Collaborative Testing Services, Inc.

Containerboard Interlaboratory Testing Program

Participant Summary Report #632 (E) - May 2022

Introduction to the Containerboard Program

Explanation of Tables and Definitions of Terms

Analysis	Sample	Analysis Name
201	BX16	Top to Bottom Box Compression Strength, Corrugated Boxes
202	EC14	Edgewise Compressive Strength, by T811, Corrugated Board
203	EC14	Edgewise Compressive Strength by T839, Corrugated Board
205	42H1	Bursting Strength (Mullen), 42 lb Linerboard
206	56G2	Bursting Strength (Mullen), 56 lb Linerboard
215	42H1	Ring Crush, 42 lb Linerboard
216	56G2	Ring Crush, 56 lb Linerboard
223	42H1	STFI, 42 lb Linerboard
224	56G2	STFI, 56 lb Linerboard
228	42H1	Roughness - Stylus Method, 42 lb Linerboard
229	42H1	Roughness - Sheffield Method, 42 lb Linerboard
231	42H	Internal Bond, 42 lb Linerboard
234	42H1	COF Inclined Plane (Slide Angle), 42 lb Linerboard
237	42H	Air Resistance, 42 lb Linerboard
240	CM12	Flat Crush Strength (CMT), 26 lb Corrugating Medium
250	CM12	Fluted Edge Crush Strength (CFC), 26 lb Corrugating Medium
255	CM12	Ring Crush (RCT), 26 lb Corrugating Medium
261	CM12	STFI, 26 lb Corrugating Medium

Collaborative Testing Services, Inc.
CONTAINERBOARD INTERLABORATORY TESTING PROGRAM

INTRODUCTION

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

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

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

USE OF AVERAGE MEAN AS A COLLABORATIVE REFERENCE VALUE

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

Material	Lot Code	Dates in Use
26# Corrugating Medium	CM12	July 2021 - Current
	CM11	April 2019 - June 2021
35# Corrugating Medium	35E2	June 2020 - Current
	35E1	June 2017 - April 2020
42# Corrugating Medium	42H1	April 2022 - Current
	42F4	August 2021 - March 2022
56# Corrugating Medium	56G2	May 2021 - Current
	56G1	January 2020 - March 2021

ABOUT CTS

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

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EXPLANATION OF TABLES

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

Definitions of Terms Used

Weekly Results

Laboratory Data

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

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

Consensus Data

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

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

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

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

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

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

Monthly Results

Laboratory Data

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

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

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

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

Consensus Data

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

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

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

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

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

Cumulative Results

Laboratory Data

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

Consensus Data

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

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

Flag	Explanation

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

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

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

Flags assigned to Weekly Means:

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

Flags assigned to Monthly SD Wks and Cumulative SD Wks:

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

	Monthly Results				Cumulative Results				
WebCode	Mean	CPV	SD		Mean	CPV	SD Months	Months	Inst
2DUKLR	602.7	-0.89	40.20		607.9	-1.32	16.59	4	ER
3NTFJM	672.6	0.27	41.31		657.1	-0.09	19.45	4	LM
7YTJUX	764.8	1.81	89.17	H	683.7	0.58	55.49	4	EX
8Y94EV	865.6	3.49 X	42.00		829.8	4.23 X	95.88 H	4	EM
9E33PV	623.2	-0.55	32.10		652.0	-0.22	55.47	4	ER
9Y6Z4G	674.2	0.30	67.64		701.1	1.01	21.08	4	TB
B2NPKY	651.8	-0.08	76.97		684.8	0.60	53.22	3	LG
BD4GBU	672.0	0.26	77.88		760.9	2.51 *	66.05	4	EX
BR2V3B	636.9	-0.32	26.43		692.9	0.81	43.04	4	TE
CGHGY9	672.0	0.26	30.44		644.2	-0.41	22.14	4	LL
DL6LCA	713.0	0.95	29.91		698.1	0.94	11.64	4	LO
FAPHYB	609.4	-0.78	16.20		643.6	-0.43	32.36	4	LS
FMUVXM	583.8	-1.21	32.54		612.4	-1.21	26.99	4	LL
HTURVD	525.6	-2.18 *	34.45		557.3	-2.59 *	24.17	4	LL
JDV66B	648.0	-0.14	13.73		651.9	-0.22	15.12	4	ER
M6QPMT	592.4	-1.07	31.48		623.5	-0.93	28.81	4	LG
N6PYC4	717.3	1.02	32.99		693.9	0.83	32.27	4	ET
NLAMLY	800.2	2.40 *	30.89		798.1	3.44 X	23.65	4	LS
VDAXH2	662.0	0.10	22.84		677.3	0.42	15.44	4	LG
W2CAB6	575.6	-1.35	43.55		657.9	-0.07	69.07	4	LM
XNMRV7	657.3	0.02	43.79		666.0	0.13	16.83	4	EX
XTXMXU	694.6	0.64	36.28		648.4	-0.31	38.06	4	ES
Y6RJC2	681.6	0.42	19.98		647.1	-0.34	54.75	4	EX
YBCLHH	647.0	-0.16	27.69		658.3	-0.06	15.22	4	LG
ZZQU9Y	674.1	0.30	36.66		675.1	0.36	8.35	4	ER

Consensus (All Labs) Results

Month Mean	656.33	Grand Mean	660.66
Avg SD	43.44	Avg SD Months	36.97
SD btwn Labs	59.93	SD btwn Labs	39.95
Labs Incld	24	Labs Incld	23

Consensus By Method

Test Method	Group Mean	SD btwn Group	Difference from Grand Mean	Labs Included
Hot melt adhesive sealing	648.54	44.47	7.79	7
Clip sealing	659.54	66.21	3.21	17

Key to Instrument Codes Reported by Participants			
EM	Emerson 1200	ER	Emerson 6200 Series
ES	Emerson 8510	ET	Emerson 7200
EX	Emerson Apparatus (Model not specified)	LG	TLS / L.A.B. Validator Series
LL	Lansmont 76-5K	LM	Lansmont 122-15k
LO	Lansmont 152-30k	LS	Lansmont Squeezer
TB	TMI Monitor/Compression Tester, Model 17-70	TE	Testometric M500 - 25 KN

Containerboard Interlaboratory Testing Program

Analysis 202

Edgewise Compressive Strength, by T811, Corrugated Board - EC14

TAPPI Official Test Method T811

	Monthly Results				Cumulative Results				
WebCode	Mean	CPV	SD		Mean	CPV	SD Months	Months	Inst
2DUKLR	35.1	-1.23	2.96		37.5	-0.33	2.42	4	EN
2LK33K	38.6	0.13	1.92		38.7	0.35	0.41	4	LD
6TAWLM	35.0	-1.29	3.72	H	35.0	-1.76	0.00	1	XX
7YTJUX	39.1	0.31	1.63		39.0	0.52	1.24	4	LC
CEPPPN	39.1	0.32	1.58		39.1	0.55	0.00	1	TD
FAPHYB	36.4	-0.75	2.65		37.2	-0.49	1.35	4	LD
H7WJGH	42.3	1.57	0.87	L	45.8	4.31 X	2.37	4	XX
KRDFBD	148.5	43.05 X	2.69		149.7	62.42 X	1.66	2	XX
XNMRV7	41.5	1.24	1.82		41.1	1.69	0.67	4	LC
YBCLHH	39.7	0.55	2.19		38.8	0.39	0.66	4	LE
Z6N7KY	36.1	-0.86	0.46	L	36.5	-0.92	0.45	4	TD

Consensus (All Labs) Results

Month Mean	38.27	Grand Mean	38.11
Avg SD	2.18	Avg SD Months	1.22
SD btwn Labs	2.56	SD btwn Labs	1.79
Labs Incld	10	Labs Incld	9

Key to Instrument Codes Reported by Participants

EN	Emerson 2200	LC	L&W Crush Tester 48
LD	L&W Crush Tester 248	LE	L&W Crush Tester 840
TD	TMI Digital Crush Tester, Model 17-09	XX	Instrument make/model not specified by lab

	Monthly Results				Cumulative Results				
WebCode	Mean	CPV	SD		Mean	CPV	SD Months	Months	Inst
2ARPZ3	38.0	-1.70	1.46		37.3	-2.37 *	0.59	4	BU
2DUKLR	42.0	0.10	1.29		41.8	-0.11	1.10	4	EN
2LK33K	43.1	0.56	0.52	L	42.1	0.05	0.79	4	LD
2MYCAZ	45.2	1.50	0.77		44.7	1.36	0.91	4	TU
3NTFJM	43.8	0.90	1.25		40.9	-0.57	2.04	4	EM
4WKDN2	44.0	0.95	0.94		43.2	0.59	0.61	4	LD
7YTJUX	41.5	-0.13	1.08		41.2	-0.42	1.08	4	LC
8Y94EV	41.9	0.05	2.17		40.8	-0.63	1.26	4	TH
9E33PV	41.3	-0.25	1.22		41.5	-0.28	0.70	3	EM
9Y6Z4G	44.1	1.02	0.47	L	45.2	1.62	1.98	4	LD
B2NPKY	41.9	0.04	1.58		41.4	-0.30	0.62	3	EM
BD4GBU	42.1	0.13	1.30		43.4	0.68	1.02	4	CT
CGHGY9	41.8	-0.02	0.93		42.0	-0.03	0.28	4	BU
DL6LCA	39.6	-0.97	1.94		40.0	-1.04	0.83	4	LD
EZLY6V	38.2	-1.59	1.27		35.1	-3.49 X	2.31	4	TK
FAPHYB	41.8	0.00	1.02		41.6	-0.23	0.46	4	LD
GEF3LQ	42.6	0.35	1.03		42.3	0.15	0.84	4	LC
H7WJGH	41.3	-0.22	1.17		44.8	1.43	2.34	4	XX
HTURVD	43.3	0.68	1.03		41.2	-0.43	1.54	4	LC
JDV66B	41.8	-0.03	1.36		41.2	-0.44	0.74	4	LD
KGBYG2	39.8	-0.89	0.83		39.7	-1.18	0.48	4	EM
KRDFBD	142.6	44.88 X	10.13	H	142.6	51.07 X	0.00	1	LD
KRNE6L	37.4	-1.99 *	2.01		33.7	-4.24 X	2.80 H	4	TD
N6PYC4	43.7	0.83	1.78		44.1	1.09	0.61	4	TD
NLAMLY	49.0	3.20 X	1.49		48.9	3.47 X	0.13 L	4	EM
PAQU99	44.7	1.28	0.92		43.0	0.51	2.37	2	EM
Q8KRYX	43.9	0.92	1.05		43.7	0.83	0.71	4	LC
RA7QXE	39.3	-1.13	2.81	H	38.9	-1.61	0.61	2	XX
TVJXMC	42.4	0.24	0.92		43.5	0.78	1.14	4	TG
UGF2VX	43.6	0.79	1.40		42.9	0.44	0.60	4	LD
VDAXH2	46.1	1.90	1.07		46.4	2.22 *	1.14	4	MK
W2CAB6	41.5	-0.16	2.20		42.7	0.35	1.06	4	TG
W3U489	43.6	0.78	1.37		43.6	0.81	1.41	4	TS
XNMRV7	43.2	0.60	1.23		43.9	0.95	0.62	4	LC
XTXMXU	42.8	0.43	1.48		42.0	-0.01	0.70	4	LD
Y6RJC2	38.7	-1.39	1.71		38.9	-1.56	1.36	4	LD
YBCLHH	36.2	-2.50 *	1.69		40.3	-0.87	2.91 H	4	LY
Z6N7KY	41.2	-0.26	1.06		39.9	-1.07	0.93	4	BU
ZZQU9Y	40.1	-0.78	1.82		40.6	-0.73	1.93	4	LD

Consensus (All Labs) Results

Month Mean	41.82	Grand Mean	42.01
Avg SD	1.41	Avg SD Months	1.26
SD btwn Labs	2.24	SD btwn Labs	1.97
Labs Incld	37	Labs Incld	35

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	TG	TMI Digital Crush Tester, 17-76
TH	TMI Monitor/Compression Tester, Model 17-76	TK	TLS Compression Tester, Model 5184
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
2ATE97	118.0 L	122.0 L	120.5	120.7 L	120.3	0.89	3.3	1.7	121.1	0.92	2.8	1.4	8	LA
2LK33K	111.7 L	111.0	108.4	114.5 L	111.4	-1.32	6.1	2.5	111.5	-1.11	5.5	1.9	8	LA
48FNUM	123.9	121.4	123.4	123.5	123.1	1.58	8.0	1.1	120.5	0.80	9.6	3.0	8	TB
4WKDN2_AL	121.7	120.6	120.7	121.6	121.2	1.11	7.7	0.6	121.6	1.05	7.3	1.8	8	AK
77UYGK	109.5	117.2	116.7	113.2	114.2	-0.64	9.1	3.6	115.1	-0.36	9.5	3.6	8	LC
7KF4V9	118.5	120.0	117.1	117.2	118.2	0.37	6.9	1.4	117.5	0.17	6.8	2.1	8	LA
8NWNHN	118.4	115.0	124.5	120.6	119.6	0.72	11.1	4.0	115.8	-0.20	9.9	5.0	8	XX
9LKH9R	122.2	122.6	125.8	125.2	124.0	1.80	7.3	1.8	126.4	2.05 *	8.8	3.2	8	XX
9RAVBF	119.7	119.2	126.2	120.4	121.4	1.16	9.6	3.3	121.4	0.99	9.6	3.3	4	LC
9RAVBF_AL	116.1	119.2	126.3	120.4	120.5	0.95	9.5	4.3	120.5	0.80	9.5	4.3	4	AL
9ZHKU7	116.5	117.9	116.8	113.3	116.1	-0.15	9.0	2.0	117.1	0.07	10.8	2.8	8	LB
AHYTPE	110.8	111.8	112.0	112.8	111.9	-1.21	7.1	0.8	111.1	-1.21	7.3	1.5	8	TP
BBCHUB	117.5	115.9	118.6	123.3	118.8	0.53	8.7	3.2	118.5	0.37	8.7	4.4	8	LJ
BBCHUB_AL	114.1	116.3	117.4	117.0	116.2	-0.13	6.9	1.5	117.7	0.20	6.3	2.1	8	AL
BD4GBU	121.0	120.5	119.5	117.5	119.6	0.73	9.0	1.5	118.2	0.31	8.4	3.4	8	XX
CUNRB2	115.5	113.6 L	115.6	116.1	115.2	-0.38	5.7	1.1	115.6	-0.25	5.9	1.4	8	XX
CVGJKM	125.8 H	127.2	118.2	120.1	122.8	1.52	13.1	4.4	124.2	1.58	12.1	3.9	8	LC
D2EPEF_AL	118.5	116.0	116.0	112.7	115.8	-0.23	8.9	2.4	117.0	0.05	9.7	2.9	8	AL
DDVGYJ_AL	115.3	124.0	120.6	116.1	119.0	0.57	6.7	4.1	119.3	0.54	7.7	3.6	8	AL
DKBXTE_AL	117.1	119.3	109.5	119.7	116.4	-0.08	9.8	4.8	115.8	-0.21	10.5	3.3	8	AL
DZ6N8M	117.6	114.0	118.1	121.4	117.8	0.26	6.9	3.0	118.3	0.33	6.7	2.7	7	AC
EAAU2P_AL	111.8	115.3	119.8	111.8	114.7	-0.51	7.0	3.8	112.8	-0.84	7.8	3.7	8	AL
FAPHYB	121.6	117.7	122.4	114.6	119.1	0.59	10.0	3.6	118.6	0.41	9.8	3.4	8	LA
FUER6H	111.8	113.0	116.0	111.8	113.1	-0.89	8.5	2.0	113.1	-0.77	8.5	2.0	4	TP
FUER6H_AL	113.9 L	112.9	108.5	111.8	111.8	-1.23	5.4	2.4	111.8	-1.06	5.4	2.4	4	XX
FUUBKA	107.8	110.5	115.1	114.3	111.9	-1.19	8.9	3.4	112.2	-0.97	10.4	2.4	8	LC
GR4AG7	112.0	116.8	117.0	120.3	116.5	-0.04	12.1	3.4	116.2	-0.12	11.4	3.0	8	LZ
H7WJGH	116.3	114.0 L	114.5	115.9	115.2	-0.38	5.9	1.1	115.7	-0.22	6.4	1.2	6	LC
HE9FK4_AL	122.5	117.4	118.6	119.9	119.6	0.72	7.3	2.2	119.3	0.54	7.1	2.3	8	AL
JYBP2C	118.4	121.2	112.6	118.4	117.7	0.23	9.8	3.6	120.3	0.75	9.4	5.3	7	AH
JYBP2C_AL	116.5	127.0	113.1	118.4	118.8	0.51	9.8	5.9	118.7	0.41	10.5	5.1	5	AL
KEMLYJ	127.5 *	119.0 H	114.9	114.5 H	119.0	0.56	17.3	6.1	121.2	0.95	14.9	4.9	8	LJ
KH3DPC	119.0 L	121.0 L	116.8	113.2 L	117.5	0.20	5.5	3.3	117.7	0.20	5.4	2.6	7	AX
KH3DPC_AL	115.7	122.8	114.7	113.2	116.6	-0.03	8.2	4.3	117.2	0.10	8.0	4.9	7	AL
KJW4T7_AL	110.0	115.3	112.4	115.0	113.2	-0.88	6.8	2.5	113.4	-0.70	6.9	2.7	8	XX

Containerboard Interlaboratory Testing Program

Analysis 205

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

TAPPI Official Test Method T807

	Weekly Means				Monthly Results				Cumulative Results					
WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
KRDFBD	101.4 X	103.3 *	103.9 *	104.1 *	103.2	-3.37 X	9.3	1.2	104.4	-2.63 *	9.1	2.6	8	LA
L9NTWZ	112.3	110.8	111.3	114.0	112.1	-1.15	7.1	1.4	111.9	-1.04	7.5	1.9	8	AH
MLU7R7	129.5 *L	129.3 *L	127.2 *L	128.3 *L	128.6	2.96 X	2.6	1.1	132.5	3.36 X	2.7	4.2	8	AH
MR4F39_AL	115.0	114.6	114.3	116.5	115.1	-0.40	9.4	1.0	116.1	-0.14	9.6	1.9	7	AL
NDZDZR	111.7	110.9	106.7	112.2	110.4	-1.58	9.3	2.5	110.3	-1.37	9.8	2.3	8	ME
PNAHH8	113.6	108.4	110.6	112.9	111.4	-1.33	10.7	2.4	111.0	-1.23	10.5	2.6	8	LA
PRXP8A_AL	120.4	116.4	120.1	115.3	118.1	0.33	8.7	2.6	116.9	0.03	9.0	3.4	8	AL
PZ998K_AL	116.5	112.6	109.9	118.3	114.3	-0.60	9.5	3.8	115.5	-0.27	11.3	2.9	8	AL
PZNA92	116.1 L	116.4	115.4	116.1	116.0	-0.18	4.2	0.4 L	115.1	-0.36	3.9	1.1	8	LA
Q7N7BY_AL	138.8XH	132.3 *H	133.1 X	133.0 XH	134.3	4.38 X	20.3	3.0	129.4	2.71 *	17.6	7.9 H	6	AL
QP2Q83	116.4	122.4	124.8	123.6	121.8	1.27	6.0	3.7	120.6	0.82	6.1	3.5	8	AH
RAMP86_AL	125.6	119.0	118.7	130.5 *	123.4	1.67	11.9	5.7	124.8	1.73	10.7	5.0	8	AK
TBGRF7	110.2	111.0	112.1	110.4	110.9	-1.44	8.9	0.9	113.5	-0.68	9.1	3.4	8	LA
TGH84T	120.3 H	122.2	116.2	123.3	120.5	0.94	11.3	3.1	120.3	0.76	10.4	2.3	8	LA
VGEJGY	116.2	118.3	113.6 H	119.4	116.9	0.04	12.7	2.6	120.0	0.70	11.7	4.6	8	RE
VXF9PP	127.8 *	125.0	123.5	126.6	125.7	2.25 *	6.5	1.9	126.6	2.11 *	6.8	2.1	8	AX
W39MXX_AL	118.2	119.7	120.7	116.2	118.7	0.50	6.8	2.0	118.2	0.31	7.0	1.8	8	AL
WUZXD8	109.2	109.5	110.1	113.0	110.4	-1.56	6.3	1.8	108.8	-1.70	6.1	4.3	8	XX
XNMRV7	110.8	120.7	105.3 *	116.7	113.4	-0.83	10.1	6.7 H	111.7	-1.07	9.4	4.9	8	AH
XPYC2U	111.5	103.0 *	101.2 *	113.0	107.2	-2.38 *	8.6	5.9	109.0	-1.64	7.6	4.9	8	LC
XTXMXU	112.1	113.8	112.9	115.3	113.5	-0.79	8.8	1.4	114.0	-0.58	7.7	3.7	8	LA
XY77X9_AL	119.0	121.0	117.9	127.1 *	121.3	1.13	9.5	4.1	120.9	0.89	8.9	3.8	8	AL
Y6RJC2	118.0	120.0	118.0	116.4	118.1	0.35	10.0	1.5	118.8	0.43	8.9	1.7	8	AH
YBCLHH	118.4	119.0	122.4	120.5	120.1	0.84	6.8	1.8	117.9	0.25	6.5	2.8	8	AH
Z6N7KY	117.9	118.6	116.2	117.8	117.6	0.23	9.8	1.0	114.2	-0.54	11.4	3.8	8	XX
ZNXDJX	116.7	117.5	115.4	114.6	116.0	-0.17	5.5	1.3	113.3	-0.73	5.3	3.0	8	LJ
ZUK8B4	109.3	111.3 H	113.3	110.8	111.2	-1.38	11.7	1.6	110.6	-1.31	10.5	1.8	8	LC
ZZQU9Y	112.9	106.8	114.9	109.0	110.9	-1.45	10.9	3.7	112.0	-1.02	10.2	4.0	8	LZ

Consensus (All Labs) Results

Wk Mean	116.72	117.18	116.20	117.13	Month Mean	116.71	Grand Mean	116.74
Avg SDr	8.80	9.40	8.64	8.79	Avg SD	8.88	Avg SD	9.01
SD btwn Labs	4.93	5.66	5.57	4.96	SD btwn Labs	4.01	SD btwn Labs	4.69
Labs Incld	61	63	62	62	SD btwn Wks	3.13	SD btwn Wks	3.39
Labs Excld	2	0	1	1	Labs Incld	60	Labs Incld	62
Labs not Rcvd	0	0	0	0				

Key to Instrument Codes Reported by Participants

AC	Perkins Model C	AH	Perkins Model AH
AK	L & W Autoline 300	AL	L & W Autoline 400
AX	Perkins Mullen Tester (model not specified)	LA	L&W Bursting Strength Tester
LB	L&W Burst-O-Matic	LC	L&W Autoline (205 Enrollment)
LJ	L&W Bursting Strength Tester J-Type	LZ	L&W (model not specified)
ME	Messmer Automatic Burst Tester ME-06	RE	Regmed/Mullen Tester
TB	TMI Monitor/Burst 1000	TP	Technidyne PROFILE/Plus
XX	Instrument make/model not specified by lab		

	Weekly Means				Monthly Results				Cumulative Results					
WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
2ATE97	117.8 L	119.6 L	116.6 L	119.8 L	118.5	0.78	3.3	1.5	117.4	0.53	2.5	1.2	12	LA
2LK33K	114.1	114.5	112.3	115.3	114.1	-0.61	7.3	1.3	113.8	-0.64	7.5	2.3	12	LA
48FNUM	118.3	123.1	116.3	124.0 *	120.4	1.41	11.9	3.7	115.5	-0.09	12.4	6.9	10	TB
4WKDN2_AL	122.1	119.2	119.5	121.6	120.6	1.46	8.2	1.5	121.6	1.91	8.5	2.2	12	AL
77UYGK	120.3	116.0	109.1	122.3	116.9	0.30	11.9	5.8	118.1	0.77	10.5	4.3	12	XX
7KF4V9	118.5	116.8	117.9	121.0	118.6	0.81	8.0	1.8	117.7	0.65	6.9	2.3	12	LA
8NWNHN	118.0	118.7	116.8 H	118.5	118.0	0.64	13.0	0.9	115.8	0.03	10.7	3.8	12	XX
9LKH9R	117.4	117.6	122.4	119.4	119.2	1.02	8.8	2.3	119.2	1.13	8.8	2.3	4	XX
9RAVBF	112.5	123.4	113.9	130.4 X	120.1	1.29	9.4	8.4 H	117.9	0.71	10.1	5.6	12	LC
9RAVBF_AL	112.8	120.8	115.5	130.4 X	119.9	1.23	10.7	7.8 H	118.5	0.91	10.4	6.0	12	XX
9ZHKU7	112.1	111.6	116.8	115.5	114.0	-0.62	7.4	2.5	113.1	-0.87	8.4	2.3	8	LB
AHYTPE	113.9	116.8	115.8	117.6	116.0	0.02	8.3	1.6	115.1	-0.21	8.1	1.9	12	TP
BBCHUB	122.5	114.6	115.6	116.2	117.3	0.40	7.2	3.6	120.5	1.55	8.2	4.6	12	LJ
BBCHUB_AL	117.8	117.6	118.0	118.2	117.9	0.61	8.4	0.2 L	116.8	0.34	8.5	2.6	12	XX
BD4GBU	117.0	111.0	124.0 *	115.5	116.9	0.28	9.7	5.4	116.1	0.11	9.9	4.9	12	XX
CUNRB2	107.5 L	110.9	110.6	112.1	110.3	-1.80	6.1	2.0	113.8	-0.62	6.1	3.4	12	XX
CVGJKM	119.2	124.5 *	115.2	115.4	118.6	0.82	11.8	4.4	119.1	1.11	10.2	3.6	12	LC
D2EPEF_AL	118.1	113.9	108.6 H	111.5	113.0	-0.94	12.6	4.0	113.4	-0.76	12.4	3.8	12	AL
DDVGYJ_AL	122.0	110.5	111.2	115.5	114.8	-0.38	7.7	5.3	115.5	-0.09	6.7	3.8	12	AL
DKBXTE_AL	120.0	113.0	120.1	114.3	116.8	0.27	9.7	3.7	116.2	0.15	11.7	2.9	12	AL
DZ6N8M	141.4 X	141.8 X	134.1 X	135.8 X	138.3	7.05 X	13.7	3.9	136.8	6.88 X	13.3	6.0	12	AC
EAAU2P_AL	112.9	117.6	114.8	113.2	114.6	-0.42	7.4	2.1	112.6	-1.01	7.8	3.1	8	AL
FAPHYB	126.5*H	126.2 *	124.6 *	116.8	123.5	2.39 *	11.9	4.5	118.1	0.77	12.0	5.3	12	LA
FUER6H	111.4	114.7	109.7	116.8	113.1	-0.90	10.3	3.2	111.4	-1.41	9.8	3.7	12	TP
FUER6H_AL	107.2 *	107.7	109.6	109.3	108.4	-2.38 *	10.0	1.2	108.7	-2.30 *	9.2	1.7	8	XX
FUUBKA	116.2	109.8	112.6	111.9	112.6	-1.06	11.4	2.7	112.2	-1.16	10.1	3.1	12	LA
GR4AG7	113.4	116.2	116.9	119.4	116.5	0.15	10.9	2.4	115.7	0.00	11.4	2.8	12	LZ
HE9FK4_AL	120.1	116.7	117.7	116.5	117.8	0.56	8.6	1.6	117.6	0.61	8.9	2.8	12	AL
JYBP2C	121.0	118.6	117.2	118.0	118.7	0.86	8.3	1.6	116.1	0.11	8.4	3.0	9	AH
JYBP2C_AL	110.8	113.6	106.4 *	111.8	110.7	-1.68	11.4	3.1	112.8	-0.95	11.2	3.3	10	AL
KEMLYJ	113.4	113.6 H	121.9	117.2	116.5	0.18	14.1	4.0	115.3	-0.15	14.3	3.2	12	LZ
KH3DPC	118.2	117.0	118.2	118.8	118.1	0.66	6.8	0.8	117.7	0.65	6.4	3.5	8	AH
KH3DPC_AL	116.3	115.6 L	115.9	111.7	114.9	-0.35	7.1	2.1	113.4	-0.76	8.9	3.1	8	AL
KRDFBD	107.5	99.0 X	107.9	96.2 X	102.6	-4.21 X	8.8	5.9	102.2	-4.43 X	14.9	6.5	12	LA
L9NTWZ	115.7	115.2	116.0	116.9	116.0	-0.01	7.4	0.7	115.3	-0.16	7.8	1.2	12	AH

Containerboard Interlaboratory Testing Program

Analysis 206

Bursting Strength (Mullen), 56 lb Linerboard - 56G2

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
MLU7R7	137.4 XL	137.1 XL	137.1 XL	137.1 XL	137.2	6.70 X	3.0	0.1 L	138.5	7.42 X	3.3	1.0	12	AH
MR4F39_AL	116.0	118.7	111.7	113.4 L	114.9	-0.33	7.4	3.1	115.5	-0.08	9.0	4.1	12	AL
NDZDZR	110.3	106.0 *	115.2	116.8	112.1	-1.23	9.4	4.9	112.1	-1.19	9.8	2.8	12	TB
PNAHH8	108.6	113.7	114.1	111.1	111.9	-1.30	11.2	2.5	110.2	-1.81	11.3	3.3	12	LA
PRXP8A_AL	108.7	118.6	116.4	116.1	115.0	-0.32	10.0	4.3	115.4	-0.12	10.7	3.3	12	XX
PZ998K_AL	119.0	116.0	120.7	118.5	118.5	0.81	10.0	1.9	117.5	0.56	10.4	2.3	12	AL
PZNA92	117.3 L	117.4 L	116.6 L	117.3 L	117.2	0.37	2.9	0.4 L	116.5	0.24	3.5	0.6 L	12	LA
Q7N7BY_AL	136.8 XH	134.4 XH	129.2 X	130.2 X	132.7	5.28 X	21.8	3.6	122.1	2.09	*15.6	8.7 H	12	XX
QP2Q83	122.6	118.6	116.6	115.2 L	118.3	0.72	5.7	3.2	117.6	0.62	6.2	2.5	8	AH
RAMP86_AL	114.2	120.6	118.6	110.4 H	115.9	-0.01	15.0	4.6	121.9	2.00	*11.9	6.1	12	AK
TBGRF7	114.1	113.4	113.6	121.8	115.7	-0.09	12.5	4.1	113.5	-0.72	15.3	4.5	12	LA
TGH84T	114.3	115.9	115.1	115.1	115.1	-0.28	12.3	0.7	117.3	0.50	11.4	2.6	12	LA
VGEJGY	111.0	116.6	114.7	117.6	115.0	-0.32	11.8	2.9	115.0	-0.25	11.8	2.9	4	RE
VXF9PP	120.4	120.6	124.7 *	122.1	122.0	1.89	9.2	2.0	121.1	1.75	9.9	3.6	12	XX
W39MXX_AL	116.8	111.1	111.5	122.5	115.5	-0.16	7.5	5.4	115.2	-0.17	6.8	3.7	12	AL
WUZXD8	110.6	106.9 *	110.5	107.4 *	108.8	-2.26 *	7.9	2.0	107.6	-2.65 *	7.2	3.8	8	XX
XNMRV7	111.9	117.8	113.2	109.8	113.2	-0.88	10.5	3.4	116.9	0.39	11.1	3.6	12	AH
XPYC2U	112.0	107.8	113.3	115.1	112.1	-1.24	8.1	3.1	113.0	-0.88	7.7	4.1	12	LC
XTXMXU	113.3	110.4	111.2	117.2	113.0	-0.93	10.5	3.0	114.9	-0.29	11.6	3.1	12	LA
XY77X9_AL	114.0	110.9	115.9	121.3	115.5	-0.14	9.8	4.4	117.5	0.57	10.9	3.5	12	AL
Y6RJC2	118.8 H	118.4	119.2	117.6	118.5	0.80	12.1	0.7	117.5	0.58	10.1	4.3	12	AH
YBCLHH	122.4	119.3	119.6	118.0	119.8	1.22	6.7	1.9	118.5	0.90	7.2	2.5	12	AH
Z6N7KY	119.3	118.1	117.3	118.7	118.4	0.75	9.7	0.9	115.7	-0.02	12.5	2.2	12	XX
ZNXDJX	115.4	115.8	115.5	115.4	115.5	-0.14	5.4	0.2 L	115.3	-0.14	5.8	0.4 L	12	LJ
ZUK8B4	112.7	114.9	115.7	111.6	113.7	-0.71	11.8	1.9	111.7	-1.32	10.8	7.7 H	12	LC
ZZQU9Y	117.8	110.6	108.6	111.4	112.1	-1.23	10.5	4.0	111.5	-1.38	10.8	2.7	12	LZ

Consensus (All Labs) Results

Wk Mean	115.76	115.69	115.43	116.24	Month Mean	115.97	Grand Mean	115.74
Avg SDr	9.69	10.05	9.35	9.63	Avg SD	9.70	Avg SD	9.88
SD btwn Labs	4.35	4.33	4.13	3.74	SD btwn Labs	3.16	SD btwn Labs	3.06
Labs Incld	58	57	58	55	SD btwn Wks	3.36	SD btwn Wks	3.76
Labs Excld	3	4	3	6	Labs Incld	57	Labs Incld	58
Labs not Rcvd	0	0	0	0				

Key to Instrument Codes Reported by Participants

AC	Perkins Model C	AH	Perkins Model AH
AK	L & W Autoline 300	AL	L & W Autoline 400
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)	RE	Regmed/Mullen Tester
TB	TMI Monitor/Burst 1000	TP	Technidyne PROFILE/Plus
XX	Instrument make/model not specified by lab		

	Weekly Means				Monthly Results				Cumulative Results					
WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
2ATE97	103.1 L	103.4	103.9 *	103.3 *	103.4	2.03 *	2.7	0.3 L	102.5	1.72	2.0	1.0	8	TU
2DUKLR	90.7	94.2 L	91.9	90.7	91.9	-0.95	2.7	1.7	93.0	-0.64	2.6	1.7	8	EN
2FKJ3B	106.2 *	107.0 *	104.3 *	98.2	103.9	2.16 *	3.3	4.0	102.7	1.77	3.1	3.1	8	MB
2LK33K	93.0	93.3	94.1	95.2 L	93.9	-0.43	2.6	1.0	93.3	-0.58	2.6	1.3	8	LD
2M6MAD	86.8 *	84.7 *	87.8 *	89.1	87.1	-2.18 *	3.6	1.9	85.1	-2.60 *	3.6	2.6	8	EM
48FNUM	97.4	98.8	95.2	95.9	96.8	0.32	3.8	1.6	92.0	-0.88	3.8	8.3 H	8	LD
4WKDN2	99.2	98.5	97.5 L	94.5 L	97.4	0.48	2.0	2.1	97.9	0.58	2.2	1.7	8	LD
77UYGK	94.9	95.0	98.9	102.9 *	97.9	0.61	3.0	3.8	96.7	0.28	3.1	4.0	8	MB
7KF4V9	94.3	91.7	91.7 L	93.0	92.7	-0.74	3.3	1.2	92.6	-0.74	3.0	1.3	8	LC
9EK2XL	99.8	93.5 L	97.5 L	99.8	97.6	0.53	3.3	3.0	95.9	0.07	3.4	3.0	8	TH
9RAVBF	92.7	92.9	87.9 *	93.9	91.9	-0.95	3.7	2.7	91.9	-0.93	3.7	2.7	4	LD
9ZHKU7	97.1	95.1	101.5 L	97.9	97.9	0.60	2.7	2.7	100.5	1.21	2.5	3.9	7	LC
AHYTPE	100.2	91.0	91.4	94.2	94.2	-0.35	3.4	4.2	94.6	-0.25	3.6	3.3	8	TJ
BBCHUB	91.4	90.7	93.3	89.5	91.2	-1.11	2.6	1.6	92.1	-0.87	2.7	1.7	8	LD
CUNRB2	95.3	92.1	94.4	89.8	92.9	-0.68	4.2	2.5	95.1	-0.13	4.2	3.9	8	LD
CVGJKM	96.5	92.0	93.9	94.2	94.1	-0.36	2.5	1.8	94.7	-0.23	2.5	1.5	8	LD
DDVGYJ	94.9	94.3	94.9	94.2	94.6	-0.26	3.6	0.4	93.8	-0.44	4.3	2.3	8	LZ
DKBXTE	94.6	94.8	93.8	93.5	94.2	-0.35	3.2	0.6	93.2	-0.58	3.2	2.2	8	LD
EZLY6V	92.6 L	92.6 L	92.3 L	92.6 L	92.5	-0.78	1.6	0.1 L	93.6	-0.49	1.7	1.2	8	MB
FAPHYB	88.1 L	89.2	93.7 L	95.8	91.7	-0.99	2.3	3.7	91.8	-0.93	2.3	2.6	8	LD
FUER6H	97.9	94.5	96.6	95.8 L	96.2	0.17	2.7	1.4	96.2	0.15	2.7	1.4	4	LD
FUUBKA	93.9	94.3	92.4	93.2	93.4	-0.55	2.4	0.8	93.9	-0.42	2.6	1.1	8	LD
GR4AG7	93.4	93.3	91.8	92.7	92.8	-0.71	3.6	0.7	91.4	-1.04	3.3	2.8	8	LC
HX4862	90.7	88.6	92.2	88.6	90.0	-1.43	3.5	1.7	90.2	-1.33	3.3	1.8	8	LD
JDV66B	93.0	93.5	94.0	95.8	94.1	-0.38	2.7	1.2	93.6	-0.49	2.8	1.2	8	LD
KRDFBD	90.5 H	96.1 H	91.8 H	91.5 H	92.4	-0.80	23.4	2.5	90.8	-1.20	17.2	5.0	8	LD
MLU7R7	90.0	89.5 L	89.9 L	89.0	89.6	-1.54	1.8	0.4	91.9	-0.92	2.7	2.5	8	LD
MR4F39	97.3	102.2	102.1 L	104.0 *	101.4	1.51	3.6	2.9	102.3	1.66	3.8	2.8	8	LC
NDZDZR	102.4	97.9	107.7 X	102.2	102.5	1.80	2.8	4.0	102.6	1.73	3.7	3.2	8	LX
PAQU99	93.3	99.1	95.5	94.7	95.6	0.02	3.1	2.4	95.6	0.01	3.1	2.4	4	EM
PM33AF	91.7	91.9 L	92.4	93.1 L	92.3	-0.85	1.9	0.7	92.2	-0.85	1.8	0.9	8	RS
PRXP8A	94.2 L	95.4	97.5 L	96.5	95.9	0.09	2.1	1.4	94.8	-0.21	2.0	1.6	8	LD
PZ998K	72.5 XH	70.7 XH	74.9 XH	70.8 XH	72.2	-6.02 X	8.6	2.0	82.5	-3.26 X	6.5	11.1 H	8	LD
PZNA92	95.2	96.1	95.9 L	96.0	95.8	0.06	2.5	0.4	95.1	-0.12	2.5	0.8	8	LD
Q7N7BY	73.1 XH	95.9	69.3 X	80.0 X	79.6	-4.12 X	6.6	11.7 H	80.8	-3.69 X	6.4	12.3 H	6	LC

Containerboard Interlaboratory Testing Program

Analysis 215

Ring Crush, 42 lb Linerboard - 42H1

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
Q8KRYX	91.3	92.4	91.0 L	93.3	92.0	-0.92	2.9	1.1	94.4	-0.29	2.7	2.9	8	LC
QWHAMV	91.1	97.2	97.6	93.4	94.8	-0.19	4.4	3.1	94.8	-0.19	4.4	3.1	4	LZ
RD8RXB	104.5 *	98.2	98.9	100.1	100.4	1.25	2.7	2.8	100.4	1.19	2.9	1.9	8	LD
TGH84T	95.1	99.3	99.7	99.5	98.4	0.73	4.0	2.2	99.8	1.04	3.8	2.2	8	LZ
TVJXMC	94.5	97.0	97.3	95.9	96.2	0.16	2.9	1.3	97.6	0.49	3.0	1.8	8	TH
V64QAT	102.4	99.1	96.9	99.3	99.4	1.00	3.5	2.3	101.6	1.49	3.7	2.8	8	TU
VGEJGY	101.7	102.8	101.4 L	99.6	101.4	1.50	3.1	1.3	104.5	2.22 *	3.1	3.5	8	EX
VXF9PP	89.2	90.4	94.0	92.1	91.4	-1.07	4.1	2.1	92.2	-0.84	3.9	1.9	8	LD
WUZXD8	101.6 L	107.1 *	108.3 X	101.5	104.6	2.34 *	3.3	3.6	104.2	2.15 *	3.3	2.7	8	TU
XEZHPX	99.7	96.0 L	97.1	98.1	97.7	0.56	2.2	1.6	96.3	0.19	2.4	2.0	8	TH
XNMRV7	97.4	98.2	98.1	97.1	97.7	0.55	2.4	0.5	97.2	0.41	2.4	0.8	8	LC
XPYC2U	93.5	95.6	93.3	96.0	94.6	-0.25	3.0	1.4	95.6	0.01	3.1	1.7	8	LD
YBCLHH	94.4	92.6	93.3	92.4 L	93.2	-0.61	2.8	0.9	95.2	-0.11	2.6	2.3	8	LG
ZNXDJX	94.7 L	94.6 L	96.9 L	95.0	95.3	-0.06	1.6	1.1	94.3	-0.31	2.7	1.3	8	LD
ZUK8B4	99.9	95.9	97.4	99.2	98.1	0.65	3.4	1.8	96.2	0.16	3.1	2.9	8	LZ
ZZQU9Y	97.2	98.9 L	96.4	95.4	97.0	0.37	3.0	1.5	96.0	0.10	3.1	1.5	8	LD

Consensus (All Labs) Results

Wk Mean	95.51	95.36	95.34	95.49	Month Mean	95.55	Grand Mean	95.59
Avg SDr	4.49	4.29	4.76	4.42	Avg SD	4.49	Avg SD	3.92
SD btwn Labs	4.41	4.39	3.77	3.85	SD btwn Labs	3.88	SD btwn Labs	4.02
Labs Incld	49	50	47	49	SD btwn Wks	2.13	SD btwn Wks	2.68
Labs Excld	2	1	4	2	Labs Incld	49	Labs Incld	49
Labs not Rcvd	0	0	0	0				

Key to Instrument Codes Reported by Participants

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

	Weekly Means				Monthly Results				Cumulative Results					
WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
2ATE97	145.3	144.0	144.8	147.0 L	145.3	1.47	2.2	1.2	145.6	2.13 *	1.8	0.8 L	12	TU
2DUKLR	129.7	131.5 L	130.8	127.4	129.9	-1.19	3.2	1.8	133.2	-0.83	4.2	2.9	12	EN
2FKJ3B	150.3 *	150.4 *	139.7	132.9	143.3	1.13	3.8	8.6 H	140.4	0.89	4.1	5.4	12	MB
2LK33K	135.0	135.1	135.9	140.3	136.6	-0.03	3.1	2.5	135.7	-0.25	2.9	2.0	12	LD
2M6MAD	124.2*H	122.6*H	122.8 *	125.9 H	123.9	-2.23 *	6.2	1.5	120.9	-3.74 X	5.5	2.5	12	EM
48FNUM	144.4	141.5	135.0	140.7	140.4	0.63	3.7	3.9	139.0	0.54	4.1	3.9	12	LD
4WKDN2	137.9	137.8	138.0	131.6	136.3	-0.08	2.8	3.1	133.8	-0.68	3.2	3.5	12	LD
77UYGK	139.6	138.1	136.3	140.9	138.7	0.33	3.6	2.0	141.1	1.05	5.1	3.5	10	MB
7KF4V9	131.2	133.3	136.1	134.9	133.9	-0.50	3.9	2.1	135.9	-0.19	5.9	3.0	12	LC
9EK2XL	145.3 L	134.9	145.7	145.0	142.7	1.03	2.6	5.2	136.1	-0.15	3.5	7.5 H	12	TH
9RAVBF	134.7	127.3	127.2	132.6	130.5	-1.09	3.6	3.8	129.6	-1.68	3.4	4.2	12	LD
9ZHKU7	143.7	144.0	147.7	141.1	144.1	1.27	3.9	2.7	142.8	1.45	4.0	3.0	8	LC
AHYTPE	140.0	135.4	135.0	133.3	135.9	-0.15	4.6	2.8	136.8	0.02	6.0	2.0	12	TJ
BBCHUB	132.3	126.3	132.6	128.0	129.8	-1.21	3.5	3.1	132.2	-1.08	3.6	2.7	12	LD
CUNRB2	128.0	127.9	122.9 *	118.4 X	124.3	-2.16 *	3.9	4.6	127.9	-2.09 *	4.3	4.1	12	LD
CVGJKM	136.7	129.2	135.2	137.4	134.7	-0.36	4.3	3.7	135.6	-0.26	4.1	2.5	12	LD
DDVGYJ	135.1	134.3	133.6	133.0	134.0	-0.48	5.0	0.9	136.3	-0.10	6.1	2.5	12	LZ
DKBXTE	132.6	133.4	128.6	128.9	130.9	-1.02	3.9	2.5	132.5	-0.99	4.2	2.0	12	LD
EZLY6V	138.6 L	138.1 L	138.8 L	138.8 L	138.6	0.31	1.6	0.4 L	137.8	0.27	1.6	1.2	12	MB
FAPHYB	123.7 *	125.3	128.4	134.7	128.0	-1.51	3.0	4.8	131.5	-1.23	3.3	3.7	12	LD
FUER6H	136.9	135.9	141.4	137.7	138.0	0.21	4.4	2.4	136.8	0.03	4.2	2.9	12	LD
FUUBKA	133.0	137.4	136.0 H	136.9	135.8	-0.16	4.7	1.9	134.4	-0.54	3.9	1.9	12	LD
GR4AG7	133.8	134.3	133.9	133.5	133.9	-0.50	4.5	0.3 L	131.4	-1.25	4.7	4.4	12	LC
HX4862	131.8	129.0	131.4	126.8	129.7	-1.22	3.2	2.3	129.8	-1.64	3.4	1.7	8	LD
JDV66B	129.6	130.4	131.3	134.2	131.4	-0.93	3.3	2.0	127.4	-2.21 *	3.2	3.9	12	LD
KRDFBD	141.4	140.1	142.5	146.2	142.5	1.00	4.5	2.6	140.7	0.96	6.4	7.7 H	12	LB
MLU7R7	130.3	130.2	130.8	129.4	130.2	-1.14	2.8	0.6	134.0	-0.64	2.9	4.2	12	LD
MR4F39	146.1	149.0 *	143.5	143.1	145.4	1.50	4.0	2.7	137.0	0.08	4.0	6.8	12	LC
NDZDZR	152.8 *	147.8	154.3 X	150.5 *	151.4	2.53 *	4.5	2.9	149.8	3.12 X	4.6	2.5	12	LY
PM33AF	135.3 L	135.0 L	135.0 L	135.1 L	135.1	-0.29	1.1	0.2 L	136.1	-0.15	1.2	1.7	12	RS
PRXP8A	134.1	136.8 L	137.1	138.9	136.7	-0.01	2.4	2.0	135.7	-0.24	2.9	2.1	12	LD
PZ998K	88.9 XH	93.5 XH	91.7 XH	86.4 XH	90.1	-8.07 X	12.3	3.1	117.9	-4.47 X	7.8	20.6 H	12	LD
PZNA92	136.1	137.0	137.3	137.0	136.9	0.02	3.2	0.5	136.7	0.00	3.0	0.4 L	12	LD
Q7N7BY	118.1XH	138.3	135.4	133.7	131.4	-0.93	6.5	9.1 H	118.1	-4.41 X	9.8	19.4 H	12	LC
Q8KRYX	133.9	131.9 L	134.5	133.6	133.4	-0.57	2.4	1.1	136.5	-0.04	3.4	2.5	12	LC

Containerboard Interlaboratory Testing Program

Analysis 216

Ring Crush, 56 lb Linerboard - 56G2

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
QWHAMV	132.7	135.9	132.4	131.6	133.1	-0.63	4.0	1.9	136.7	0.01	4.5	3.1	12	LZ
RD8RXB	141.5	146.7	145.2	147.2	145.1	1.45	3.6	2.6	141.5	1.14	4.4	6.2	12	LD
TGH84T	135.5	135.5	133.6	131.3	134.0	-0.48	3.9	2.0	135.3	-0.32	3.5	1.8	12	LZ
TVJXMC	138.4	139.5	138.9	137.4	138.5	0.31	3.6	0.9	139.8	0.75	4.0	1.7	8	TH
V64QAT	141.5	138.0	141.5	139.1	140.0	0.57	4.2	1.8	142.5	1.38	4.4	2.8	12	TU
VGEJGY	138.9	142.0	143.3	142.2 H	141.6	0.84	5.6	1.9	144.6	1.88	4.7	2.9	12	EX
VXF9PP	134.4 H	136.2	136.6	135.9	135.8	-0.17	6.1	0.9	136.4	-0.06	6.2	1.4	12	LD
WUZXD8	144.8	142.9	147.8	145.8	145.3	1.48	2.5	2.1	145.4	2.08 *	2.4	1.7	8	TU
XEZHPX	143.7	138.6	142.7	145.8	142.7	1.03	3.5	3.0	135.5	-0.28	3.7	7.5 H	12	TH
XNMRV7	141.1	142.4	140.2	140.1	140.9	0.72	2.4	1.1	139.8	0.74	3.2	1.5	12	LC
XPYC2U	141.2	137.0 H	140.9 H	141.5	140.1	0.58	6.6	2.1	139.6	0.68	5.7	2.6	12	LD
YBCLHH	135.2	135.1	135.7	133.5	134.9	-0.33	3.8	1.0	137.4	0.16	3.7	2.5	12	LY
ZNXDJX	136.9	137.2	137.5	137.1	137.2	0.07	2.6	0.2 L	137.6	0.21	3.3	0.4 L	12	LD
ZUK8B4	143.2	141.1	142.0	138.8	141.3	0.78	4.4	1.9	138.1	0.34	4.3	3.9	12	LZ
ZZQU9Y	137.5	135.9	138.2	138.5	137.5	0.13	4.4	1.2	137.1	0.10	3.9	2.6	12	LD

Consensus (All Labs) Results

Wk Mean	137.29	136.47	136.70	137.01	Month Mean	136.76	Grand Mean	136.69
Avg SDr	4.02	4.06	3.77	3.70	Avg SD	3.95	Avg SD	4.09
SD btwn Labs	6.14	6.02	5.77	5.84	SD btwn Labs	5.78	SD btwn Labs	4.21
Labs Incld	48	49	48	48	SD btwn Wks	2.96	SD btwn Wks	3.57
Labs Excld	2	1	2	2	Labs Incld	49	Labs Incld	46
Labs not Rcvd	0	0	0	0				

Key to Instrument Codes Reported by Participants

EM	Emerson 1200	EN	Emerson 2200
EX	Emerson (model not specified)	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	RS	Regmed Digital Crush Tester CT-2000
TH	TMI Compression Tester, Model 17-76	TJ	TLS Compression Tester, Model CDM-5
TU	TMI Universal Crush Tester (TMI K440)		

	Weekly Means				Monthly Results				Cumulative Results					
WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
2DUKLR	21.8	22.3	21.0	21.3	21.6	-1.72	1.7	0.6	21.8	-1.71	1.8	0.6	8	LY
2FKJ3B	26.2	25.2	24.8	24.0	25.1	1.08	1.9	0.9	25.0	1.13	2.0	0.9	8	LA
2LK33K	22.6	23.0 L	22.8 L	24.0 L	23.1	-0.53	1.0	0.6	23.3	-0.42	0.9	0.5	8	BK
48FNUM	23.9	23.0	23.7	23.6	23.6	-0.12	2.1	0.4	23.7	-0.05	2.0	1.1	8	LW
4WKDN2_AL	24.9	24.2 H	25.2	24.8	24.8	0.85	2.1	0.4	24.6	0.73	1.9	1.1	8	AK
77UYGK	25.2	25.4 H	26.1	26.8 *	25.9	1.76	2.1	0.7	25.4	1.46	2.1	0.8	8	LA
7KEEKJ	25.1	25.1	24.0	23.5	24.4	0.58	1.7	0.8	24.3	0.52	1.6	0.7	8	LH
7KF4V9	24.1	24.2 L	23.5 H	23.2	23.8	0.02	1.9	0.5	23.6	-0.12	1.6	0.4	8	LA
9EK2XL	22.4	22.8	22.5	22.9	22.7	-0.87	1.6	0.2	22.7	-0.94	1.6	0.3	8	LZ
9RAVBF	13.2 XH	14.8 X	21.2	18.6 X	16.9	-5.48 X	2.2	3.6 H	16.9	-5.94 X	2.2	3.6 H	4	LZ
9RAVBF_AL	45.6 XL	45.1 XL	43.3 XL	43.1 XL	44.3	16.61 X	0.0	1.2	44.3	17.91 X	0.0	1.2	4	AL
9Y9FGG	22.9	23.1 L	22.8	22.3	22.8	-0.75	1.4	0.3	22.9	-0.74	1.5	0.4	8	LW
9ZHKU7	22.7	23.3	23.2	23.3	23.1	-0.47	1.6	0.3	24.0	0.20	1.6	1.1	8	LW
AHYTPE	23.4	24.3	24.2	24.2	24.0	0.24	1.6	0.4	24.1	0.31	1.6	0.4	8	TT
BBCHUB_AL	23.0	23.3	23.1	22.5	23.0	-0.61	1.8	0.4	23.2	-0.47	1.7	0.4	8	AL
CVGJKM	24.3	23.3	22.9	23.5	23.5	-0.19	1.6	0.6	23.6	-0.16	1.8	0.4	8	LA
DDVGYJ_AL	22.8 L	21.9	21.8	22.5	22.3	-1.18	1.6	0.5	22.3	-1.26	1.7	0.4	8	AL
DKBXTE_AL	23.7	23.1	23.2	24.2	23.6	-0.14	2.0	0.5	23.7	-0.04	1.9	0.5	8	AL
DL6LCA	25.7	24.5	24.3	23.5	24.5	0.64	1.7	0.9	24.5	0.67	1.7	0.8	8	LH
DZ6N8M	21.8	22.2 L	21.5	21.9	21.9	-1.51	1.3	0.3	22.1	-1.40	1.4	0.5	8	LH
EAAU2P_AL	24.6	24.7	24.7	24.3	24.6	0.70	2.1	0.2	24.5	0.70	2.1	0.4	8	AL
FAPHYB	20.6 *	21.2	21.8	23.2	21.7	-1.62	1.4	1.1	22.1	-1.48	1.5	1.0	8	LZ
FUER6H_AL	24.0	24.2	24.1	23.5	23.9	0.17	2.0	0.3	23.9	0.17	2.0	0.3	4	XX
FUUBKA	22.5 L	24.3	24.4	23.5	23.6	-0.06	1.6	0.8	23.5	-0.22	1.5	0.8	8	LA
GR4AG7	20.9 *	21.3	20.7 *	20.5 *	20.8	-2.33 *	1.7	0.3	20.8	-2.55 *	1.8	0.3	8	LY
H7WJGH	26.9 *	26.1 L	23.5	25.5	25.5	1.43	1.3	1.4 H	26.3	2.21 *	2.2	1.3	8	LA
HE9FK4_AL	24.8	23.8	24.4	25.0	24.5	0.64	2.0	0.5	24.2	0.40	1.9	0.8	8	AL
JDV66B	22.3	22.7	22.4	22.9	22.6	-0.94	2.0	0.2	22.5	-1.09	1.9	0.2 L	8	LU
JYBP2C	23.5	23.4	24.2	23.9	23.7	0.02	2.0	0.4	23.6	-0.15	1.9	0.4	6	LH
JYBP2C_AL	22.0	22.5	22.3	22.5	22.3	-1.13	1.9	0.2	22.5	-1.10	1.8	0.4	5	AL
KEMLYJ	28.0 X	26.6 *L	26.6 *	25.8 L	26.7	2.43 *	1.9	0.9	27.2	3.01 X	2.1	1.3	8	LH
KH3DPC	23.1	24.6	24.4	24.6	24.2	0.37	2.0	0.7	24.7	0.87	2.0	1.1	7	LU
KH3DPC_AL	23.5	23.3 L	24.2 L	23.9	23.7	0.00	1.1	0.4	23.8	0.01	1.2	1.2	7	AL
KJW4T7	22.8	22.3	23.0	22.5	22.6	-0.89	1.6	0.3	22.2	-1.31	1.7	0.6	8	LY
KJW4T7_AL	24.0	23.2	24.1 L	23.3	23.6	-0.06	1.1	0.5	23.4	-0.26	1.3	0.6	8	XX

	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
KRDFBD	45.8 XH	44.3 XH	44.4 XH	46.9 XH	45.3	17.45 X	5.5	1.2	35.0	9.82 X	5.5	11.2 H	8	LH
L9NTWZ	24.0	24.5	24.1	23.9	24.1	0.32	1.4	0.2	24.3	0.45	1.5	0.3	8	TT
MR4F39	24.7	23.3 L	23.0	23.6	23.6	-0.07	1.6	0.7	24.1	0.30	1.6	0.9	7	LU
NDZDZR	24.7 H	25.2 H	23.2	No Data	24.4	0.51	2.6	1.0	23.9	0.11	2.4	1.3	7	XX
P9W7QD	26.7 *	26.0	26.5 *	25.2	26.1	1.91	1.7	0.7	25.2	1.26	1.7	1.1	8	LH
PNAHH8	23.8	25.5	26.7 *	25.0 H	25.2	1.20	2.6	1.2	25.1	1.21	2.3	1.0	8	LH
PRBHH4	24.9 H	26.0	26.2	25.2	25.6	1.49	2.1	0.6	24.6	0.77	2.0	1.2	8	ID
PRXP8A_AL	22.9 L	23.0	23.8	24.1	23.5	-0.20	1.7	0.6	23.3	-0.36	1.6	0.5	8	AL
PZ998K	23.4	22.5	22.8	23.5	23.1	-0.53	2.0	0.5	22.9	-0.77	1.9	0.5	8	LY
PZ998K_AL	24.0	23.7	23.0	23.4	23.6	-0.14	1.4	0.4	23.7	0.00	1.6	0.4	8	AL
PZNA92	23.8	23.6	23.4	23.9	23.7	-0.03	1.9	0.2	23.2	-0.49	1.8	0.6	8	LA
Q7N7BY_AL	23.6 H	23.5	23.5	22.9	23.4	-0.28	2.6	0.4	23.5	-0.25	2.3	0.3	6	AL
QP2Q83	25.6	25.6	26.2	25.4	25.7	1.58	1.7	0.3	26.2	2.14 *	1.9	0.6	8	LU
QWHAMV	25.0	26.9 *	24.8	26.7 *	25.8	1.70	1.9	1.1	25.8	1.82	1.9	1.1	4	XX
RA7QXE	22.2 H	22.9 H	22.6 L	24.0	23.0	-0.62	2.1	0.8	23.2	-0.50	2.0	0.6	8	XX
RAMP86_AL	24.7	23.5	24.9	22.8	24.0	0.19	2.1	1.0	24.3	0.47	2.0	0.7	8	AK
RD8RXB	24.6	25.5	25.8	26.0	25.5	1.40	1.7	0.6	25.4	1.48	1.8	0.6	8	LH
TBGRF7	22.2	22.0	22.3	20.7 *	21.8	-1.54	1.5	0.7	22.1	-1.43	1.6	0.6	8	LY
TGH84T	22.2	21.7	22.2	22.5	22.1	-1.27	1.7	0.3	22.3	-1.24	1.8	0.4	8	LU
V64QAT	25.4 H	22.0	22.9	23.2	23.4	-0.28	2.2	1.4 H	24.3	0.44	2.0	1.5	8	LA
VXF9PP	23.9	23.9 L	24.4 L	24.0 L	24.0	0.25	0.8	0.2	24.4	0.55	0.9	0.6	8	LH
W39MXX	23.0	25.1	24.1 H	23.3	23.9	0.11	2.3	0.9	23.9	0.13	2.0	1.1	7	LU
W3U489	23.1 L	22.9 L	21.2 L	23.9 L	22.8	-0.77	0.9	1.1	23.4	-0.33	1.0	1.2	8	LH
WUZXD8	25.1	26.0	25.9	25.0	25.5	1.46	2.1	0.5	25.5	1.53	2.2	0.5	8	TT
XEZHPX	22.1	22.8	23.2 H	22.7 H	22.7	-0.83	2.3	0.5	22.8	-0.86	2.0	0.4	8	LZ
XNMRV7	23.3	24.0	23.3	23.8	23.6	-0.09	1.7	0.4	23.7	-0.08	1.5	0.4	8	LU
XPYC2U	24.7	25.3	24.7	24.1 L	24.7	0.79	1.5	0.5	24.8	0.91	2.0	0.7	8	LA
XY77X9_AL	25.4	25.6	26.1	23.1	25.0	1.07	1.9	1.3	25.8	1.79	1.8	1.3	8	AL
Y2L6K2	22.9 L	22.6	24.7	23.0	23.3	-0.33	1.4	0.9	23.5	-0.18	1.5	0.8	8	LA
YBCLHH	22.0	22.2	22.3	22.1	22.2	-1.27	1.3	0.1	22.5	-1.06	1.5	0.5	8	LU
ZUK8B4	23.6	24.5	22.2	21.9 L	23.0	-0.55	1.7	1.2	23.0	-0.67	2.0	0.9	8	LA
ZZQU9Y	22.1	22.2	22.6	22.9	22.4	-1.03	1.7	0.4	22.5	-1.07	1.7	0.6	8	LY

Containerboard Interlaboratory Testing Program

Analysis 223

STFI, 42 lb Linerboard - 42H1

TAPPI Official Test Method T826

Consensus (All Labs) Results

Wk Mean	23.68	23.79	23.68	23.63	Month Mean	23.72	Grand Mean	23.74
Avg SDr	1.81	1.81	1.78	1.78	Avg SD	1.80	Avg SD	1.79
SD btwn Labs	1.34	1.37	1.44	1.25	SD btwn Labs	1.24	SD btwn Labs	1.15
Labs Incld	63	64	65	63	SD btwn Wks	0.69	SD btwn Wks	0.76
Labs Excld	4	3	2	3	Labs Incld	64	Labs Incld	63
Labs not Rcvd	0	0	0	1				

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, 56 lb Linerboard - 56G2

TAPPI Official Test Method T826

Report #632 (E)
May 2022

	Weekly Means				Monthly Results				Cumulative Results					
WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
2DUKLR	33.2	32.0	32.6	31.8	32.4	-1.50	1.9	0.6	32.5	-1.26	2.1	0.6	12	LY
2FKJ3B	36.7	39.7	37.2	35.2	37.2	1.43	2.5	1.9	36.8	1.00	2.6	1.4	12	LA
2LK33K	34.5	34.2 L	35.9 L	34.3	34.7	-0.07	1.5	0.8	34.2	-0.37	1.6	0.8	12	BK
48FNUM	35.4 H	32.1	34.7	34.2	34.1	-0.46	2.7	1.4	34.7	-0.11	2.7	1.3	10	LW
4WKDN2_AL	34.0	34.3	35.1	34.1	34.4	-0.29	2.1	0.5	34.3	-0.31	2.1	0.8	12	XX
77UYGK	34.8	36.6 L	33.7	32.6	34.4	-0.24	2.0	1.7	36.8	0.98	2.3	2.8	10	LA
7KEEKJ	34.4	35.6	34.8	34.1	34.7	-0.06	2.4	0.7	36.1	0.61	2.4	1.4	12	LH
7KF4V9	36.7	34.6	33.7	33.6	34.7	-0.12	2.1	1.4	34.3	-0.34	2.0	1.0	11	LA
9EK2XL	33.6	34.1	34.3	34.2	34.1	-0.48	2.5	0.3	31.3	-1.88	2.2	2.8 H	12	XX
9RAVBF	26.1 X	23.4 XL	31.1	26.4 X	26.8	-4.93 X	1.8	3.2 H	26.0	-4.70 X	2.5	2.9 H	12	LZ
9RAVBF_AL	45.0 XL	41.5 *L	39.2 *L	41.3 XL	41.7	4.20 X	0.0	2.4 H	42.6	4.04 X	0.0	2.5	12	XX
9Y9FGG	33.8	33.1	33.5	33.3	33.4	-0.86	2.0	0.3	33.6	-0.68	2.0	0.9	12	LW
9ZHKU7	34.8	34.7	34.2	35.8	34.9	0.02	1.9	0.7	34.5	-0.24	2.0	0.7	8	ID
AHYTPE	34.9	35.0	34.8	34.2 L	34.7	-0.07	1.6	0.4	34.7	-0.10	1.6	0.3 L	12	TT
BBCHUB_AL	35.5	36.3	34.4	34.4	35.2	0.19	2.1	0.9	35.0	0.06	2.1	0.8	12	AL
CVGJKM	36.1	35.6	33.8	34.7	35.0	0.12	2.2	1.0	35.2	0.17	2.3	0.8	12	LU
DDVGYJ_AL	32.7	33.4	33.2	33.2	33.1	-1.05	1.9	0.3	33.4	-0.78	2.0	0.9	12	AL
DKBXTE_AL	34.9	34.1	34.8	35.0	34.7	-0.09	2.3	0.4	34.8	-0.08	2.3	0.6	12	AL
DL6LCA	36.0	37.7	35.4	36.4	36.4	0.95	2.4	1.0	35.9	0.54	2.3	1.1	8	LH
DZ6N8M	32.9	33.0	33.4	32.1	32.9	-1.21	1.7	0.5	32.8	-1.10	1.8	0.5	12	LH
EAAU2P_AL	36.5	36.1	37.1	37.0	36.7	1.11	2.5	0.5	36.2	0.69	2.2	0.7	8	AL
FAPHYB	31.0 *	31.9	33.3	34.4	32.6	-1.35	1.9	1.5	33.5	-0.76	2.1	1.2	12	LZ
FUER6H_AL	35.2	34.2	34.6	34.6	34.7	-0.12	2.1	0.4	34.7	-0.14	2.1	0.4	4	XX
FUUBKA	35.9	35.5	34.1	36.4	35.5	0.38	2.2	1.0	34.1	-0.43	2.4	1.3	12	LW
GR4AG7	31.3 *	31.4	31.8	30.3 *	31.2	-2.23 *	1.9	0.7	30.6	-2.27 *	2.4	2.1	12	LW
H7WJGH	38.7 *	38.5	37.2 L	37.2	37.9	1.86	2.1	0.8	36.1	0.61	2.5	1.6	12	LA
HE9FK4_AL	32.7	33.7	35.2	35.5	34.3	-0.34	2.0	1.3	34.0	-0.49	2.2	1.0	12	AL
JDV66B	34.1 H	33.3	32.8	33.3	33.4	-0.88	3.0	0.5	31.9	-1.58	2.6	1.5	12	LU
JYBP2C	37.4	35.4	35.3	33.3	35.3	0.30	2.3	1.7	35.0	0.04	2.4	1.5	10	LH
JYBP2C_AL	31.4 *	33.4	32.3 L	32.1 L	32.3	-1.55	1.5	0.8	32.0	-1.54	1.6	0.9	10	AL
KEMLYJ	40.7 X	40.2 *	39.9 *	No Data	40.3	3.32 X	2.6	0.4	39.9	2.64 *	2.3	1.0	7	LZ
KH3DPC	37.1	38.5	36.7	37.2	37.4	1.55	2.4	0.8	37.3	1.23	2.3	1.0	8	LA
KH3DPC_AL	35.0	35.4	34.4	36.2	35.2	0.24	1.9	0.8	35.2	0.16	2.0	0.6	8	AL
KJW4T7	33.2	32.4	31.7	30.5 *	32.0	-1.76	2.2	1.1	33.6	-0.71	2.3	1.8	12	LY
KRDFBD	44.4 XH	38.9	44.9 XH	43.3 XH	42.9	4.90 X	3.9	2.8 H	41.1	3.26 X	3.7	2.8 H	12	LH

	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
L9NTWZ	35.0	35.2	35.2	34.9	35.1	0.13	1.7	0.1 L	35.0	0.04	1.6	0.9	12	TT
MR4F39	37.2	35.3	36.6	34.5	35.9	0.64	2.4	1.3	35.6	0.35	2.4	0.9	11	LU
NDZDZR	36.1	37.6 H	30.9 H	36.1	35.2	0.20	4.2	3.0 H	35.3	0.22	3.8	2.2	7	LZ
P9W7QD	36.7	37.2	37.7	36.3 H	36.9	1.28	2.5	0.6	36.6	0.89	1.8	0.6	12	LH
PNAHH8	34.8	36.1	36.4	36.5 H	35.9	0.67	2.9	0.8	36.3	0.70	2.9	1.1	12	LH
PRBHH4	34.7	35.2	35.4	35.6	35.2	0.23	2.5	0.4	35.2	0.16	2.5	0.4	4	ID
PRXP8A_AL	33.5	34.3	33.1	35.1 L	34.0	-0.51	1.7	0.9	34.7	-0.11	1.9	1.1	12	XX
PZ998K	33.8	33.9	34.4	32.6	33.7	-0.73	2.0	0.8	33.1	-0.98	2.3	0.9	12	LY
PZ998K_AL	34.6	33.2	34.1	35.1	34.3	-0.36	2.2	0.8	34.6	-0.16	3.2	1.0	12	AL
PZNA92	35.2	35.0	35.0	35.1	35.1	0.13	2.6	0.1 L	31.3	-1.89	2.6	5.5 H	12	LA
Q7N7BY_AL	37.8	34.1	35.3	34.4	35.4	0.34	2.3	1.7	35.4	0.25	2.1	1.8	12	XX
QP2Q83	39.2 *	40.7 *	40.0 *	36.7	39.1	2.62 *	2.8	1.8	38.7	1.98 *	2.5	1.3	8	LU
QWHAMV	36.8	37.5 H	36.3	37.6	37.0	1.34	3.0	0.6	39.5	2.39 *	2.6	2.0	12	XX
RA7QXE	35.1	34.5	34.2	34.4	34.6	-0.17	1.8	0.4	35.1	0.12	1.9	1.0	8	XX
RAMP86_AL	36.2	35.3	36.5	35.9	36.0	0.69	2.0	0.5	36.5	0.86	2.5	0.8	12	AK
RD8RXB	37.0	35.2	36.7	35.2	36.0	0.72	2.3	1.0	35.9	0.54	2.5	0.7	12	LH
TBGRF7	32.4	32.3	32.0	31.4	32.0	-1.71	2.2	0.4	32.5	-1.28	2.1	0.9	12	LU
TGH84T	34.0	33.9	32.5 H	32.4	33.2	-1.01	2.6	0.9	33.3	-0.83	2.5	0.7	12	LU
V64QAT	36.7	35.0	35.8	36.5	36.0	0.70	2.6	0.8	36.6	0.86	2.5	1.4	12	LA
VXF9PP	36.3 L	36.3 L	36.9	35.1 L	36.1	0.79	1.1	0.8	35.9	0.54	1.1	0.7	12	LH
W39MXX	37.8	38.2 H	34.2 L	35.4	36.4	0.93	2.4	1.9	35.9	0.52	2.3	1.5	11	LU
W3U489	34.6	33.5	29.6 *	32.3	32.5	-1.43	2.1	2.1	30.5	-2.33 *	1.9	2.5	12	LH
WUZXD8	36.4	38.7	37.7	36.9	37.4	1.57	2.8	1.0	37.7	1.45	2.5	0.9	8	TT
XEZHPX	33.4	33.3	32.3	33.9	33.2	-0.99	2.4	0.7	31.2	-1.98 *	2.2	2.1	12	LU
XNMRV7	36.2	35.2	35.1	34.7	35.3	0.30	2.4	0.6	35.0	0.06	2.5	0.7	12	LU
XPYC2U	38.5	36.4	36.1	38.1 *	37.3	1.48	2.1	1.2	36.2	0.69	2.5	1.9	12	LA
XY77X9_AL	36.5	38.2	36.9	37.0	37.2	1.41	2.4	0.7	38.0	1.60	2.6	0.9	12	AL
Y2L6K2	31.3 *	34.4	35.7	34.1	33.9	-0.58	2.3	1.9	34.0	-0.50	2.3	1.0	12	LA
YBCLHH	32.9	33.1	33.2	32.5	32.9	-1.17	2.1	0.3	33.7	-0.63	2.1	1.0	12	LU
ZUK8B4	35.0 H	38.4	32.9	30.9 *	34.3	-0.34	2.9	3.2 H	34.0	-0.46	2.2	1.8	12	LA
ZZQU9Y	33.2	34.7	33.7	33.8	33.8	-0.61	2.3	0.6	34.0	-0.50	2.2	0.6	12	LZ

Consensus (All Labs) Results

Wk Mean	35.05	35.36	34.75	34.55	Month Mean	34.84	Grand Mean	34.92
Avg SDr	2.29	2.49	2.15	2.23	Avg SD	2.29	Avg SD	2.30
SD btwn Labs	1.88	2.27	2.06	1.80	SD btwn Labs	1.64	SD btwn Labs	1.90
Labs Incld	62	65	65	62	SD btwn Wks	1.13	SD btwn Wks	1.40
Labs Excld	4	1	1	3	Labs Incld	62	Labs Incld	61
Labs not Rcvd	0	0	0	1				

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
2DUKLR	152.1	0.89	15.51		154.0	0.96	2.57	2	EV
2FKJ3B	118.1	-1.27	10.39		139.7	0.00	30.48	2	LA
48FNUM	115.9	-1.41	15.21		116.3	-1.58	0.58	2	XX
4WKDN2	142.7	0.29	17.45		143.9	0.28	1.66	2	EV
77UYGK	138.1	0.00	25.13		154.5	1.00	23.20	2	LA
7KF4V9	129.4	-0.55	16.92		120.6	-1.30	12.52	2	EV
DDVGYJ_AL	114.0	-1.53	10.07		116.3	-1.58	3.27	2	XX
DKBXTE	115.4	-1.44	11.99		116.2	-1.59	1.23	2	LS
EAAU2P_AL	132.2	-0.37	15.24		138.4	-0.09	8.70	2	AL
FAPHYB	147.4	0.59	15.82		143.0	0.22	6.22	2	LS
FUUBKA	139.5	0.08	11.27		162.4	1.53	32.47	2	LA
GR4AG7	126.4	-0.74	16.32		137.4	-0.16	15.56	2	LS
HE9FK4_AL	122.8	-0.97	7.06	L	122.1	-1.19	0.97	2	AL
JDV66B	154.6	1.04	9.49		148.9	0.62	8.10	2	EV
JYBP2C_AL	160.4	1.41	23.87		153.5	0.93	9.76	2	AL
KEMLYJ	238.1	6.33 X	25.07		215.6	5.13 X	31.82	2	LS
KH3DPC_AL	124.4	-0.87	14.96		117.5	-1.50	9.83	2	AL
KJW4T7_AL	153.6	0.98	21.21		149.2	0.64	6.22	2	XX
MR4F39	175.9	2.39 *	20.04		167.9	1.90	11.31	2	EV
PH7AH7	133.5	-0.29	18.77		138.9	-0.05	7.71	2	LS
PNAHH8	139.1	0.06	13.37		137.8	-0.13	1.76	2	EV
PZ998K	136.2	-0.12	10.18		153.2	0.91	23.97	2	LA
PZ998K_AL	163.8	1.63	34.32	H	152.8	0.88	15.56	2	AL
PZNA92	145.5	0.47	17.57		149.7	0.67	5.87	2	LS
Q7N7BY_AL	136.8	-0.08	30.72	H	141.7	0.13	6.89	2	AL
RAMP86_AL	152.5	0.91	20.86		144.5	0.32	11.30	2	AK
TGH84T	134.2	-0.25	7.80	L	137.8	-0.13	5.11	2	EV
V64QAT	135.6	-0.16	23.00		138.1	-0.11	3.51	2	LA
W39MXX	157.8	1.25	28.65		149.4	0.65	11.88	2	EV
XPYC2U	121.4	-1.06	20.58		119.5	-1.37	2.76	2	LA
XY77X9_AL	118.1	-1.27	8.63		116.7	-1.56	1.98	2	AL
ZZQU9Y	144.0	0.37	12.43		149.6	0.67	7.91	2	EV

Consensus (All Labs) Results

Month Mean	138.11	Grand Mean	139.72
Avg SD	18.20	Avg SD Months	12.47
SD btwn Labs	15.79	SD btwn Labs	14.80
Labs Incld	31	Labs Incld	31

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

Containerboard Interlaboratory Testing Program

Analysis 229

Roughness - Sheffield Method, 42 lb Linerboard - 42H1

TAPPI Official Test Method T538

	Monthly Results				Cumulative Results				
WebCode	Mean	CPV		SD	Mean	CPV		SD Months	Months	Inst
2M6MAD	418.4	5.64	X	7.34	419.1	5.76	X	1.08	2	TS
4WKDN2	376.8	0.11		10.89	377.1	0.11		0.42	2	LA
4WKDN2_AL	374.1	-0.25		9.33	375.2	-0.15		1.56	2	AK
BBCHUB_AL	374.6	-0.18		6.40	375.8	-0.07		1.70	2	AL
DKBXTE_AL	362.1	-1.85		6.73	361.0	-2.06	*	1.52	2	AL
E82LWB	384.3	1.11		7.07	385.2	1.19		1.20	2	TS
FAPHYB	377.5	0.21		7.46	379.2	0.40		2.40	2	XX
FUER6H	373.5	-0.33		7.75	373.5	-0.38		0.00	1	PP
FUER6H_AL	379.5	0.47		6.25	379.5	0.43		0.00	1	XX
H7R7PE	390.5	1.94	*	4.93	388.9	1.70		2.28	2	PP
H7WJGH	385.0	1.20		8.21	386.1	1.31		1.48	2	XX
JYBP2C_AL	368.2	-1.03		7.87	368.9	-0.99		0.99	2	AL
KJW4T7_AL	374.1	-0.25		6.33	371.3	-0.67		3.96	2	XX
PRXP8A_AL	383.2	0.96		5.51	383.8	1.01		0.85	2	AL
PZ998K_AL	373.0	-0.40		6.07	372.8	-0.48		0.35	2	AL
RAMP86_AL	363.9	-1.61		6.40	365.3	-1.48		1.98	2	AK
XNMRV7	380.5	0.60		6.29	379.7	0.45		1.20	2	XX
XY77X9_AL	370.7	-0.70		8.04	373.9	-0.33		4.45	2	AL

Consensus (All Labs) Results

Month Mean	375.97	Grand Mean	376.29
Avg SD	7.29	Avg SD Months	2.08
SD btwn Labs	7.51	SD btwn Labs	7.43
Labs Incld	17	Labs Incld	17

Key to Instrument Codes Reported by Participants

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

Containerboard Interlaboratory Testing Program

Analysis 231

Internal Bond, 42 lb Linerboard - 42H

TAPPI Official Test Method T569

	Monthly Results			Cumulative Results				
WebCode	Mean	CPV	SD	Mean	CPV	SD Months	Months	Inst
4WKDN2	106.6	-0.94	4.04	106.5	-1.07	0.14	2	TM
7KF4V9	131.2	0.37	9.31	126.8	0.05	6.22	2	TM
BBCHUB	126.8	0.14	5.17	129.7	0.21	4.07	2	TM
BM62B2	145.6	1.13	2.25	144.4	1.03	1.64	2	TM
CVGJKM	131.4	0.38	7.89	137.0	0.62	7.92	2	HZ
DDVGYJ	106.0	-0.97	4.85	108.5	-0.96	3.54	2	TM
DKBXTE	126.6	0.12	4.67	128.9	0.17	3.29	2	TM
FUER6H	143.0	0.99	8.15	143.0	0.95	0.00	1	HY
FUUBKA	154.8	1.62	8.11	166.4	2.25 *	16.40	2	HY
H7WJGH	103.0	-1.13	3.81	100.4	-1.41	3.68	2	SC
JDV66B	125.8	0.08	5.93	128.6	0.15	3.96	2	TM
JYBMET	128.0	0.20	11.42	128.0	0.12	0.00	1	XX
MR4F39	112.2	-0.64	4.09	109.5	-0.91	3.82	2	TM
PH7AH7	137.6	0.71	3.21	140.1	0.79	3.54	2	HY
PNAHH8	120.4	-0.20	4.67	118.6	-0.40	2.55	2	TM
PRXP8A	56.6	-3.58 X	1.60	56.5	-3.84 X	0.04	2	LZ
PZ998K	129.0	0.25	4.47	129.9	0.22	1.27	2	TM
Q4X68V	75.8	-2.57 *	2.94	99.7	-1.45	33.92	2	SC
Q7N7BY	91.6	-1.73	4.77	89.5	-2.02 *	2.97	2	SC
RAMP86	142.8	0.98	4.92	132.0	0.34	15.27	2	TM
W39MXX	113.0	-0.60	6.96	115.9	-0.55	4.10	2	TM
WUZXD8	123.0	-0.07	11.07	122.5	-0.19	0.67	2	TM
XNMRV7	143.9	1.04	3.84	147.1	1.18	4.53	2	HY
ZZQU9Y	140.3	0.85	11.85	141.6	0.87	1.84	2	HZ

Consensus (All Labs) Results

Month Mean	124.27	Grand Mean	125.85
Avg SD	6.61	Avg SD Months	9.54
SD btwn Labs	18.90	SD btwn Labs	18.04
Labs Incld	23	Labs Incld	23

Consensus By Method

Test Method	Group Mean	SD btwn Group	Difference from Grand Mean	Labs Included
Scott Bond Type	121.07	18.68	3.20	19
Modified Scott Bond Mechanics	149.36	7.69	25.09	2

Analysis Notes

PRXP8A - Method used is not covered in this test. Data excluded from consensus calculation.

Key to Instrument Codes Reported by Participants

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

	Monthly Results				Cumulative Results			
WebCode	Mean	CPV	SD		Mean	CPV	SD Months	Months
2DUKLR	29.8	0.55	1.22		29.5	0.42	0.44	2
48FNUM	25.8	-0.65	1.64		27.5	-0.17	2.40	2
4WKDN2	28.4	0.12	3.21		28.2	0.04	0.25	2
77UYGK	26.7	-0.38	1.40		26.7	-0.41	0.00	1
7RY83B	24.8	-0.95	1.10		25.8	-0.68	1.41	2
D2EPEF	29.2	0.37	2.28		31.7	1.09	3.54	2
DDVGYJ	31.1	0.95	2.31		27.7	-0.11	4.86	2
DKBXTE	25.6	-0.71	7.13	H	25.2	-0.86	0.57	2
FAPHYB	32.2	1.27	3.56		32.4	1.29	0.21	2
FUER6H	25.0	-0.89	2.55		25.0	-0.92	0.00	1
FUUBKA	26.6	-0.41	2.41		24.4	-1.10	3.11	2
GR4AG7	33.0	1.51	0.71		32.0	1.18	1.41	2
H7WJGH	28.0	0.01	0.71		28.1	0.01	0.14	2
HE9FK4	24.4	-1.07	1.52		26.8	-0.38	3.39	2
JDV66B	31.4	1.03	0.55	L	32.1	1.21	0.99	2
JL8LEW	24.2	-1.13	2.77		25.1	-0.89	1.27	2
KEMLYJ	20.2	-2.33 *	0.84		20.5	-2.27 *	0.42	2
KH3DPC	33.5	1.66	1.70		33.5	1.63	0.00	1
MR4F39	28.8	0.25	2.28		30.3	0.67	2.12	2
PH7AH7	27.9	-0.02	1.14		31.5	1.02	5.02	2
PNAHH8	29.0	0.31	5.05	H	29.5	0.42	0.64	2
PRXP8A	23.0	-1.49	2.37		24.1	-1.20	1.48	2
PZ998K	29.2	0.37	1.30		28.7	0.19	0.71	2
PZNA92	27.2	-0.23	0.45	L	26.8	-0.38	0.57	2
Q7N7BY	30.9	0.88	2.47		31.2	0.94	0.44	2
QP2Q83	32.8	1.45	1.44		31.7	1.09	1.56	2
RAMP86	31.6	1.09	1.14		30.7	0.78	1.32	2
TGH84T	26.6	-0.41	1.95		25.4	-0.80	1.70	2
VXF9PP	28.7	0.22	1.04		28.7	0.19	0.00	2
W39MXX	31.6	1.09	2.07		31.8	1.12	0.28	2
XNMRV7	22.5	-1.62	1.20		23.1	-1.48	0.82	2
XY77X9	28.9	0.28	1.89		28.8	0.23	0.07	2
ZZQU9Y	24.0	-1.19	2.74		21.6	-1.94 *	3.39	2

Consensus (All Labs) Results

Month Mean	27.96	Grand Mean	28.06
Avg SD	2.40	Avg SD Months	2.03
SD btwn Labs	3.33	SD btwn Labs	3.33
Labs Incld	33	Labs Incld	33

Key to Instrument Codes Reported by Participants

ZZ Instruments No Longer Tracked

	Monthly Results				Cumulative Results				
WebCode	Mean	CPV	SD		Mean	CPV	SD Months	Months	Inst
2FKJ3B	30.9	-0.85	2.65		31.3	-0.77	0.46	2	LA
48FNUM	32.3	-0.10	1.35		27.1	-3.46 X	7.25	2	LP
4WKDN2_AL	31.9	-0.28	1.30		32.1	-0.23	0.20	2	AK
77UYGK	30.1	-1.34	1.74		30.9	-0.97	1.27	2	LA
7X4BQN	33.1	0.39	3.84		33.7	0.85	0.83	2	LP
BBCHUB_AL	31.4	-0.61	2.26		32.6	0.10	1.75	2	AL
BR2V3B	28.1	-2.43 *	1.45		28.4	-2.67 *	0.35	2	LP
CUNRB2	34.9	1.37	3.67		33.4	0.63	2.12	2	GG
D2EPEF_AL	32.3	-0.06	2.62		32.8	0.24	0.67	2	AL
DDVGYJ_AL	33.2	0.43	1.84		33.7	0.82	0.66	2	XX
DKBXTE_AL	30.1	-1.30	1.78		31.0	-0.93	1.26	2	AL
EAAU2P_AL	33.8	0.77	1.42		33.8	0.86	0.10	2	AL
FAPHYB	35.7	1.83	3.76		35.3	1.90	0.52	2	GA
FUER6H	32.1	-0.19	3.24		32.1	-0.21	0.00	1	TP
FUER6H_AL	31.9	-0.29	1.32		31.9	-0.34	0.00	1	XX
FUUBKA	33.4	0.53	2.01		33.2	0.50	0.28	2	LP
GR4AG7	29.3	-1.76	2.00		29.8	-1.72	0.71	2	XX
HE9FK4_AL	31.0	-0.80	1.90		31.7	-0.50	0.94	2	AL
J86T8U	33.5	0.58	3.36		34.6	1.39	1.53	2	TD
JDV66B	31.7	-0.40	3.64		32.8	0.21	1.46	2	GA
JYBP2C_AL	34.0	0.85	1.75		33.7	0.85	0.31	2	AL
KEMLYJ	34.4	1.07	4.83 H		33.8	0.88	0.79	2	TD
KFGC3D	33.8	0.75	9.74 H		31.7	-0.51	3.01	2	LP
KH3DPC	33.8	0.78	1.58		32.7	0.18	1.58	2	GG
KH3DPC_AL	31.6	-0.47	1.65		32.4	-0.02	1.13	2	AL
KJW4T7_AL	32.3	-0.06	2.35		32.4	-0.05	0.04	2	XX
KRDFBD	24.1	-4.66 X	2.61		24.6	-5.09 X	0.75	2	HG
MR4F39_AL	33.0	0.32	2.25		33.2	0.52	0.30	2	AL
PH7AH7	31.6	-0.49	1.59		31.9	-0.33	0.52	2	LP
PNAHH8	30.4	-1.16	1.69		31.4	-0.70	1.41	2	LP
PRXP8A_AL	36.3	2.18 *	1.06 L		34.7	1.46	2.37	2	AL
PZ998K	51.7	10.78 X	4.90 H		51.9	12.74 X	0.32	2	LP
PZ998K_AL	35.0	1.46	2.08		34.8	1.56	0.31	2	AL
PZNA92	31.8	-0.36	1.62		31.3	-0.78	0.78	2	LA
Q7N7BY_AL	33.6	0.66	2.51		33.7	0.82	0.11	2	AL
QP2Q83	33.7	0.68	1.26		32.8	0.21	1.27	2	TL
RAMP86_AL	32.4	0.00	2.49		31.9	-0.37	0.81	2	AK
RD8RXB	28.8	-2.04 *	2.82		28.5	-2.60 *	0.49	2	XX
TGH84T	32.4	-0.01	1.59		32.1	-0.21	0.43	2	XX

Containerboard Interlaboratory Testing Program

Analysis 237

Air Resistance, 42 lb Linerboard - 42H

TAPPI Official Test Method T460

	Monthly Results			Cumulative Results				
WebCode	Mean	CPV	SD	Mean	CPV	SD Months	Months	Inst
V64QAT	34.5	1.13	2.17	33.8	0.86	1.00	2	LA
W39MXX_AL	34.7	1.27	2.73	34.9	1.62	0.29	2	AL
XNMRV7	31.9	-0.33	3.46	31.0	-0.91	1.15	2	TP
XPYC2U	32.0	-0.25	3.04	32.2	-0.14	0.33	2	LA
XY77X9_AL	32.7	0.14	2.87	31.3	-0.74	1.98	2	AL
ZBTV9Y	31.6	-0.46	3.38	31.6	-0.53	0.00	1	GG
ZZQU9Y	30.4	-1.14	1.58	32.1	-0.22	2.40	2	LP

Consensus (All Labs) Results

Month Mean	32.44	Grand Mean	32.44
Avg SD	2.85	Avg SD Months	1.18
SD btwn Labs	1.79	SD btwn Labs	1.53
Labs Incld	44	Labs Incld	43

Key to Instrument Codes Reported by Participants

AK	L & W Autoline 300	AL	L & W Autoline 400
GA	Gurley Precision #4340 Automatic Densometer	GG	Gurley Precision #4320 Densometer
HG	Technidyne - Hagerty Model #1 and Profile System	LA	L&W Autoline (237 Enrollment)
LP	L&W Air Permeance Tester SE 166	TD	TMI Gurley Densometer
TL	Teledyne Gurley Densometer #4110, Oil Flotation	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
2ATE97	57.6 L	57.5	59.4 L	58.2 L	58.2	0.03	1.5	0.9	57.8	-0.24	1.3	2.6	16	TU
2BN69T	63.7 *	64.8 *	61.8	62.5	63.2	2.00 *	4.6	1.3	63.5	2.11 *	4.0	1.6	16	TX
2DUKLR	55.4	54.7	52.9	57.0	55.0	-1.22	3.8	1.7	57.8	-0.24	5.6	2.4	16	EN
2FKJ3B	52.3	51.7 *	51.8 *	52.4 *	52.0	-2.39 *	3.3	0.3	50.7	-3.17 X	3.3	2.0	16	MB
2KDQKJ	59.1	58.5	58.0	57.6	58.3	0.07	3.6	0.6	58.7	0.14	3.3	0.6	16	LD
3XH76T	58.2 L	58.0	58.1 L	58.0 L	58.1	-0.01	1.6	0.1 L	58.3	0.00	1.5	0.2 L	16	LD
48FNUM	62.5	63.7	61.7	60.3	62.1	1.55	4.4	1.4	61.3	1.21	4.1	1.6	16	LD
6GH4FK	54.0	54.8	53.3	54.3	54.1	-1.57	2.9	0.6	55.2	-1.29	2.6	1.1	16	LD
77UYGK	53.2	53.3	52.3 *	51.2 *	52.5	-2.21 *	5.2	1.0	53.3	-2.07 *	5.0	1.5	14	MB
7KEEKJ	61.4	60.1	61.0	61.3	61.0	1.12	3.4	0.6	61.4	1.28	3.3	1.1	16	LD
7KF4V9	59.1	60.6	61.6	61.6	60.7	1.03	2.9	1.2	59.8	0.60	3.2	2.0	16	LC
7X4BQN	53.8	56.8	57.2	57.0	56.2	-0.75	3.3	1.6	57.0	-0.57	3.3	1.5	16	LD
8XHTPM	56.9	55.3	63.2	60.2	58.9	0.31	3.4	3.5 H	62.9	1.89	4.0	3.5	16	LC
9RAVBF	60.8	60.1	57.3	56.1	58.6	0.18	4.1	2.2	57.5	-0.37	3.8	1.8	12	LD
9ZHKU7	60.7	59.2	60.2	59.4	59.9	0.68	2.9	0.7	58.4	0.04	3.2	1.8	16	LD
AHYTPE	56.9	61.0	59.0	59.4	59.1	0.38	4.5	1.7	58.7	0.15	4.9	1.4	16	TJ
CRVVL8	59.0	58.6	58.1	57.7	58.4	0.09	3.5	0.6	58.5	0.04	3.4	0.5	16	LC
CVGJKM	56.1	58.6	59.5 L	57.7	58.0	-0.06	3.1	1.4	58.3	0.00	3.2	1.3	16	LD
DL6LCA	64.5 *	64.8 *	64.3 *	57.9	62.9	1.87	3.8	3.3 H	61.4	1.26	4.6	2.7	16	LD
DZ6N8M	58.8	56.2	57.8 L	58.2 L	57.7	-0.14	1.8	1.1	57.1	-0.53	2.1	0.7	16	EN
EZLY6V	56.1	56.9 L	56.0 L	56.3	56.3	-0.70	1.8	0.4	58.4	0.02	1.8	2.0	16	MB
FAPHYB	57.8	59.9	57.8	59.6	58.8	0.26	2.8	1.1	58.3	-0.02	3.3	1.4	16	LZ
FUER6H	57.9	56.9	59.4	58.2	58.1	-0.01	4.3	1.1	56.8	-0.62	3.5	1.2	12	LD
FUUBKA	53.9	54.8	57.9 L	56.7	55.8	-0.91	2.5	1.8	56.4	-0.82	3.6	1.8	16	LD
GJ7LJE	58.6	57.0	60.3 H	63.1	59.8	0.66	4.2	2.6	60.8	1.01	3.8	3.1	12	LD
HE9FK4	61.2	61.1	58.6	63.8	61.2	1.20	4.1	2.1	61.2	1.20	4.0	2.3	16	LZ
HYV4UV	57.9	59.4	61.2	63.1	60.4	0.90	3.2	2.2	59.7	0.55	3.4	2.5	16	LC
J86T8U	48.7 XH	49.1 X	47.2 X	48.9 X	48.5	-3.79 X	4.4	0.9	49.4	-3.70 X	3.8	1.7	16	TH
JDV66B	58.9	57.9	57.9	58.2	58.2	0.04	2.7	0.5	56.8	-0.62	3.6	1.6	16	LD
JL8LEW	60.1	61.2	59.5	61.3	60.5	0.94	3.6	0.9	60.5	0.88	4.2	1.5	16	LZ
KFGC3D	56.9	57.0	58.1	61.6 H	58.4	0.12	3.9	2.2	58.6	0.10	4.0	2.2	16	LD
KH3DPC	62.8	62.1	63.5 L	No Data	62.8	1.83	2.9	0.7	62.4	1.67	3.1	0.8	10	LZ
KJW4T7	60.6	61.5	61.7	60.5	61.1	1.16	4.0	0.7	61.7	1.37	3.9	1.9	16	LD
KRDFBD	56.7	55.5 H	59.5 H	58.0 H	57.4	-0.28	9.7	1.7	53.9	-1.85	6.1	3.1	12	LD
L9NTWZ	57.9 H	56.4 H	59.6	57.7 H	57.9	-0.09	6.9	1.3	58.1	-0.11	5.9	1.0	16	TG

Containerboard Interlaboratory Testing Program

Analysis 240

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

TAPPI Official Test Method T809

	Weekly Means				Monthly Results				Cumulative Results					
WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
MR4F39	54.5	59.0	54.4	55.9	56.0	-0.85	3.2	2.1	59.3	0.40	3.5	5.3 H	15	LC
NDZDZR	58.7	60.4	59.0	56.3	58.6	0.19	3.1	1.7	59.4	0.43	3.7	2.4	16	LD
P9W7QD	56.4	58.1	57.6	57.6	57.4	-0.27	2.8	0.7	55.6	-1.15	3.2	1.7	16	LD
PFHY3D	59.2 L	59.2 L	59.5 L	59.4 L	59.3	0.47	0.8	0.1 L	59.4	0.44	1.0	0.2 L	16	LD
PH7AH7	No Data	No Data	No Data	60.8 L	60.8	1.06	1.1	0.0	60.6	0.95	2.4	0.6	4	LD
PRBHH4	53.1	54.7	54.2	54.5	54.2	-1.55	2.8	0.7	53.9	-1.83	3.1	0.8	8	RS
PRXP8A	53.9 L	55.4	54.4	54.6	54.6	-1.39	2.5	0.6	54.6	-1.54	2.5	0.9	16	LD
PZ998K	58.0	55.6	56.3	54.1	56.0	-0.82	4.2	1.6	54.7	-1.51	3.9	1.9	16	LD
PZNA92	58.1 L	58.8	58.0	57.8	58.2	0.02	1.7	0.4	58.5	0.07	1.5	0.4 L	16	LD
Q4X68V	53.4	53.9	56.6	54.7	54.6	-1.36	4.0	1.4	55.2	-1.30	3.9	1.3	16	LC
RA7QXE	62.5 L	59.0 L	60.3 L	59.8 L	60.4	0.89	0.7	1.5	60.5	0.89	0.9	1.5	8	XX
RAMP86	57.8	59.1	58.6	58.9	58.6	0.19	4.2	0.6	57.7	-0.27	4.1	1.3	16	LD
RD8RXB	56.3	56.8	57.9	53.8	56.2	-0.75	2.7	1.8	56.0	-0.97	3.1	2.5	16	LD
TBGRF7	53.8	55.8	52.8	54.4	54.2	-1.54	4.3	1.3	55.6	-1.15	4.4	2.7	16	LD
V64QAT	53.4	55.3 H	52.8	55.5	54.2	-1.52	4.8	1.4	55.7	-1.08	4.3	2.3	16	TU
VGEJGY	57.9	57.7	56.1	56.5	57.1	-0.42	3.7	0.9	57.3	-0.45	3.2	1.4	16	EM
VXF9PP	69.0 X	65.3 *	65.4 *	65.1 *	66.2	3.17 X	4.4	1.9	62.8	1.83	4.1	2.5	16	LD
XEZHPX	58.5	61.3	61.1 L	61.3	60.5	0.96	2.6	1.4	59.4	0.42	3.1	2.0	16	TH
XNMRV7	59.9	59.1	58.9	59.9	59.5	0.54	3.9	0.5	59.6	0.52	3.9	1.2	16	LC
YBCLHH	59.9	57.8	56.8	59.6	58.5	0.16	2.7	1.5	57.9	-0.20	3.0	1.3	16	LZ
ZNXDJX	58.3	58.5	58.0	58.6	58.4	0.10	2.2	0.3	58.7	0.16	3.1	0.4 L	16	LD
ZVDYKP	55.4	55.3	57.9	57.2	56.4	-0.66	2.9	1.3	55.8	-1.04	3.3	1.7	16	TH
ZZQU9Y	58.0 H	59.0	59.7	60.4	59.3	0.46	4.8	1.0	58.8	0.20	4.2	2.0	16	LZ

Consensus (All Labs) Results

Wk Mean	57.78	58.23	58.31	58.26	Month Mean	58.11	Grand Mean	58.35
Avg SDr	3.67	3.52	4.00	3.62	Avg SD	3.67	Avg SD	3.62
SD btwn Labs	2.89	2.90	3.00	2.89	SD btwn Labs	2.55	SD btwn Labs	2.42
Labs Incld	55	56	56	56	SD btwn Wks	1.44	SD btwn Wks	1.91
Labs Excld	2	1	1	1	Labs Incld	56	Labs Incld	56
Labs not Rcvd	1	1	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
RS	Regmed Digital Crush Tester CT-2000	TG	TMI Compression Tester, Model 17-10
TH	TMI Compression Tester, Model 17-76	TJ	TLS Compression Tester, Model CDM-5
TU	TMI Universal Crush Tester (TMI K440)	TX	TMI Crush Tester (model not specified)
XX	Instrument make/model not specified by lab		

Containerboard Interlaboratory Testing Program

Analysis 250

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

TAPPI Official Test Method T843

	Weekly Means				Monthly Results				Cumulative Results					
WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
2LK33K	67.7	67.1	68.4	68.8	68.0	-0.74	3.3	0.8	67.7	-0.31	2.6	0.6 L	16	LD
3XH76T	68.7	68.7	68.8	68.7	68.7	-0.23	1.8	0.1 L	69.2	0.29	1.6	0.4 L	16	LD
48FNUM	67.9	69.6	68.9	66.1	68.1	-0.64	3.5	1.5	67.9	-0.21	4.0	1.5	16	LD
7X4BQN	67.9	68.7	72.2	68.1	69.2	0.13	3.6	2.0	70.2	0.70	3.4	2.1	16	LD
9ZHKU7	64.4	66.2	67.2	68.5	66.6	-1.73	3.8	1.7	67.9	-0.24	3.2	2.0	16	LD
CRVVL8	68.2	68.9	69.3	68.6	68.8	-0.20	3.4	0.5	68.9	0.17	3.1	0.5 L	16	LD
EZLY6V	69.9	69.5 L	69.5	69.7	69.6	0.42	1.7	0.2 L	68.8	0.14	1.7	0.9	16	MB
FUER6H	69.8	71.3	69.8	70.8	70.4	0.96	3.9	0.8	71.9	1.43	3.4	1.4	12	LD
FUUBKA	74.0 *	70.1	69.4	70.2	70.9	1.31	3.2	2.1	72.2	1.54	3.4	2.0	16	LD
HE9FK4	66.7	69.7	66.9	69.1	68.1	-0.67	2.9	1.5	67.4	-0.44	3.6	1.5	16	LZ
KFGC3D	70.5	72.0	66.6	71.9	70.2	0.84	3.4	2.5	70.1	0.66	3.7	2.1	16	LD
KRDFBD	49.8 XH	52.7 XH	53.4 XH	52.5 XH	52.1	-11.84 X	7.3	1.6	63.8	-1.89	4.6	7.1 H	16	LD
MR4F39	69.6	64.1	69.9	72.4	69.0	-0.03	3.5	3.5 H	69.4	0.41	3.8	4.2	15	LC
PRXP8A	71.3	71.4 L	71.6	70.6	71.2	1.52	2.3	0.4	70.2	0.73	3.2	1.4	16	LD
PZ998K	58.1 XH	60.2 *H	60.0 XH	59.6 XH	59.5	-6.70 X	7.2	1.0	63.7	-1.93 *	6.2	5.2 H	16	LD
PZNA92	69.9	68.5	68.8	68.9	69.0	-0.02	1.6	0.6	68.9	0.19	1.5	0.4 L	16	LD
RA7QXE	69.5 L	73.0 L	70.2 L	72.3 L	71.2	1.53	0.8	1.7	70.0	0.62	1.0	2.2	8	XX
RAMP86	67.0	68.5	70.5	68.1	68.5	-0.36	3.1	1.5	68.4	-0.02	3.5	1.7	16	LD
XEZHPX	62.7 *	62.6	63.8 *	62.5 X	62.9	-4.29 X	2.7	0.6	62.9	-2.29 *	3.5	1.2	16	TH
XNMRV7	70.8	70.3	68.8	66.0	69.0	-0.04	3.9	2.1	70.1	0.67	3.4	1.8	16	LC
YBCLHH	65.6	65.8	66.3	66.8	66.1	-2.05 *	3.0	0.6	67.9	-0.24	3.3	1.7	16	LZ

Consensus (All Labs) Results

Wk Mean	68.52	68.30	68.78	69.19	Month Mean	69.04	Grand Mean	68.45
Avg SDr	2.84	3.60	3.16	3.02	Avg SD	3.07	Avg SD	3.41
SD btwn Labs	2.59	3.20	1.97	1.92	SD btwn Labs	1.43	SD btwn Labs	2.44
Labs Incld	19	20	19	18	SD btwn Wks	1.61	SD btwn Wks	2.56
Labs Excld	2	1	2	3	Labs Incld	18	Labs Incld	21
Labs not Rcvd	0	0	0	0				

Key to Instrument Codes Reported by Participants

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

Containerboard Interlaboratory Testing Program

Analysis 255

Ring Crush (RCT), 26 lb Corrugating Medium - CM12

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
2ATE97	43.5	46.1	43.9	45.6	44.8	0.51	2.4	1.3	43.1	-0.89	1.5	1.8	16	TU
2BN69T	43.2	43.1	44.8 H	42.5	43.4	-0.21	4.2	1.0	44.9	0.66	4.1	2.6	16	LZ
6GH4FK	44.0	43.0	43.4	44.3	43.7	-0.07	3.2	0.6	45.1	0.80	2.7	1.1	16	LC
77UYGK	43.2	42.0	40.6	41.5	41.8	-1.02	3.7	1.1	44.2	0.06	3.9	2.8	14	MB
7X4BQN	40.5	46.2	42.6	44.5	43.5	-0.17	3.6	2.5	42.8	-1.13	3.7	1.4	16	LD
8XHTPM	38.8 *	39.3	38.8 *	38.4 *	38.8	-2.59 *	2.9	0.4	36.7	-6.37 X	3.4	1.7	16	XX
9RAVBF	43.5	40.4	40.5	42.2	41.7	-1.12	4.0	1.5	42.0	-1.85	3.7	1.8	12	LD
CVGJKM	44.6	42.1 H	47.7 *	42.9 H	44.3	0.28	4.0	2.5	44.4	0.17	3.4	1.7	16	LD
DL6LCA	46.8	44.5	45.1	47.5	46.0	1.14	2.3	1.4	45.2	0.92	3.1	1.2	16	LD
EZLY6V	42.6	43.0	42.9	42.3	42.7	-0.59	1.6	0.3	42.8	-1.13	1.7	0.5	16	MB
FAPHYB	41.2	40.1	41.2	43.3	41.4	-1.23	2.3	1.3	41.8	-2.03 *	2.9	1.6	16	LD
FUER6H	44.8	40.9	41.5	40.0	41.8	-1.06	2.3	2.1	44.1	-0.08	2.4	2.2	12	LD
FUUBKA	42.7	44.5	41.9	43.7	43.2	-0.32	3.6	1.1	44.1	-0.08	3.3	1.2	16	XX
GJ7LJE	44.2	43.6	43.4	44.0	43.8	-0.01	3.1	0.4	44.8	0.55	3.6	2.4	12	LD
HYV4UV	48.3 *	49.5 *	47.1	47.9	48.2	2.29 *	2.9	1.0	48.0	3.32 X	2.5	0.9	16	LC
KFGC3D	44.4	42.6	44.4	44.4	43.9	0.07	3.8	0.9	43.4	-0.64	3.5	1.4	16	LD
NDZDZR	44.1	46.9	41.3	46.2	44.6	0.43	2.7	2.5	44.9	0.63	3.6	1.7	16	LZ
PFHY3D	45.6 L	45.6 L	45.5 L	45.7 L	45.6	0.94	0.4	0.1 L	45.7	1.31	0.7	0.1 L	16	LD
PRXP8A	46.2	46.0	43.9	45.6	45.4	0.84	2.2	1.0	44.1	-0.04	2.5	1.4	16	LD
PZNA92	44.4	45.2	44.6	44.6	44.7	0.47	2.9	0.3	44.4	0.25	2.9	0.3 L	16	LD
RD8RXB	45.7	47.5	46.4	49.3 *	47.2	1.79	3.3	1.6	45.7	1.30	3.7	2.6	16	LD
TVJXMC	39.3 *	41.1 L	44.5	42.5	41.9	-1.01	2.7	2.2	44.0	-0.12	3.0	1.9	16	TH
UGF2VX	43.1	45.0	46.5	44.8	44.8	0.54	3.0	1.4	45.1	0.79	2.9	2.0	12	LD
VGEJGY	44.5	43.4	43.0	45.0	44.0	0.09	3.4	0.9	46.3	1.82	3.2	2.0	16	EM
XEZHPX	43.0	42.1	42.9 L	44.0	43.0	-0.41	2.4	0.8	42.4	-1.48	2.7	1.3	16	TH
XNMRV7	45.6	44.2	44.2	44.9	44.7	0.49	3.9	0.7	44.8	0.55	3.5	1.7	16	LC
ZNXDJX	43.7	44.2	43.5	43.2	43.7	-0.07	2.3	0.4	43.8	-0.35	3.0	0.3 L	16	LD
ZVDYKP	34.3 X	35.0 X	36.6 X	35.9 X	35.4	-4.37 X	2.2	1.0	36.3	-6.78 X	2.3	1.9	16	TH

Consensus (All Labs) Results

Wk Mean	43.75	43.78	43.56	44.10	Month Mean	43.80	Grand Mean	44.15
Avg SDr	2.70	3.07	3.66	2.66	Avg SD	3.05	Avg SD	3.10
SD btwn Labs	2.11	2.43	2.13	2.30	SD btwn Labs	1.91	SD btwn Labs	1.17
Labs Incld	27	27	27	27	SD btwn Wks	1.35	SD btwn Wks	1.71
Labs Excld	1	1	1	1	Labs Incld	27	Labs Incld	25
Labs not Rcvd	0	0	0	0				

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

Containerboard Interlaboratory Testing Program

Analysis 261

STFI, 26 lb Corrugating Medium - CM12

TAPPI Official Test Method T826

Report #632 (E)
May 2022

	Weekly Means				Monthly Results				Cumulative Results					
WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
2FKJ3B	14.3	15.2 *	14.2	13.3	14.3	0.83	1.0	0.8	14.1	0.68	1.6	0.9	16	LA
2KDQKJ	13.5	13.8	13.1	14.2	13.7	-0.31	0.9	0.5	13.6	-0.36	0.9	0.5	12	LB
3XH76T	13.7 L	13.8 L	13.7 L	13.7 L	13.7	-0.21	0.3	0.1 L	13.8	-0.01	0.4	0.1 L	16	LA
6GH4FK	14.8	14.2	14.2	14.2	14.4	1.05	1.0	0.3	14.1	0.68	1.1	0.4	16	LH
77UYGK	14.8	15.8 XH	13.4	No Data	14.7	1.59	1.2	1.2 H	14.8	1.97 *	1.2	0.9	13	LA
9RAVBF	7.1 XH	8.7 XH	12.7	10.5 X	9.8	-7.82 X	1.7	2.4 H	8.7	-9.88 X	1.5	1.7 H	12	LZ
AHYTPE	13.8	13.9	13.9	14.0	13.9	0.11	1.1	0.1	14.0	0.38	1.2	0.3	16	TT
CRVVL8	13.7	12.9	13.3	14.0	13.5	-0.66	1.0	0.5	13.6	-0.39	0.9	0.5	16	LB
DKBXTE	14.5	14.3	14.4	14.5 H	14.4	1.12	1.3	0.1 L	14.2	0.85	1.2	0.4	16	LA
DL6LCA	14.6	13.8	15.0 *	14.3	14.4	1.16	1.2	0.5	11.5	-4.46 X	1.0	5.4 H	16	XX
DZ6N8M	13.2	13.1	12.9	13.4	13.2	-1.30	1.0	0.2	13.1	-1.39	1.0	0.2	16	LH
FAPHYB	12.3 *	12.5	12.9	13.5	12.8	-1.97 *	1.1	0.5	13.2	-1.04	1.0	0.5	16	LZ
J86T8U	13.4 H	14.0	14.6	13.5	13.9	0.07	1.3	0.6	13.7	-0.22	1.2	0.5	16	TX
JDV66B	13.1	13.5	13.0	13.7 H	13.3	-0.98	1.2	0.3	13.2	-1.14	1.1	0.6	16	LU
JYBMET	13.5	13.2	13.9	13.2	13.4	-0.73	1.1	0.3	13.4	-0.78	1.1	0.3	8	LA
PRBHH4	14.4	14.1	13.9	15.5 X	14.5	1.21	1.0	0.7	14.4	1.22	1.1	0.6	8	XX
PRXP8A	13.6	14.1	13.3	14.3 L	13.8	-0.03	0.8	0.4	13.8	0.16	0.9	0.5	16	LA
PZ998K	12.5	13.6	13.6	13.0	13.2	-1.24	1.1	0.5	13.6	-0.25	1.3	0.5	16	LB
PZNA92	13.9	13.8	13.9	13.8	13.8	0.03	1.1	0.1 L	13.9	0.25	1.1	0.1 L	16	LB
RA7QXE	13.2	12.3 *	13.7	13.1	13.1	-1.44	0.9	0.6	13.0	-1.54	1.0	0.5	8	XX
RAMP86	14.7	14.8	14.4	14.5	14.6	1.44	1.0	0.2	14.6	1.70	1.2	0.6	16	LA
UGF2VX	12.9	13.2	13.7	14.3	13.5	-0.59	1.0	0.6	13.3	-1.00	1.2	0.7	16	LA
V64QAT	13.8	14.2	12.7	13.2	13.5	-0.68	1.1	0.7	13.6	-0.25	1.0	0.6	16	LA
VXF9PP	14.8	13.7 L	14.9	14.6	14.5	1.27	0.7	0.6	14.6	1.56	0.7	0.3	16	LH
XEZHPX	13.9	13.1	13.5 L	13.8	13.6	-0.49	0.9	0.4	12.9	-1.76	0.8	0.8	16	LZ
XNMRV7	14.3	14.5	14.6	14.5	14.5	1.19	1.0	0.1	14.2	0.77	1.0	0.3	16	LU
Y2L6K2	13.6	13.6	13.5	13.7	13.6	-0.42	0.9	0.1	13.7	-0.07	1.0	0.5	16	LA
ZUK8B4	13.6 L	13.2	14.0	14.5 L	13.8	0.00	0.8	0.5	13.8	-0.03	0.9	0.6	16	LA

Consensus (All Labs) Results

Wk Mean	13.79	13.71	13.74	13.88	Month Mean	13.83	Grand Mean	13.77
Avg SDr	1.01	0.99	1.02	1.02	Avg SD	1.01	Avg SD	1.06
SD btwn Labs	0.68	0.66	0.64	0.50	SD btwn Labs	0.52	SD btwn Labs	0.51
Labs Incld	27	26	28	25	SD btwn Wks	0.50	SD btwn Wks	0.52
Labs Excld	1	2	0	2	Labs Incld	27	Labs Incld	26
Labs not Rcvd	0	0	0	1				

Key to Instrument Codes Reported by Participants			
LA	L&W Autoline	LB	L&W Model 152
LH	L&W 282	LU	L&W 52 without moisture correction (was 53)
LZ	L&W (model not specified)	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