-0.19	1.3	0.3	24.3	-0.19	1.6	0.7	16	AL
D4J9ED	24.8	23.9	24.0	25.5	24.5	0.00	1.9	0.7	24.4	0.01	1.7	1.1	16	BK
DE3P4D	24.8	24.7	24.4	23.3	24.3	-0.23	2.0	0.7	24.3	-0.13	2.0	0.7	16	LA
DN8UTA	25.1	24.1	23.7	23.8	24.2	-0.35	1.6	0.6	23.8	-0.82	1.8	0.6	16	LY
DN8WJD	25.8	25.6	26.1	25.8	25.8	1.23	1.9	0.2	24.9	0.65	1.8	0.7	16	LY
DN8WJD_AL	25.6	24.9	26.5	26.1	25.8	1.18	2.0	0.7	25.0	0.71	1.9	0.8	16	AL
DXTY29_AL	24.7 L	25.0	24.4	25.1	24.8	0.26	1.9	0.3	25.3	1.22	2.1	0.8	16	AL
EAMEQA	23.2	23.2	23.9 L	23.4	23.4	-1.04	1.6	0.3	24.2	-0.32	1.7	0.7	16	LZ
EJDZV8	22.9	23.5	23.1	No Data	23.2	-1.25	1.7	0.3	23.8	-0.90	1.9	0.6	10	TT
FEBG8E	25.6	25.6	25.6	23.5	25.1	0.51	1.9	1.0	24.6	0.20	1.9	0.8	16	LA
FEVF4C	25.0	24.4	25.3	24.0	24.7	0.14	2.0	0.6	24.6	0.18	1.7	0.6	16	LA
FF8WJC	23.9 L	24.0 L	24.1 L	24.1 L	24.0	-0.48	0.3	0.1 L	24.1	-0.43	0.5	0.2 L	8	XX
FQ9GJJ	26.4	24.4 L	No Data	No Data	25.4	0.81	1.2	1.4	24.0	-0.55	1.6	1.3	8	LU
G2L49A	23.4 L	24.1 L	24.0 L	24.2 L	23.9	-0.57	0.2	0.4	24.2	-0.28	0.4	0.5	8	XX
GKXQV3_AL	24.9	25.3	25.2	24.4	24.9	0.38	1.5	0.4	25.2	1.08	1.6	0.5	16	AL
GPRKT6_AL	25.1	27.6 XH	27.0	26.0	26.4	1.76	2.3	1.1	25.8	1.91	2.1	2.3 H	16	AL

Containerboard Interlaboratory Testing Program

Analysis 223

STFI, 42 lb Linerboard - 42N1

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
GQ76H9	24.9	24.7	23.6	22.9	24.0	-0.48	1.7	0.9	24.3	-0.23	1.7	0.7	16	LY
JFY9C9	24.9 L	25.8	25.2	25.3	25.3	0.72	1.4	0.4	24.8	0.53	1.7	0.8	16	LA
KDPJM6	23.5 L	23.4	24.7	24.0	23.9	-0.57	1.8	0.6	24.1	-0.50	1.8	0.5	14	LW
LXP7MY	21.8 *H	23.1	22.5	24.1	22.9	-1.54	2.3	1.0	23.3	-1.52	2.6	0.8	16	LH
MDZ8WU_AI	32.7 X	31.6 X	31.5 X	30.6 XH	31.6	6.61 X	2.5	0.9	31.1	9.08 X	2.4	0.9	16	AL
N9VX34	22.2 L	No Data	No Data	No Data	22.2	-2.17 *	0.5	0.0	22.8	-2.19 *	0.9	0.5	4	LH
NRWLU3_AL	22.5	25.0	21.9 *	22.2	22.9	-1.52	1.7	1.4	25.1	0.91	2.0	3.4 H	16	AK
PG6MG3_AL	24.1	23.8 H	23.9	22.9	23.7	-0.79	2.1	0.5	23.8	-0.92	1.9	0.8	15	AL
Q9A764	27.8 *	28.1 X	26.3	25.8	27.0	2.30 *	2.0	1.1	27.0	3.48 X	1.9	0.8	8	LH
QPYARY_AL	25.1	22.4 *	25.3	26.0	24.7	0.15	2.0	1.5 H	25.3	1.22	1.9	1.0	16	AL
R27H8W	24.4	24.3	23.2	24.8	24.2	-0.35	2.0	0.7	24.2	-0.39	2.0	0.7	4	LU
RV2LG6	22.9	23.0	23.6	23.1	23.1	-1.30	2.2	0.3	23.0	-1.94 *	1.9	1.0	16	XX
T9JTTV	24.8	25.0	24.2	25.2	24.8	0.24	1.9	0.4	24.8	0.48	1.8	0.6	16	LH
W4X8AY	20.3 X	22.0 *	21.1 *	21.3 *	21.2	-3.13 X	1.7	0.7	22.0	-3.35 X	1.5	0.9	16	XX
WWXPYT	35.3 XH	32.7 XH	No Data	No Data	34.0	8.86 X	12.3	1.9	26.0	2.17 *	4.9	3.8 H	14	LZ
XCBFHT	23.2 H	25.2	26.5	24.0	24.7	0.19	2.2	1.4	24.4	-0.11	1.8	0.9	14	LA
YFNHXW_AI	24.8	24.3	25.5	26.5	25.2	0.67	1.7	1.0	26.0	2.18 *	4.2	1.4	16	AL
Z7DFCV	23.9	24.6	23.9	24.4	24.2	-0.33	1.7	0.4	24.2	-0.37	1.8	0.5	16	LU
Z7T2LX	26.2 L	24.6	26.2 H	25.4	25.6	1.00	1.9	0.8	24.7	0.31	2.5	0.9	15	LU

Consensus (All Labs) Results

Wk Mean	24.47	24.35	24.54	24.50	Month Mean	24.52	Grand Mean	24.43
Avg SDr	1.95	1.81	2.00	1.88	Avg SD	1.90	Avg SD	2.08
SD btwn Labs	1.35	0.95	1.31	1.21	SD btwn Labs	1.07	SD btwn Labs	0.73
Labs Incld	51	48	50	49	SD btwn Wks	0.76	SD btwn Wks	1.13
Labs Excld	3	5	1	1	Labs Incld	51	Labs Incld	50
Labs not Rcvd	0	1	3	4				

Key to Instrument Codes Reported by Participants

AK	L & W Autoline 300	AL	L & W Autoline 400
BK	Buchel Strip Compression Tester BK-155	ID	IDM Compression Tester
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

Containerboard Interlaboratory Testing Program

Analysis 224

STFI, 52 lb Linerboard - 52M1

TAPPI Official Test Method T826

Report #682
July 2026

	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
32BFPV_AL	31.5	32.4	29.5	31.5 L	31.2	-0.24	2.4	1.2	31.1	-0.47	2.4	0.8	12	XX
3GPPTK	31.3	30.0	30.6	30.1	30.5	-0.97	1.9	0.6	31.1	-0.49	2.0	0.8	8	LH
4KH7HJ	31.7 L	31.1	31.1	31.0	31.2	-0.19	1.7	0.3	31.5	-0.14	1.6	0.4	12	LH
4U8RRN	31.3	31.8	30.1	31.1	31.1	-0.38	2.5	0.7	30.9	-0.65	2.4	0.6	12	LH
7W9EKJ	29.6	29.8	29.7	30.0	29.8	-1.78	2.7	0.2	29.4	-1.95 *	2.4	0.7	12	LU
8TKLGF	29.8	29.6	30.7 H	28.4 *	29.6	-1.92	3.3	0.9	30.5	-0.97	3.0	0.9	12	XX
8UF89K	30.8 H	30.3	30.5	30.5 H	30.5	-0.97	3.3	0.2	30.3	-1.15	2.9	0.6	12	XX
94WBVB	31.6	30.9	31.6	31.7	31.4	0.02	2.4	0.3	32.5	0.72	2.5	1.0	12	LU
9TYBGL	31.4	32.1	32.4	32.1	32.0	0.60	2.4	0.4	31.4	-0.27	2.3	0.8	12	LZ
9XVYYD	31.7	31.6	31.8	31.5	31.6	0.23	2.7	0.1 L	31.9	0.22	2.7	0.7	12	LH
AHFDVE_AL	32.4	33.3	30.2	30.7	31.7	0.24	2.6	1.5	30.9	-0.69	2.5	1.1	12	AL
ANYJME	30.2	31.7	29.3	28.8	30.0	-1.53	2.8	1.3	32.0	0.29	2.9	1.8	12	XX
ATUDKF	32.7	32.3	32.5	31.6	32.3	0.93	2.9	0.5	32.7	0.93	2.8	0.9	12	LA
AWE6WH	27.9 XL	24.5 X	29.5 H	27.7 *L	27.4	-4.30 X	2.5	2.1 H	36.0	3.80 X	3.2	9.3 H	8	ID
B3YHEH	32.2	32.8	33.5	31.6	32.5	1.18	2.8	0.8	32.5	0.71	2.8	0.8	12	LH
B96CAD_AL	33.2	30.8	30.4	32.3	31.7	0.26	2.5	1.3	31.2	-0.44	2.8	1.8	11	AL
BNHPKJ	31.9	30.3	30.6	29.3	30.5	-0.97	2.4	1.1	30.7	-0.86	2.8	0.8	12	LZ
CDEPQC	30.4 H	29.5	33.8	32.2	31.5	0.04	2.9	1.9 H	31.4	-0.21	2.9	1.4	10	LW
CGEZMC	32.2	33.8	32.4	34.1 *	33.1	1.83	2.3	1.0	32.4	0.62	2.3	1.8	12	LA
CHAJND_AL	31.4	33.4	31.9	31.9 L	32.1	0.76	1.7	0.9	31.8	0.10	1.8	1.0	12	XX
D4J9ED	31.4	30.4	31.7	32.1	31.4	-0.01	2.4	0.7	31.7	0.07	2.4	0.7	12	BK
DE3P4D	32.0	31.0	32.4	32.8	32.1	0.70	2.5	0.8	31.7	0.08	2.5	0.8	12	LA
DN8UTA	30.7	30.3	30.0	31.3	30.6	-0.93	2.4	0.5	30.8	-0.72	2.4	1.1	12	LZ
DN8WJD	31.3	30.9	31.1	31.7	31.2	-0.20	2.1	0.3	31.3	-0.30	2.0	0.4	12	LY
DN8WJD_AL	31.3	31.5	32.5	31.9	31.8	0.41	1.9	0.5	31.9	0.21	1.8	0.5	12	AL
DXTY29_AL	32.7	30.3	32.6 H	31.7	31.8	0.43	3.0	1.1	32.7	0.90	2.9	1.3	12	AL
EAMEQA	30.9	31.1	29.6 H	30.7	30.6	-0.93	2.8	0.7	31.8	0.12	2.8	1.7	12	LZ
EJDZV8	32.1	31.7	30.1	No Data	31.3	-0.17	2.7	1.0	31.4	-0.26	2.6	0.8	11	TT
FEBG8E	31.5	32.5	31.0	31.4	31.6	0.18	2.6	0.6	31.4	-0.26	2.5	0.6	12	LU
FEVF4C	31.5	32.2	32.2 L	31.3	31.8	0.40	2.2	0.5	31.9	0.19	2.1	0.6	12	LA
FF8WJC	32.1 L	31.7 L	31.7 L	32.1 L	31.9	0.50	0.3	0.3	32.3	0.58	0.4	0.7	8	XX
FQ9GJJ	31.9	32.4 L	No Data	No Data	32.2	0.77	2.6	0.3	31.8	0.09	2.4	1.5	8	LU
G2L49A	32.1 L	31.5 L	31.9 L	32.3 L	31.9	0.54	0.3	0.3	32.7	0.88	0.7	0.9	8	XX
GKXQV3_AL	33.0	32.8	32.8	31.5	32.5	1.15	2.1	0.7	32.6	0.82	2.1	1.1	12	AL
GPRKT6_AL	35.5 X	34.5 *	34.7 *H	35.0 *	34.9	3.76 X	3.1	0.4	34.7	2.65 *	2.8	0.9	12	AL

Containerboard Interlaboratory Testing Program

Analysis 224

STFI, 52 lb Linerboard - 52M1

TAPPI Official Test Method T826

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
GQ76H9	31.9	31.4	31.4	30.2	31.2	-0.21	2.3	0.7	31.8	0.14	2.8	1.0	12	LU
JFY9C9	32.2	31.9	33.6	30.1	32.0	0.56	2.3	1.4	32.2	0.51	2.3	1.1	12	LA
KDPJM6	30.5	29.6	30.3 L	30.9 L	30.3	-1.19	1.8	0.5	30.5	-1.04	2.0	0.7	12	LW
LXP7MY	30.0 H	28.5 *H	29.0 H	30.5 H	29.5	-2.06 *	3.9	0.9	29.6	-1.78	3.9	1.3	12	LH
MDZ8WU_AI	41.4 XH	41.4 X	43.0 X	40.9 XH	41.7	10.98 X	3.5	0.9	40.7	7.83 X	3.3	1.3	12	AL
N9VX34	30.8 L	No Data	No Data	No Data	30.8	-0.67	0.6	0.0	29.9	-1.53	0.8	1.3	2	LH
NRWLU3_AL	30.4	29.8	30.7	31.7	30.7	-0.83	2.1	0.8	31.6	-0.02	2.1	2.1	12	AK
PG6MG3_AL	32.2	32.7	33.7	31.7 H	32.6	1.23	2.7	0.9	32.4	0.63	3.0	1.2	10	XX
Q9A764	33.1	35.3 *	33.3	33.7	33.8	2.59 *	2.4	1.0	33.7	1.76	2.6	0.7	12	LH
QPYARY_AL	32.7	30.4	31.5	34.6 *	32.3	0.93	2.5	1.8	32.7	0.86	2.7	1.4	8	AL
R27H8W	31.4	31.3	31.6	31.4	31.4	0.00	2.5	0.2 L	31.4	-0.21	2.5	0.2 L	4	LU
RV2LG6	29.1 *	31.3	28.5	28.8	29.4	-2.16 *	2.5	1.3	30.0	-1.44	2.8	1.1	12	XX
T9JTTV	32.4	32.9	31.6	31.8	32.2	0.78	2.6	0.6	32.3	0.57	2.6	1.3	12	LH
W4X8AY	28.2 X	26.6 X	27.6 *	28.4 *	27.7	-4.00 X	2.4	0.8	28.8	-2.53 *	2.0	2.1	12	XX
WWXPYT	40.5 X	34.5 *	No Data	No Data	37.5	6.53 X	3.1	4.3	34.6	2.59 *	5.2	2.8 H	10	LA
XCBFHT	29.6	30.6	31.5	32.5 L	31.0	-0.43	2.4	1.2	31.2	-0.40	2.4	1.0	12	LW
YFNHXW_AI	34.2 *	34.7 *	30.5	30.4	32.4	1.08	2.5	2.3 H	33.5	1.58	2.8	1.8	12	AL
Z7DFCV	31.2	31.4	30.7	31.0	31.1	-0.39	2.3	0.3	31.3	-0.32	2.3	0.4	12	LU
Z7T2LX	32.8 L	31.1	33.2	31.7 H	32.2	0.83	2.9	1.0	32.0	0.29	2.4	1.1	11	LU

Consensus (All Labs) Results

Wk Mean	31.55	31.60	31.30	31.29	Month Mean	31.43	Grand Mean	31.66
Avg SDr	2.54	2.41	2.55	2.48	Avg SD	2.46	Avg SD	2.55
SD btwn Labs	1.04	1.46	1.49	1.47	SD btwn Labs	0.93	SD btwn Labs	1.15
Labs Incld	49	50	50	49	SD btwn Wks	0.94	SD btwn Wks	1.16
Labs Excld	5	3	1	1	Labs Incld	49	Labs Incld	52
Labs not Rcvd	0	1	3	4				

Key to Instrument Codes Reported by Participants

AK	L & W Autoline 300	AL	L & W Autoline 400
BK	Buchel Strip Compression Tester BK-155	ID	IDM Compression Tester
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
7W9EKJ	173.0	1.10	17.76		166.2	0.60	7.63	4	EV
8TKLGF	166.4	0.61	24.11		164.5	0.50	6.13	4	EV
9TYBGL	176.7	1.38	13.77		174.9	1.14	15.86	4	EV
9XVYYD	157.4	-0.06	14.13		158.6	0.14	4.95	4	EV
A8WMPP	178.6	1.52	15.74		176.0	1.20	7.68	4	LS
AHFDVE_AL	129.6	-2.12 *	14.20		124.0	-1.98 *	6.90	4	AL
ATUDKF	159.3	0.08	14.03		156.5	0.01	8.68	4	LA
BNHPKJ	161.2	0.23	17.59		164.1	0.48	28.97 H	4	LS
CDEPQC	137.7	-1.52	7.94		135.5	-1.27	3.81	4	XX
CGEZMC	146.3	-0.88	14.38		132.7	-1.44	10.81	4	LA
DE3P4D	158.0	-0.01	23.71		167.1	0.66	7.39	4	LA
DN8UTA	162.0	0.29	13.17		163.0	0.41	4.68	4	LS
DN8WJD	152.8	-0.40	20.86		160.6	0.26	6.70	4	XX
DN8WJD_AL	156.1	-0.15	14.96		154.8	-0.09	9.66	4	AL
DXTY29_AL	151.0	-0.53	17.29		145.7	-0.65	7.70	4	AL
GKXQV3_AL	153.9	-0.32	12.84		155.2	-0.07	9.15	4	AL
GPRKT6_AL	172.1	1.04	21.61		173.3	1.04	6.48	4	AL
H6H6R4_AL	104.8	-3.96 X	12.87		120.1	-2.22 *	10.64	4	AL
JFY9C9	171.8	1.02	31.75 H		167.7	0.70	22.27	4	LA
MDZ8WU_AL	60.5	-7.25 X	7.91		86.3	-4.28 X	17.39	4	AL
N9VX34	162.8	0.34	12.36		176.1	1.21	27.32 H	4	EV
QPYARY	134.0	-1.79	7.30 L		133.7	-1.38	1.61 L	4	LS
QPYARY_AL	164.9	0.50	19.42		165.2	0.54	8.46	4	AL
R27H8W	178.0	1.47	12.94		178.0	1.33	0.00	1	EV
WWXPYT	148.7	-0.70	11.91		152.6	-0.23	10.44	4	LA
XCBFHT	166.2	0.60	12.30		162.2	0.36	6.87	3	LA
YFNHXW_AL	138.4	-1.47	14.34		135.8	-1.25	4.11	4	AL
Z7T2LX	155.3	-0.21	17.88		156.3	0.00	3.11	4	EV

Consensus (All Labs) Results

Month Mean	158.16	Grand Mean	156.30
Avg SD	16.89	Avg SD Months	11.66
SD btwn Labs	13.46	SD btwn Labs	16.34
Labs Incld	26	Labs Incld	27

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 - 42N1

TAPPI Official Test Method T538

	Monthly Results				Cumulative Results				
WebCode	Mean	CPV	SD		Mean	CPV	SD Months	Months	Inst
32BFPV_AL	378.7	0.33	7.80		380.3	0.28	1.58 L	4	XX
8TKLGF	378.8	0.34	11.90		380.7	0.30	4.74	4	XX
B96CAD_AL	385.5	0.76	12.49		383.4	0.47	4.99	4	AL
CF43BF	342.1	-2.01 *	9.57		344.3	-1.95 *	2.65	4	TS
CHAJND_AL	382.9	0.60	10.08		374.9	-0.05	5.77	4	AL
DN8UTA	370.3	-0.21	13.64		365.7	-0.62	4.34	4	XX
DN8WJD_AL	373.2	-0.02	5.63		377.3	0.09	3.04	4	AL
DXTY29_AL	345.3	-1.80	4.03 L		345.8	-1.85	3.15	4	AL
FFMDE6	372.7	-0.05	3.40 L		372.5	-0.21	1.27 L	3	XX
GPRKT6_AL	382.0	0.54	10.72		375.7	-0.01	7.24	4	AL
NRWLU3_AL	366.8	-0.43	9.60		386.2	0.64	23.76	4	AK
QPYARY_AL	406.9	2.13 *	7.35		407.1	1.93 *	1.63 L	4	AL
T9JTTV	375.6	0.13	8.72		394.7	1.17	37.91 H	4	PP
UZNCGW	2,992.8	167.22 X	50.30 H		1,675.5	80.23 X	1,863.01	2	TS
YFNHXW_AL	363.8	-0.62	9.32		366.7	-0.56	3.77	4	AL
Z7DFCV	378.8	0.33	5.83		382.0	0.38	2.29	4	PP

Consensus (All Labs) Results

Month Mean	373.56	Grand Mean	375.81
Avg SD	9.15	Avg SD Months	12.13
SD btwn Labs	15.66	SD btwn Labs	16.20
Labs Incld	15	Labs Incld	15

Key to Instrument Codes Reported by Participants

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

Containerboard Interlaboratory Testing Program

Analysis 231

Internal Bond, 42 lb Linerboard - 42N1

TAPPI Official Test Method T569

	Monthly Results				Cumulative Results				
WebCode	Mean	CPV	SD		Mean	CPV	SD Months	Months	Inst
32BFPV	136.6	0.84	7.77		144.2	1.19	5.25	4	HY
9TYBGL	136.6	0.84	4.94		141.5	1.00	6.97	4	HZ
9XVYYD	140.4	1.08	4.16		133.0	0.39	7.85	4	TM
A8WMPP	130.2	0.42	6.53		133.4	0.42	2.71	4	HY
B3YHEH	131.6	0.51	5.55		130.9	0.24	1.79 L	4	HZ
B96CAD	133.7	0.65	6.48		132.5	0.36	2.74	4	TM
CHAJND	128.8	0.33	6.98		130.8	0.23	2.97	4	LZ
DN8WJD	136.2	0.81	7.29		133.1	0.39	5.00	4	TM
DXTY29	106.2	-1.14	7.09		117.6	-0.72	14.32	4	TM
EJDZV8	111.6	-0.78	2.46		106.7	-1.50	5.85	3	TM
FEBG8E	129.4	0.37	2.30		125.2	-0.17	5.53	4	HZ
FEVF4C	125.6	0.12	5.86		128.0	0.03	4.46	4	TM
GPRKT6	95.4	-1.84	7.27		98.6	-2.08 *	2.69	4	TM
H6H6R4	110.6	-0.85	2.07		147.4	1.43	38.33 H	4	TM
JW8473	109.0	-0.96	3.81		128.8	0.09	42.26 H	4	TM
LXP7MY	139.4	1.02	13.09 H		131.3	0.26	5.68	4	HY
MDZ8WU	100.6	-1.50	3.21		109.5	-1.30	8.95	4	TM
PG6MG3	135.2	0.75	4.32		139.8	0.88	3.50	4	HY
QPYARY	103.0	-1.35	15.26 H		106.3	-1.53	10.53	4	TM
R27H8W	114.8	-0.58	5.76		114.8	-0.92	0.00	1	TM
W9CHUU	121.8	-0.12	5.07		123.9	-0.26	3.31	4	HZ
XCBFHT	147.2	1.52	9.86		152.7	1.80	4.77	3	HY
Z7DFCV	142.7	1.23	7.08		138.5	0.79	4.46	4	HY
Z7T2LX	102.6	-1.37	5.22		113.6	-1.01	9.60	4	TM

Consensus (All Labs) Results

Month Mean	123.72	Grand Mean	127.57
Avg SD	6.93	Avg SD Months	13.39
SD btwn Labs	15.41	SD btwn Labs	13.91
Labs Incld	24	Labs Incld	24

Consensus By Method

Test Method	Group Mean	SD btwn Group	Difference from Grand Mean	Labs Included
Scott Bond Type	121.20	15.99	2.52	17
Modified Scott Bond Mechanics	138.11	8.36	14.39	4

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)	TM	TMI Monitor/Internal Bond Tester

	Monthly Results			Cumulative Results			
WebCode	Mean	CPV	SD	Mean	CPV	SD Months	Months
2WHZZW	24.8	-0.40	2.28	23.0	-1.02	1.40	4
32BFPV	28.6	0.87	3.51	27.6	0.64	0.75	4
4U8RRN	24.6	-0.47	4.22	25.0	-0.28	2.68	4
7W9EKJ	30.5	1.51	1.11	30.6	1.77	0.53	4
9TYBGL	27.2	0.40	3.27	25.8	0.00	1.30	4
9XVYYD	23.2	-0.93	4.87	26.6	0.30	2.33	4
A8WMPP	27.6	0.53	1.14	27.8	0.73	0.49	4
AHFDVE	29.8	1.27	2.17	28.0	0.79	2.98	4
B3YHEH	26.8	0.27	2.17	26.0	0.06	1.65	4
BNHPKJ	21.8	-1.40	1.30	19.9	-2.15 *	1.77	4
CDEPQC	26.8	0.27	3.27	27.4	0.59	1.48	4
CHAJND	20.6	-1.80	2.10	20.4	-1.97 *	0.49	4
DE3P4D	30.0	1.33	2.35	25.4	-0.14	3.26	4
DN8UTA	28.7	0.90	4.09	28.4	0.94	2.66	4
DN8WJD	25.8	-0.07	1.30	25.6	-0.09	0.50	4
DXTY29	24.9	-0.36	3.21	28.2	0.87	2.46	4
GPRKT6	21.2	-1.60	2.17	23.2	-0.94	2.46	4
H6H6R4	31.3	1.77	2.83	28.6	1.04	2.66	4
LXP7MY	28.6	0.87	2.07	25.5	-0.11	8.21 H	4
MDZ8WU	27.0	0.33	2.86	27.8	0.72	1.85	4
PG6MG3	26.0	0.00	1.00	25.3	-0.20	1.28	4
QPYARY	26.2	0.07	2.95	26.8	0.37	1.45	4
R27H8W	20.0	-2.00 *	2.35	20.0	-2.11 *	0.00	1
T9JTTV	23.4	-0.87	3.21	24.6	-0.43	1.38	4
WWXPYT	23.1	-0.97	4.16	21.5	-1.56	1.85	4
XCBFHT	27.6	0.53	1.52	27.7	0.68	0.50	3
YFNHXW	25.7	-0.09	1.88	25.6	-0.06	0.84	4
Z7DFCV	28.2	0.73	1.58	27.2	0.50	1.20	4
Z7T2LX	23.8	-0.73	1.48	28.7	1.06	4.64	4

Consensus (All Labs) Results

Month Mean	26.00	Grand Mean	25.79
Avg SD	2.70	Avg SD Months	2.50
SD btwn Labs	3.00	SD btwn Labs	2.74
Labs Incld	29	Labs Incld	29

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
2WHZZW_AL	42.9	0.24	3.45		43.3	0.29	1.91	4	AL
32BFPV	40.1	-1.78	3.66		41.9	-0.97	1.89	4	TP
32BFPV_AL	42.3	-0.22	3.14		42.4	-0.56	0.60	4	XX
4U8RRN	43.4	0.58	2.21		42.9	-0.10	0.64	4	LP
9TYBGL	41.5	-0.79	2.23		43.3	0.32	1.32	4	LP
9XVYYD	42.6	-0.01	2.25		42.4	-0.57	1.00	4	LP
A8WMPP	43.6	0.73	1.77		43.8	0.80	0.42	4	LP
AHFDVE_AL	39.7	-2.07 *	2.71		40.3	-2.46 *	0.87	4	AL
ATUDKF	42.2	-0.27	1.04	L	43.7	0.67	1.26	4	LA
AWE6WH	44.1	1.07	3.98		43.8	0.71	1.21	4	GG
B3YHEH	42.5	-0.09	2.53		43.0	-0.01	1.48	4	LP
B96CAD_AL	39.8	-2.00 *	1.94		40.5	-2.25 *	2.06	4	AL
BNHPKJ	42.0	-0.42	1.61		41.6	-1.25	0.87	4	TD
CDEPQC	41.3	-0.89	2.00		39.5	-3.17 X	1.79	4	LP
CGEZMC	41.5	-0.80	2.62		41.9	-1.03	1.41	4	LA
CHAJND_AL	43.8	0.86	1.18	L	43.6	0.58	0.80	4	AL
DE3P4D	40.1	-1.80	2.33		41.5	-1.31	1.42	4	LA
DN8UTA	43.4	0.60	4.29		44.7	1.56	1.05	4	GA
DN8WJD	44.1	1.05	2.74		43.6	0.58	1.18	4	LP
DN8WJD_AL	44.7	1.51	2.47		43.4	0.42	0.89	4	AL
DXTY29_AL	41.2	-0.96	1.94		42.4	-0.50	1.18	4	AL
EJDZV8	43.1	0.33	3.50		44.2	1.17	1.49	3	GA
FQ9GJJ_AL	41.6	-0.70	2.13		42.5	-0.44	0.67	4	AL
GKXQV3_AL	42.9	0.25	1.68		42.8	-0.12	0.26	4	AL
GPRKT6_AL	45.4	2.00 *	1.59		44.5	1.42	0.69	4	AL
H6H6R4_AL	41.2	-1.02	2.53		42.6	-0.30	1.71	4	AL
JFY9C9	44.0	1.00	3.77		44.4	1.35	0.91	4	LA
N4P699	44.0	1.00	2.28		43.9	0.81	1.29	4	LP
NRWLU3_AL	43.4	0.56	2.06		43.6	0.62	0.43	4	AK
Q9A764	43.5	0.65	3.24		43.4	0.42	1.30	3	XX
QPYARY_AL	41.6	-0.70	3.25		41.7	-1.18	0.60	4	AL
R27H8W	43.5	0.68	7.42	H	43.5	0.52	0.00	1	GA
T9JTTV	41.7	-0.65	3.18		43.4	0.41	1.98	4	TP
W9CHUU	40.7	-1.36	3.39		43.2	0.25	1.90	4	LP
WWXPYT	42.7	0.04	4.55		43.0	0.00	0.91	4	LA
XCBFHT	43.9	0.93	3.60		43.5	0.52	0.40	3	LP
YFNHXW_AL	42.8	0.12	3.48		40.6	-2.18 *	1.45	4	AL
Z7DFCV	43.7	0.80	4.21		44.5	1.37	1.00	4	TP
Z7T2LX_AL	43.4	0.57	2.86		43.1	0.11	0.32	4	AL

Containerboard Interlaboratory Testing Program

Analysis 237

Air Resistance, 42 lb Linerboard - 42N

TAPPI Official Test Method T460

	Monthly Results			Cumulative Results				
WebCode	Mean	CPV	SD	Mean	CPV	SD Months	Months	Inst
ZBMUZL	44.0	0.98	2.82	43.3	0.33	0.60	4	LP

Consensus (All Labs) Results

Month Mean	42.59	Grand Mean	42.97
Avg SD	3.05	Avg SD Months	1.19
SD btwn Labs	1.41	SD btwn Labs	1.09
Labs Incld	40	Labs Incld	39

Key to Instrument Codes Reported by Participants

AK	L & W Autoline 300	AL	L & W Autoline 400
GA	Gurley Precision #4340 Automatic Densometer	GG	Gurley Precision #4320 Densometer
LA	L&W Autoline (237 Enrollment)	LP	L&W Air Permeance Tester SE 166
TD	TMI Gurley Densometer	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
32BFPV	52.1	52.0	51.8	52.0	52.0	-0.39	2.3	0.1 L	46.1	-2.41 *	2.0	9.2 H	16	LD
3GPPTK	55.8	53.2	54.1	55.6	54.7	0.54	2.6	1.2	54.0	0.26	2.8	1.4	16	LD
48T9GL	50.6	50.9	49.1	50.2	50.2	-0.99	1.8	0.8	49.7	-1.18	2.0	1.3	16	TX
4KH7HJ	49.8	48.8	49.3	49.3	49.3	-1.30	2.2	0.4	49.3	-1.32	1.8	0.5 L	16	LD
4U8RRN	54.2	56.7 H	55.4 H	55.0	55.3	0.77	3.6	1.0	55.5	0.78	2.9	1.1	16	LD
7W9EKJ	51.9	51.6	52.1	53.6	52.3	-0.27	3.1	0.9	52.5	-0.25	3.2	1.2	16	EN
8FT32N	52.6	53.2	51.9	51.3	52.3	-0.28	1.8	0.8	52.1	-0.36	2.0	1.3	16	LD
8TKLGF	49.5	50.5	53.0	51.6	51.2	-0.67	2.2	1.5	52.1	-0.37	2.2	1.3	16	TX
9TYBGL	52.9	52.5	53.2	54.2 H	53.2	0.03	3.4	0.7	53.7	0.15	3.0	1.3	16	LZ
A8WMPP	43.6 X	No Data	No Data	49.6	46.6	-2.23 *	1.8	4.2	49.3	-1.32	1.6	3.3	5	LD
AHFDVE	52.3	52.3	52.9 H	52.6	52.5	-0.21	2.9	0.3	52.4	-0.28	3.1	1.2	16	LZ
B3YHEH	49.6	51.6	49.9	49.6	50.2	-1.01	2.3	1.0	49.4	-1.30	2.1	1.4	16	LZ
B6MWYL	54.0	53.0	54.8	53.3	53.8	0.23	2.5	0.8	55.9	0.91	2.5	1.5	16	LD
CDEPQC	57.8	57.3	56.1	55.5	56.7	1.23	2.2	1.0	55.9	0.93	2.5	1.8	16	LD
CHAJND	51.6	51.3	49.6	49.7	50.5	-0.88	2.1	1.0	50.5	-0.93	2.1	1.3	16	LD
D4J9ED	52.6	52.5	52.1	53.1	52.6	-0.19	2.2	0.4	53.3	0.02	2.3	1.0	15	LZ
DE3P4D	52.8	52.0	51.2	51.9	52.0	-0.39	2.7	0.7	51.3	-0.64	3.9	1.0	16	MB
DN8WJD	51.9	52.2	52.6	51.6	52.1	-0.35	2.5	0.4	53.5	0.12	3.2	1.6	16	LD
DP3DVB	53.7	54.2	54.9 H	53.6	54.1	0.33	2.9	0.6	53.4	0.06	2.9	1.2	16	TX
DXTY29	54.1	48.8	55.9	52.9	52.9	-0.06	2.6	3.0 H	52.3	-0.30	2.5	2.1	16	LD
FEBG8E	52.3	48.5	51.1	50.0	50.5	-0.90	2.1	1.6	51.0	-0.74	2.3	1.1	16	LD
FEVF4C	58.9 *H	55.5	54.0	53.5	55.5	0.81	3.3	2.4	55.6	0.82	3.3	2.0	16	LC
FF8WJC	55.6 L	56.1 L	55.7 L	55.5 L	55.7	0.90	0.5	0.3	56.5	1.12	0.8	1.0	8	XX
FFMDE6	49.5	50.2	50.4	49.3	49.8	-1.12	2.3	0.5	50.1	-1.04	2.6	1.1	12	LD
FQ9GJJ	54.9	55.5	53.8	53.4	54.4	0.45	2.2	1.0	54.3	0.39	2.3	1.0	15	LC
GQ76H9	54.7 H	52.3	53.8	50.3	52.8	-0.11	3.7	1.9	53.6	0.15	4.7	1.8	16	LD
JFY9C9	56.8	56.2	54.0	52.5	54.9	0.61	2.6	2.0	57.9	1.58	3.5	4.3	16	TU
KANHH2	49.5 H	51.0	54.0	56.4	52.7	-0.13	3.5	3.1 H	51.5	-0.58	2.9	1.9	16	LD
L7FRQC	57.5	61.9 X	60.2 *	60.0 *	59.9	2.33 *	2.3	1.8	58.4	1.78	2.7	1.7	16	TB
LQMUQ3	55.3 L	55.2 L	55.3 L	55.3 L	55.3	0.75	0.8	0.0 L	56.2	1.03	0.6	0.6 L	16	LD
MDZ8WU	56.2	57.8	55.0 H	57.7	56.7	1.23	3.6	1.3	53.7	0.18	3.3	10.4 H	15	LD
N4P699	53.7	53.1	54.0	54.7	53.9	0.26	2.2	0.7	53.0	-0.08	2.6	1.1	16	LD
PG6MG3	51.1	52.5	51.3	51.7	51.6	-0.50	1.8	0.6	52.2	-0.33	2.2	2.1	16	LD
Q9A764	49.6	52.4	47.4 *	51.8	50.3	-0.96	3.0	2.3	49.1	-1.40	2.3	3.9	16	LD
R27H8W	50.9	51.2	52.4 H	55.0	52.4	-0.25	3.6	1.9	52.4	-0.29	3.6	1.9	4	LD

	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
RV2LG6	59.3 *L	60.1 *L	62.9 XL	60.3 *L	60.6	2.58 *	0.8	1.6	60.5	2.50 *	1.0	1.5	16	XX
T9JTTV	55.5	54.7	53.9	54.4	54.6	0.53	2.7	0.7	56.6	1.17	3.6	2.2	16	LD
W4X8AY	47.5 *	47.5 *	46.6 *	47.0 *	47.1	-2.04 *	1.7	0.4	48.9	-1.45	2.3	2.9	16	TU
WWXPYT	50.3	52.7	51.6	53.2	52.0	-0.39	2.6	1.3	54.2	0.34	3.0	2.8	16	LD
XCBFHT	54.6	54.4 H	54.5	53.7 H	54.3	0.41	3.6	0.4	54.3	0.38	3.4	0.6 L	16	XX
XEYWRZ	57.6	60.1 *	58.2 *	59.5 *	58.9	1.98 *	2.1	1.1	58.4	1.78	2.7	1.0	16	LC
Z6XJJW	50.6	49.4 H	49.4	50.1	49.9	-1.10	3.3	0.6	54.0	0.27	3.0	2.8	16	LD
Z7DFCV	54.8	55.0	55.5	54.4	54.9	0.62	2.2	0.5	53.9	0.24	2.4	2.0	16	LC
ZBMUZL	53.0	54.2	53.6	53.1	53.5	0.13	1.8	0.5	52.0	-0.40	1.7	1.4	16	LD

Consensus (All Labs) Results

Wk Mean	53.24	53.10	52.98	53.15	Month Mean	53.10	Grand Mean	53.20
Avg SDr	2.68	2.47	2.62	2.60	Avg SD	2.57	Avg SD	2.70
SD btwn Labs	2.84	2.88	2.72	2.90	SD btwn Labs	2.92	SD btwn Labs	2.93
Labs Incld	43	42	42	44	SD btwn Wks	1.41	SD btwn Wks	2.76
Labs Excld	1	1	1	0	Labs Incld	44	Labs Incld	44
Labs not Rcvd	0	1	1	0				

Key to Instrument Codes Reported by Participants

EN	Emerson 2200 Series	LC	L&W Crush Tester 48
LD	L&W Crush Tester 248	LZ	L&W Crush Tester (model not specified)
MB	Messmer Buchel K440	TB	TMI Monitor/Compression Tester, 17-70
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 - CM61

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
32BFPV	61.4	60.9	62.9	62.3	61.9	1.13	2.4	0.9	61.3	0.93	2.1	1.1	16	LD
8FT32N	58.5	59.9	60.9	58.1	59.3	0.44	2.0	1.3	59.0	0.29	1.9	1.3	16	LZ
AHFDVE	54.2	54.2	51.3 H	53.4	53.3	-1.21	3.0	1.4	53.4	-1.27	2.9	1.2	16	LZ
B3YHEH	62.6	63.5	63.1	62.1	62.8	1.39	2.2	0.6	62.6	1.30	2.0	0.7	16	LD
CDEPQC	59.6	59.1	60.4	60.6	59.9	0.59	2.4	0.7	60.0	0.56	2.6	1.3	16	LD
CHAJND	56.3	56.2	57.5	58.7	57.2	-0.15	2.1	1.2	57.4	-0.16	2.0	0.9	16	LD
D4J9ED	60.6	60.1	59.8	61.0	60.4	0.72	2.5	0.5	58.3	0.08	2.2	2.0	15	LZ
DN8WJD	48.2 *	48.3 *	49.1 *	48.6 *	48.5	-2.49 *	2.8	0.4	49.0	-2.50 *	3.1	1.0	16	LD
DXTY29	59.8 L	54.9	57.3	58.9	57.7	0.00	1.8	2.1	58.2	0.07	2.0	1.2	16	LD
FF8WJC	55.9 L	56.9 L	55.7 L	56.1 L	56.2	-0.43	0.4	0.6	57.1	-0.23	0.8	1.1	8	XX
FQ9GJJ	58.3 L	60.9	59.6	61.3	60.0	0.62	1.7	1.4	60.4	0.66	2.1	1.5	14	LC
N4P699	57.1	59.3	58.9	56.1	57.8	0.03	1.9	1.5	58.3	0.09	1.8	1.0	16	LD
PG6MG3	59.8	58.8	58.0	59.0	58.9	0.32	2.9	0.7	58.0	0.01	2.6	1.2	16	LD
RV2LG6	69.4 *L	71.1 XL	70.7 XL	72.6 XL	71.0	3.60 X	0.7	1.3	70.5	3.49 X	0.7	1.2	16	XX
T9JTTV	56.0	52.7	54.9	54.1	54.4	-0.90	3.6	1.4	52.6	-1.49	3.8	3.2	16	LD
VEYDQR	58.3	57.4	58.8	55.8	57.6	-0.04	1.7	1.3	58.3	0.08	1.8	1.2	16	LC
WWXPYT	54.3 H	58.6	59.6	53.0	56.4	-0.36	3.1	3.2 H	61.6	1.01	3.4	6.1 H	16	LD
XCBFHT	60.6	60.0	60.9	60.3	60.4	0.74	2.0	0.4	59.7	0.48	2.0	0.8	16	XX
Z6XJJW	49.9 H	50.1 *H	51.5 H	51.0	50.6	-1.93 *	5.0	0.8	52.2	-1.61	4.6	1.5	16	LD
Z7DFCV	60.6	60.0	60.9	61.4	60.7	0.81	1.8	0.6	60.1	0.60	1.8	1.1	16	LC
ZBMUZL	59.9	60.7	60.7	60.1	60.3	0.71	1.6	0.4	62.0	1.10	1.4	1.2	16	LD

Consensus (All Labs) Results

Wk Mean	58.15	57.63	58.09	57.59	Month Mean	57.73	Grand Mean	57.98
Avg SDr	2.59	2.55	2.64	2.20	Avg SD	2.52	Avg SD	2.49
SD btwn Labs	4.46	3.87	3.84	3.92	SD btwn Labs	3.68	SD btwn Labs	3.60
Labs Incld	21	20	20	20	SD btwn Wks	1.27	SD btwn Wks	1.92
Labs Excld	0	1	1	1	Labs Incld	20	Labs Incld	20
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)	XX	Instrument make/model not specified by lab

Containerboard Interlaboratory Testing Program

Analysis 255

Ring Crush (RCT), 26 lb Corrugating Medium - CM61

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
32BFPV	32.0	32.7	33.2	30.5	32.1	-0.77	1.6	1.2	31.7	-1.05	1.5	0.8	16	LD
4U8RRN	33.6	34.7	32.0	32.9	33.3	0.10	2.5	1.1	33.5	0.25	2.4	0.9	16	LD
8FT32N	31.0	35.5	33.5	35.5	33.9	0.52	2.1	2.1	32.9	-0.19	1.9	1.4	16	LZ
8TKLGF	24.5 X	25.2 XH	24.1 X	25.6 X	24.8	-6.09 X	3.0	0.7	25.8	-5.08 X	3.0	1.1	16	MZ
B3YHEH	34.9	34.3	34.2	34.5	34.5	0.95	1.9	0.3	34.8	1.10	1.7	1.1	16	LD
B6MWYL	30.7	30.4 *	30.1 *	30.3	30.4	-2.04 *	1.8	0.3	34.0	0.56	1.6	2.2	16	LD
CHAJND	32.9	33.7 H	33.8 H	34.1	33.6	0.34	2.9	0.5	33.1	-0.06	2.6	0.8	16	LD
DE3P4D	33.8	33.9	33.0	32.1	33.2	0.04	1.7	0.8	34.4	0.83	3.1	1.9	16	MB
DN8UTA	33.2	32.4	32.1	32.7	32.6	-0.41	2.1	0.5	33.0	-0.15	1.8	0.9	16	LD
DP3DVB	28.5 *	33.8	33.0	32.5	31.9	-0.89	1.6	2.4 H	32.0	-0.84	1.9	2.7	16	LZ
FEBG8E	32.7	34.8	32.1	32.4	33.0	-0.12	1.6	1.2	32.4	-0.52	1.8	1.2	16	LD
FECEGA	34.3 H	34.6	34.5 H	34.0	34.4	0.88	3.3	0.2	29.4	-2.59 *	2.2	3.7	12	XX
FF8WJC	32.9 L	32.2 L	32.1 L	32.3 L	32.4	-0.58	0.4	0.4	34.6	0.95	9.1	4.8 H	8	MZ
GLU77E	31.8	31.9	31.6	30.7	31.5	-1.23	1.3	0.6	31.6	-1.08	1.7	0.4 L	16	TH
KANHH2	29.7 H	33.1	36.2 *	35.5	33.6	0.33	2.5	2.9 H	33.6	0.32	2.4	2.2	16	LD
L7FRQC	35.4	34.3	34.2	34.2	34.5	0.99	1.8	0.6	33.4	0.17	1.9	1.0	16	XX
LQMUQ3	35.3 L	35.4 L	35.4 L	35.3 L	35.3	1.59	0.6	0.1 L	36.5	2.30 *	0.6	0.9	16	LD
MDZ8WU	35.1	34.7	35.9	35.7	35.3	1.58	2.0	0.5	34.3	0.78	1.7	5.8 H	15	LZ
N4P699	31.4	31.3	32.8	31.7	31.8	-0.98	1.8	0.7	33.0	-0.10	1.8	1.1	16	LD
NRWLU3	34.5	35.1	33.4	35.4	34.6	1.05	1.6	0.9	33.9	0.50	1.6	1.3	16	LD
PG6MG3	30.8	33.1	32.3	33.1	32.4	-0.59	2.0	1.1	33.9	0.49	1.9	1.3	16	LD
Q9A764	32.7	35.9	34.9	33.7	34.3	0.84	1.9	1.4	34.1	0.60	1.7	1.2	16	LD
T9JTTV	31.9 H	31.7	31.5	30.3	31.3	-1.33	2.7	0.7	30.0	-2.18 *	2.8	2.9	16	LD
W4X8AY	31.9	32.6	31.6	31.9	32.0	-0.87	1.7	0.4	32.9	-0.18	1.6	1.1	16	TU
XCBFHT	32.0	33.3	32.6	32.6 H	32.6	-0.39	2.2	0.6	33.5	0.21	2.1	0.8	16	XX
XEYWRZ	35.8	36.0	35.4	36.2	35.9	1.97 *	2.2	0.4	34.3	0.79	2.0	1.3	16	XX
Z7DFCV	32.0	32.0	33.1	31.9	32.3	-0.66	1.4	0.6	32.3	-0.62	1.7	0.6 L	16	LC
ZBMUZL	32.9	32.8	33.1	32.1	32.7	-0.32	1.4	0.4	32.7	-0.31	1.2	0.6 L	16	LD

Consensus (All Labs) Results

Wk Mean	32.74	33.56	33.24	33.12	Month Mean	33.16	Grand Mean	33.18
Avg SDr	2.09	2.01	1.97	1.81	Avg SD	1.97	Avg SD	2.60
SD btwn Labs	1.80	1.48	1.49	1.76	SD btwn Labs	1.37	SD btwn Labs	1.45
Labs Incld	27	27	27	27	SD btwn Wks	1.08	SD btwn Wks	2.11
Labs Excld	1	1	1	1	Labs Incld	27	Labs Incld	27
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
MZ	Messmer Buchel (model not specified)	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 - CM61

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
48T9GL	12.0	11.9 H	12.3	11.1	11.8	0.52	1.1	0.5	11.0	-0.98	0.9	0.7	16	TT
4U8RRN	11.8	11.3	11.4	11.2	11.4	-0.03	0.8	0.3	11.3	-0.44	0.8	0.2	16	LH
8TKLGF	9.4 *	10.6	10.4	9.9	10.1	-1.84	0.7	0.5	10.6	-1.66	0.8	0.5	16	TS
94WBVB	11.2	11.9	12.2	12.2	11.9	0.59	0.9	0.5	12.0	0.87	0.9	0.4	16	LU
A8WMPP	No Data	No Data	No Data	12.0	12.0	0.77	0.7	0.0	11.9	0.60	0.7	0.2	4	LH
ATUDKF	11.9 L	11.0	12.6	12.7	12.1	0.84	0.9	0.8	12.2	1.13	1.2	0.6	16	LA
B3YHEH	13.4 *	11.9	12.4	12.6	12.6	1.56	0.9	0.6	12.7	2.05 *	0.9	0.5	16	LH
CHAJND	11.3	11.2 L	12.1 L	11.8	11.6	0.21	0.6	0.4	11.5	-0.09	0.7	0.3	14	LA
DE3P4D	12.4	12.4	11.8 H	12.4	12.3	1.15	1.0	0.3	11.9	0.72	1.3	0.5	16	LA
DN8UTA	11.2	10.7	10.9	10.8	10.9	-0.72	0.7	0.2	11.4	-0.22	0.8	1.0	16	LB
DN8WJD	11.5	11.8 H	12.0 H	11.4 H	11.7	0.35	1.6	0.3	11.6	0.19	1.6	0.5	16	LB
DP3DVB	9.5 *	11.0	10.6 L	10.1	10.3	-1.57	0.7	0.7	11.3	-0.30	0.7	1.0	16	TX
DXTY29	11.9	11.7	10.6	11.0	11.3	-0.20	0.8	0.6	11.6	0.12	0.8	0.5	16	LA
EAMEQA	10.9	10.2 L	10.8	10.8	10.7	-1.05	0.7	0.3	10.8	-1.29	0.7	0.3	16	XX
FEBG8E	12.3	11.7	11.6	11.3	11.7	0.38	0.9	0.4	11.5	0.05	0.8	0.3	16	XX
FEVF4C	11.6	11.7	11.7	12.0	11.8	0.41	0.9	0.2	11.7	0.41	0.9	0.3	16	LA
FF8WJC	11.6 L	11.4 L	11.6 L	11.5 L	11.5	0.11	0.3	0.1	11.6	0.09	0.3	0.1 L	8	XX
JFY9C9	11.7	12.1	12.5	12.7	12.3	1.09	0.9	0.4	12.3	1.37	1.0	0.4	16	LA
KANHH2	11.9	10.9	11.3	11.3 L	11.3	-0.13	0.8	0.4	11.3	-0.39	1.0	0.5	16	LH
NRWLU3	13.2	12.7 *	13.2 *	12.9	13.0	2.11 *	1.0	0.2	12.0	0.80	0.9	0.8	16	LH
PG6MG3	10.5	10.7	10.5	11.3 L	10.8	-0.95	0.9	0.3	10.7	-1.52	0.8	0.3	16	LB
QPYARY	11.7	11.4	11.6	12.5	11.8	0.48	0.9	0.5	11.7	0.39	0.9	0.3	16	LA
RV2LG6	10.3	10.8	11.1	10.9	10.8	-0.93	0.8	0.3	10.7	-1.37	0.8	0.6	16	XX
T9JTTV	11.6	11.7	11.5	11.7	11.6	0.25	0.8	0.1	11.6	0.20	0.8	0.4	16	LH
W4X8AY	10.3	10.4	9.9 *	10.0	10.2	-1.76	0.8	0.2	10.6	-1.66	0.9	0.7	16	XX
WWXPYT	12.0 H	11.3 H	No Data	No Data	11.6	0.28	1.9	0.5	12.6	1.91 *	1.1	1.2 H	14	LB
Z6XJJW	10.0	10.0 *	10.7 L	10.7	10.4	-1.49	0.6	0.4	11.2	-0.58	0.7	0.7	16	LA
Z7DFCV	11.1	11.0	11.1	11.3	11.1	-0.43	0.7	0.1	11.3	-0.42	0.7	0.2	16	LU

Consensus (All Labs) Results

Wk Mean	11.43	11.32	11.48	11.49	Month Mean	11.45	Grand Mean	11.51
Avg SDr	0.91	0.88	0.91	0.87	Avg SD	0.91	Avg SD	0.89
SD btwn Labs	0.96	0.67	0.80	0.85	SD btwn Labs	0.74	SD btwn Labs	0.57
Labs Incld	27	27	26	27	SD btwn Wks	0.42	SD btwn Wks	0.56
Labs Excld	0	0	0	0	Labs Incld	28	Labs Incld	28
Labs not Rcvd	1	1	2	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)
TS	TMI Monitor/STFI Compression Tester, 17-33	TT	TMI Short Span Compression, 17-34 (MB K455)
TX	TMI (model not specified)	XX	Instrument make/model not specified by lab

End of Report