

Collaborative Testing Services, Inc. Containerboard Interlaboratory Testing Program

Participant Summary Report #471 (N)- December 2008

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[Explanation of Tables and Definitions of Terms](#)

[Instrument Manufacturer Contacts](#)

Analysis	Sample Lot	Analysis Name
<u>201</u>	<u>BOX3</u>	<u>Box Compression Strength, Corrugated Boxes</u>
<u>202</u>	<u>ECT2</u>	<u>Edgewise Compressive Strength of Fiberboard, Corrugated board</u>
<u>205</u>	<u>42X1</u>	<u>Mullen Burst of Linerboard, 42 lb Linerboard</u>
<u>207</u>	<u>36U3</u>	<u>Mullen Burst of Linerboard, 36 lb Linerboard</u>
<u>215</u>	<u>42X1</u>	<u>Ring Crush of Linerboard, Rigid Platen Type, 42 lb Linerboard</u>
<u>217</u>	<u>36U3</u>	<u>Ring Crush of Linerboard, Rigid Platen Type, 36 lb Linerboard</u>
<u>223</u>	<u>42X1</u>	<u>STFI of Linerboard, 42 lb Linerboard</u>
<u>225</u>	<u>36U3</u>	<u>STFI of Linerboard, 36 lb Linerboard</u>
<u>228</u>	<u>42X</u>	<u>Roughness - Stylus Method, 42 lb Linerboard</u>
<u>231</u>	<u>42X1</u>	<u>Internal Bond Strength, Linerboard, 42 lb Linerboard</u>
<u>234</u>	<u>42X1</u>	<u>Coefficient of Static Friction - Inclined Plane, 42 lb Linerboard</u>
<u>237</u>	<u>42X1</u>	<u>Air Resistance - Gurley Method, Linerboard, 42 lb linerboard</u>
<u>240</u>	<u>CM71</u>	<u>Flat Crush Strength (CMT) of Medium, 26 lb Corrugating Medium</u>
<u>250</u>	<u>CM71</u>	<u>Fluted Crush of Medium, 26 lb Corrugating Medium</u>
<u>255</u>	<u>CM71</u>	<u>Ring Crush of Medium, 26 lb Corrugating Medium</u>
<u>261</u>	<u>CM71</u>	<u>STFI of Medium, 26 lb Corrugating Medium</u>

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 50 countries, currently participate in the CTS programs.

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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; 36 lb. and 69 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
36# Linerboard	36U2	December 2007 - April 2008
36# Linerboard	36U3	May 2008 -
42# Linerboard	42X1	March 2008 -
69# Linerboard	69V4	January 2007 - May 2008
69# Linerboard	69Y1	July 2008 -
Corrugating Medium	CM71	July 2007 -

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 analysis 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 SDr - For each week, the average of the within-laboratory standard deviations (SDr's) for all the participants, excluding those laboratories flagged with an 'X'. The Avg SDr 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 Incl - The number of laboratory Means included in the Wk Mean for that week.

Labs Excl - 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.

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

SD Wks - 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 SDr - For the current month, the average of the within-laboratory standard deviations (SDr'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 Wks - For the current month, the average of the laboratory between week standard deviations (SD Wks') for all the participants.

Labs Incl - The number of laboratory Means included in the Month Mean.

continued on next page

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 (SDr's) for the weeks shown.
- SD Wks- 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.

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 SDr - For the cumulative period, the average of the within-laboratory standard deviations (SDr'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 Wks - For the cumulative period, the average of the laboratory between week standard deviations for all the participants.
- Labs Incl - 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
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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 required.
- *** 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 SDr for each week is not shown, but laboratory average SDr and consensus average SDr values are shown.
- L** Indicates low within-laboratory standard deviation. The laboratory SDr for each week is not shown, but laboratory monthly average SDr and consensus average SDr values are shown.

Flags assigned to Monthly SD Wks and Cumulative SD Wks:

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

INSTRUMENT MANUFACTURER CONTACTS

If your data results have been flagged with an "X" and you believe that the problem may be with your instrument (and not your testing procedures), then CTS urges you to contact the appropriate instrument manufacturer. Where possible, CTS has asked the manufacturer to supply a contact person who is familiar with the Containerboard Collaborative Reference Program, and who can thus work with you on evaluating your results to better determine the cause of the problem. Additional contact names will be added as they become available.

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Containerboard Interlaboratory Testing Program
Analysis 201

Top to Bottom Box Compression Strength, Corrugated Boxes - BOX3
TAPPI Official Test Method T804



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
1A8KV3	953.7	0.14	27.6	894.0	-0.65	29.2	3	XX
1Y998F	888.6	-0.97	33.5	891.4	-0.71	41.3	3	LO
2YUS22	944.6	-0.02	62.6	951.7	0.62	62.1	3	ER
3DNSF7	900.4	-0.77	47.5	895.1	-0.63	47.2	3	LG
3LCZKX	1,008.6	1.07	43.1	973.3	1.09	50.9	3	LG
6KZRHP	980.4	0.59	48.6	969.1	1.00	68.7	3	ER
773CP5	994.5	0.83	25.3	955.8	0.71	42.8	3	TB
8LFH34	971.7	0.44	50.1	917.3	-0.14	39.0	3	XX
9RMWM7	1,055.0	1.86	62.6	972.0	1.07	95.5	3	ER
BF2C9E	896.5	-0.83	64.7	862.7	-1.34	46.6	3	LO
CV9LXV	933.6	-0.20	67.2	924.0	0.01	48.7	3	IB
CYGZG8	850.0	-1.62	48.1	831.7	-2.03*	48.8	3	LH
DH4LZA	1,031.2	1.45	42.9	955.5	0.70	48.8	3	TC
EXSER2	948.9	0.06	35.2	935.8	0.27	57.6	3	LN
UN8VN8	962.4	0.28	15.0	995.5	1.59	31.8	3	LM
WTKKY2	827.6	-2.00 *	39.4	853.9	-1.54	43.4	3	XX
XS88U5	941.0	-0.08	69.3	930.8	0.16	76.1	3	MC
Y234UK	932.3	-0.23	22.4	915.9	-0.17	51.5	3	LH
YGH216	652.2	-4.98 X	20.0	639.4	-6.27 X	27.6	3	TS

Consensus (All Labs) Results

Month Mean	945.61	Grand Mean	923.64
Avg SDr	47.44	Avg SDr	53.96
SD btwn Labs	58.93	SD btwn Labs	45.34
Labs Incd	18	Labs Incd	18

Instrument Code List as Reported by the Labs

(ER) - Emerson 6200 Series

(LG) - TLS / L.A.B. Validator Series

(LM) - Lansmont 122-15k

(LO) - Lansmont 152-30k

(TB) - TMI Monitor/Compression Tester, Model 17-70

(TS) - Tinus Olsen Model CTM

(IB) - Ibertest Model EMIB-10

(LH) - L.A.B. Compression Tester Model #10610

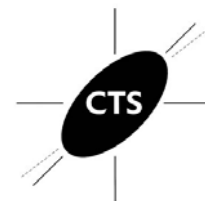
(LN) - Lansmont 152-50k

(MC) - MTI Lab Model 10240

(TC) - TMI Monitor/Compression Tester, Model 17-37

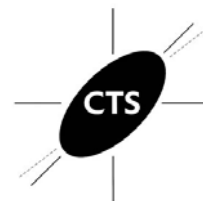
(XX) - Instrument make/model not specified by lab

Containerboard Interlaboratory Testing Program
Analysis 202
Edgewise Compressive Strength, Corrugated board - ECT2
TAPPI T811, T838 and T839



WebCode	Monthly Results			Cumulative Results				Inst
	Mean	CPV	SDr	Mean	CPV	SDr	Months	
1ZAPT1	65.0	0.95	2.0	62.2	0.38	3.8	4	TD
46CQ8B	62.4	0.15	3.2	59.7	-0.39	2.8	4	EN
5AQATA	65.7	1.17	1.3	62.3	0.39	2.5	4	EM
6A42F1	64.7	0.88	3.2	61.5	0.17	2.6	4	EN
6RBQAT	55.3	-2.03 *	1.7	54.7	-1.89	2.3	3	TC
93FCB8	65.9	1.23	4.2	65.7	1.43	3.2	4	EM
ABRUKU	49.1	-3.96 X	2.1	46.3	-4.39 X	2.3	4	CT
ADG135	66.5	1.43	2.3	66.5	1.66	2.6	4	LC
AJNMV9	51.3	-3.27 X	4.3	52.4	-2.57 *	3.5	4	WK
ALGJD2	56.5	-1.67	1.6	60.0	-0.31	1.4	4	TC
B6Q666	60.6	-0.40	2.0	61.2	0.05	2.2	4	LX
CAAF69	63.0	0.35	3.3	63.5	0.75	3.5	3	LC
D2ZDK8	48.0	-4.31 X	1.9	53.0	-2.38 *	2.2	4	LC
ESYHP4	59.5	-0.74	3.0	61.1	0.04	2.3	4	LX
FD1P7L	62.1	0.05	1.0	63.5	0.74	2.1	4	TA
GVLATAT	59.6	-0.72	2.7	59.9	-0.32	3.1	4	LX
H95CPU	62.2	0.11	4.6	63.7	0.82	3.1	4	TC
JBDZWJ	65.0	0.98	1.8	63.0	0.61	1.8	4	EM
L41S6E	66.7	1.49	1.4	62.6	0.48	2.1	4	TD
LNNG3Z	58.5	-1.06	3.5	56.6	-1.32	2.7	4	EM
MJAV7Z	63.5	0.51	2.1	60.6	-0.11	1.8	3	LC
PD3KMH	61.2	-0.20	2.2	58.7	-0.68	2.0	4	TL
PDV396	60.5	-0.43	1.3	60.1	-0.26	1.5	4	EM
PK6MRH	62.3	0.13	1.9	62.7	0.52	2.0	4	EM
PWLTWB	59.9	-0.63	4.4	62.1	0.35	3.4	4	LC
RVQEVC	58.3	-1.11	2.9	58.7	-0.68	2.4	4	XX
TC8VBD	65.9	1.25	1.7	62.2	0.37	2.5	4	TM
TD2QSV	58.5	-1.06	2.6	56.0	-1.50	5.1	4	TB
TENUML	58.7	-0.97	1.3	61.2	0.07	1.8	4	TC
TKJFXM	57.6	-1.33	2.7	62.5	0.44	2.2	4	LC
TRG62K	66.6	1.46	4.2	65.8	1.45	3.4	2	XX
TURV4V	65.1	0.99	2.6	64.8	1.16	2.9	4	LC
XJ46WB	63.8	0.59	2.6	63.6	0.78	2.0	3	LD
XR97LT	58.1	-1.17	2.5	59.5	-0.46	2.3	3	LC
Y9UHKJ	60.0	-0.58	1.5	60.0	-0.29	2.0	4	LX
Z4D34L	63.0	0.35	0.6	62.7	0.52	0.8	4	TC

Containerboard Interlaboratory Testing Program
 Analysis 202
Edgewise Compressive Strength, Corrugated board - ECT2
 TAPPI T811, T838 and T839



Consensus (All Labs) Results			
Month Mean	61.88	Grand Mean	60.98
Avg SDr	2.62	Avg SDr	2.63
SD btwn Labs	3.23	SD btwn Labs	3.34
Labs Includ	33	Labs Includ	35

ECT Results by Methodology (as reported by laboratory)

Test Methodology	Sample ECT2		
	Group Mean	Btwn Lab STD	Labs included
	66.58	0.00	1
TAPPI T811 Wax Edge (1)	60.97	3.56	3
TAPPI T839 Clamp (3)	62.04	2.98	28

ECT Results in pounds force / inch.

Instrument Code List as Reported by the Labs

- | | |
|---|--|
| (CT) - Con-Ten
(EN) - Emerson 2200
(LD) - L&W Crush Tester 248
(TA) - Thwing-Albert (model not specified)
(TC) - TMI Monitor/Compression Tester, Model 17-37
(TL) - Tech-Lab Systems Compression
(WK) - Zwick Z005 Crush Tester | (EM) - Emerson 1200 Series
(LC) - L&W Crush Tester 48
(LX) - L&W 506
(TB) - TMI Monitor/Compression Tester, Model 17-70
(TD) - TMI Digital Crush Tester, Model 17-09
(TM) - TMI/Hinde & Dausch
(XX) - Instrument make/model not specified by lab |
|---|--|

Containerboard Interlaboratory Testing Program
 Analysis 205
Bursting Strength (Mullen), 42 lb Linerboard - 42X1
 TAPPI Official Test Method T807



WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	Inst
2JULGX	106.0	101.9	105.6	101.2	103.7	0.50	9.7	2.5	105.1	0.77	8.0	2.5	16	LZ
2SY6DT	96.4	99.6 L	99.6 L	No Data	98.5	-0.94	5.1	1.8	102.7	0.06	6.0	3.9	15	AH
3AE4HW	101.0	117.4 X	104.7	104.1	106.8	1.36	11.8	7.2 H	107.1	1.39	11.0	4.7	12	TB
3UMZUU	99.8	100.3	102.2 L	98.3	100.2	-0.49	6.1	1.6	100.3	-0.66	6.6	1.7	16	AH
4NTE3J	101.7	102.9	103.4	102.1	102.5	0.18	7.5	0.8	101.2	-0.37	6.3	0.9	16	LZ
4SFSN8	110.1 L	107.2 L	No Data	107.7	108.3	1.80	5.1	1.6	107.6	1.51	5.3	2.3	15	XX
5B476N	107.8	106.4	103.2	105.1	105.6	1.04	11.2	2.0	101.7	-0.24	9.9	4.5	15	LC
5F859A	105.8	106.7	104.6	102.4	104.9	0.83	10.9	1.9	105.0	0.75	10.3	3.8	16	XX
5KAFQP	104.2	108.3	108.9	96.6	104.5	0.73	11.5	5.7	103.6	0.32	9.7	4.8	16	TB
5QCYF1	104.9	105.3	94.7	93.2	99.5	-0.66	7.9	6.5	107.2	1.41	10.8	16.0 H	15	AH
62MCY8	97.8	95.7	93.9*	95.0	95.6	-1.76	11.0	1.6	96.5	-1.78	9.6	3.2	16	XX
6XT6NC	103.6	104.6 H	107.1	103.5	104.7	0.78	13.2	1.7	106.3	1.13	9.6	2.8	16	LA
7A4G66	108.5 L	109.4 L	108.0 L	108.1 L	108.5	1.85	3.8	0.6 L	106.8	1.27	5.7	2.4	16	TX
7Y8BTZ	103.2	107.2	97.7	111.0	104.8	0.81	10.1	5.7	102.5	0.01	9.4	3.8	16	LZ
7ZAVJ9	99.6 L	108.3	105.8	104.8	104.6	0.76	10.1	3.7	106.2	1.12	8.0	2.7	16	AX
82JN62	103.8	101.3	104.8	103.7	103.4	0.42	8.8	1.5	103.0	0.15	9.7	1.2	16	LA
8FMN4H	96.8	95.4	100.0	96.4	97.2	-1.32	9.0	2.0	98.0	-1.34	8.6	4.0	16	TB
8H4ZG2	100.6	97.6	107.9	104.6 H	102.7	0.22	14.3	4.5	106.4	1.17	12.5	5.0	16	LA
9B7R28	93.5*	106.1	98.2	99.2	99.3	-0.74	10.5	5.2	102.4	-0.03	10.1	4.1	16	AH
9D9ULH	100.6	97.4	102.4	98.1	99.6	-0.63	11.4	2.3	101.2	-0.38	11.6	3.8	16	AH
9RUZC6	102.3	108.9	104.5	108.5	106.1	1.16	11.7	3.2	103.0	0.16	11.1	3.2	16	LA
ADHY6E	101.7	101.7	102.9	103.7	102.5	0.17	12.8	1.0	106.0	1.05	10.9	4.3	16	AH
B4UFFC	No Data	99.2	100.1	108.3	102.5	0.18	9.1	5.0	100.1	-0.70	10.3	4.6	7	TB
BPLYR4	93.2*	103.1	97.4	96.3	97.5	-1.23	10.1	4.1	98.1	-1.29	9.7	3.9	16	LA
BSBGAV	108.5	96.1	98.9	105.1	102.1	0.07	8.9	5.7	104.1	0.48	10.8	5.8	16	LC
CHY859	101.0	101.1	109.8	108.0	105.0	0.86	8.1	4.6	106.8	1.28	9.5	3.9	16	LA
CJ8HTZ	107.4	106.3	103.7	No Data	105.8	1.10	11.1	1.9	106.2	1.10	10.1	3.0	9	TB
CP68JR	107.5	112.2*	105.2	103.0	107.0	1.42	8.1	3.9	103.8	0.38	8.4	2.9	16	AH
DKB4Y6	105.3	109.8	109.5	102.3	106.7	1.34	11.4	3.6	104.5	0.62	10.8	3.2	16	AA
DU23QH	106.5	103.7	103.7	No Data	104.6	0.76	10.7	1.6	104.5	0.60	12.5	3.3	14	LA
F2B6UM	103.5	100.8	100.8	105.8	102.7	0.23	6.9	2.4	102.7	0.05	8.1	3.6	16	TC
FKKTYW	102.6	102.6	103.6	97.1	101.5	-0.11	11.2	3.0	99.4	-0.91	10.2	3.9	12	LC
FZ6L41	98.7	96.0	104.7	94.5 L	98.5	-0.95	10.6	4.5	100.9	-0.47	10.1	4.2	16	AH
GAKKAB	101.2	101.5	100.4	98.4	100.4	-0.43	11.1	1.4	103.8	0.39	11.5	3.3	16	LZ

Containerboard Interlaboratory Testing Program
 Analysis 205
Bursting Strength (Mullen), 42 lb Linerboard - 42X1
 TAPPI Official Test Method T807



WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	
GQ6MDL	101.2	99.9	103.5	96.3	100.2	-0.47	7.5	3.0	99.2	-0.98	7.7	3.3	16	AH
KHFUSJ	95.8	92.8 ^H	94.9	103.2	96.7	-1.46	11.4	4.5	97.5	-1.47	11.2	4.5	16	XX
LTB96M	100.4	102.9	99.2	105.9	102.1	0.06	11.5	3.0	102.6	0.05	9.6	4.0	16	LZ
MAFVP1	100.9	103.1	107.4	108.2	104.9	0.84	9.7	3.5	103.6	0.35	9.6	3.3	16	LJ
MFA62R	100.3	96.9	98.2	92.0	96.8	-1.41	8.6	3.5	100.0	-0.73	11.5	3.9	12	LA
MPKQ5M	100.6	102.9	104.2	102.0	102.4	0.15	10.5	1.5	102.6	0.03	11.6	3.2	16	AH
NCPYZ9	104.1 ^L	99.5	100.6	101.3	101.4	-0.14	6.4	2.0	102.2	-0.09	7.9	1.6	16	TB
NYX618	105.9	107.6	102.7	108.0	106.0	1.16	10.0	2.4	107.2	1.41	9.5	2.7	14	TB
QDJHH7	97.0	94.2	94.3 [*]	95.1	95.2	-1.88	10.0	1.3	94.7	-2.32 [*]	9.3	7.7 ^H	16	LJ
QET5TD	98.3	103.1	105.1	100.7	101.8	-0.03	8.6	3.0	102.9	0.14	10.4	2.2	16	LZ
QMT2JH	No Data	94.8	No Data	No Data	94.8	-1.98	9.4	0.0 ^L	99.7	-0.82	8.9	4.6	7	TB
QPXBDF	103.4	No Data	No Data	No Data	103.4	0.41	9.6	0.0 ^L	104.7	0.67	8.5	2.2	10	LB
S39THH	104.4	100.4	100.4	104.9	102.5	0.18	10.2	2.5	108.1	1.68	11.6	6.2	16	TB
S9PLK1	106.8	102.3	102.5	107.1	104.7	0.78	9.1	2.6	105.1	0.79	10.1	3.5	15	AA
SDNY65	99.3	99.1	99.1	99.9	99.4	-0.71	9.9	0.4 ^L	104.8	0.68	9.3	4.2	16	LC
TEW3GD	99.0	94.4	101.8	92.8	97.0	-1.37	9.3	4.1	97.4	-1.51	10.8	2.9	16	LA
U84N4L	106.5	108.2	107.1	109.8	107.9	1.68	9.7	1.4	103.1	0.18	10.0	3.6	16	LJ
UC25H1	101.7	96.1	101.8	97.8	99.3	-0.71	10.8	2.8	100.6	-0.56	11.0	4.1	16	TB
UWJFV6	101.2	96.5	104.1	102.6	101.1	-0.22	11.1	3.3	99.6	-0.85	10.5	3.5	16	LA
X4P5XZ	97.6	100.7	89.3 ^X	92.9	95.1	-1.89	8.6	5.0	93.3	-2.72 [*]	9.4	10.1 ^H	16	LA
XDGUYG	107.5	101.1	95.3	99.3	100.8	-0.30	10.2	5.1	99.3	-0.95	8.9	3.8	12	AX
Y9R2Z6	106.0	93.6	101.3	104.2	101.3	-0.17	10.7	5.5	99.1	-0.99	10.1	3.4	16	LA
Z1MLCC	91.8 [*]	98.2	101.8	96.9 ^H	97.2	-1.32	12.4	4.2	99.1	-1.00	11.3	4.7	16	AX
Z4U9BP	97.2	No Data	104.4	98.9	100.2	-0.48	12.1	3.8	102.5	0.02	11.4	4.7	6	TB

Consensus (All Labs) Results													
Wk Mean	102.00	101.69	102.36	101.62	Month Mean	101.89				Grand Mean	102.47		
Avg SDr	9.93	10.11	10.31	9.73	Avg SDr	10.00				Avg SDr	9.83		
SD btwn Labs	4.16	4.79	3.92	4.96	SD btwn Labs	3.58				SD btwn Labs	3.37		
Labs Inclid	56	55	54	53	SD btwn Wks	3.50				SD btwn Wks	4.49		
Labs Exclid	0	1	1	0	Labs Inclid	58				Labs Inclid	58		
Labs not rcvd	2	2	3	5									

Containerboard Interlaboratory Testing Program
Analysis 205
Bursting Strength (Mullen), 42 lb Linerboard - 42X1
TAPPI Official Test Method T807



Instrument Code List as Reported by the Labs

(AA) - Perkins Model A	(AH) - Perkins Model AH
(AX) - Perkins Mullen Tester (model not specified)	(LA) - L & W Bursting Strength Tester
(LB) - L & W Burst-O-Matic	(LC) - L & W Autoline
(LJ) - L & W Bursting Strength Tester J-Type	(LZ) - L & W (model not specified)
(TB) - TMI Monitor/Burst 1000	(TC) - TMI Monitor/Burst (Model 13-71)
(TX) - TMI Monitor/Burst (model not specified)	(XX) - Instrument make/model not specified by lab

Containerboard Interlaboratory Testing Program
Analysis 207

Bursting Strength (Mullen), 36 lb Linerboard - 36U3
TAPPI Official Test Method T807



WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	
1SDWJL	88.7	92.0	94.1	90.4	91.3	-0.15	10.0	2.3	91.7	-0.20	10.0	2.3	12	LJ
3X4CEH	93.3	93.6	95.2	97.8	95.0	0.94	11.0	2.1	96.9	1.49	10.2	3.3	11	LA
4284W8	87.1	87.1	81.4 X	83.0 *	84.7	-2.12 *	8.5	2.9	85.2	-2.32 *	8.7	3.2	12	XX
4QLQER	83.6 *	80.4 *	84.9 *	84.1	83.2	-2.54 *	9.8	2.0	85.2	-2.31 *	9.7	3.1	11	LJ
5CU48G	86.0	92.2	94.8	92.6 L	91.4	-0.12	6.9	3.8	91.3	-0.32	6.5	2.0	12	LZ
5ZJLHZ	84.7	No Data	No Data	No Data	84.7	-2.09 *	7.3	0.0 L	92.4	0.01	8.9	3.4	9	LB
6ULZ1Q	86.8	91.2	89.8	86.3	88.5	-0.97	9.0	2.4	93.6	0.41	8.1	5.5 H	12	LC
7NGFE6	92.7	88.4	95.6	96.0	93.2	0.41	6.9	3.5	93.5	0.38	9.7	2.7	12	LA
7TG1ZP	92.9	90.3	88.0	88.2	89.9	-0.57	7.6	2.3	89.6	-0.90	8.7	2.1	12	LC
8WT4BY	85.5	83.9	89.3	85.3	86.0	-1.71	8.6	2.3	86.7	-1.81	9.7	2.2	12	LZ
AL2KN4	88.3	89.6	90.8	88.9	89.4	-0.71	10.1	1.1	88.4	-1.27	9.6	1.7	12	LA
AVUBDN	92.6	90.6	93.8	97.1	93.5	0.50	9.8	2.7	93.8	0.47	9.9	1.9	12	LZ
C1AZ1J	91.9	87.3	93.2	92.7	91.3	-0.16	6.7	2.7	92.0	-0.12	7.4	2.0	12	TB
E9QEGC	91.3	91.4	91.5	95.7	92.4	0.19	9.4	2.2	92.8	0.14	9.6	2.1	12	LZ
EJZXFG	90.0 L	89.4	92.4	85.7	89.4	-0.72	5.0	2.8	90.0	-0.76	6.3	2.1	12	AH
FDM3VY	96.1	93.0	91.7	96.0 L	94.2	0.71	9.2	2.2	92.3	-0.02	10.2	2.5	12	LA
FU36KQ	89.2	90.0	90.1	94.4	91.0	-0.25	7.5	2.3	96.1	1.22	8.3	6.3 H	12	LC
GSC5CG	93.3	98.7	100.6 X	97.4	97.5	1.69	9.2	3.1	96.0	1.19	10.0	4.1	11	TB
GTDACX	88.4	87.3	88.2	No Data	88.0	-1.13	4.8	0.6	90.1	-0.72	6.1	3.6	11	AH
H3UFS7	95.6	96.5	96.1	94.0	95.6	1.11	10.7	1.1	95.6	1.05	10.0	2.6	12	AH
HPSZNR	100.0 *	98.1	94.5	97.8	97.6	1.72	8.4	2.3	96.5	1.36	11.0	3.2	12	LA
J28FK9	90.6	93.2	88.3	91.0	90.8	-0.30	9.9	2.0	91.0	-0.42	10.0	2.3	12	TB
J8N4CQ	98.8	89.2	90.2	93.7	93.0	0.35	10.3	4.3	91.1	-0.41	10.4	3.3	12	AH
JH1K8B	99.5	99.1	96.6	99.3	98.6	2.02 *	9.3	1.4	97.9	1.82	8.3	2.9	12	TB
JQAM1K	92.0	90.6	90.6	91.8	91.3	-0.16	8.7	0.8	91.5	-0.26	10.7	2.2	10	LA
JTG4CN	91.0	94.2	93.1	94.4	93.2	0.40	11.3	1.6	94.2	0.60	10.3	3.0	12	LZ
K6WFDV	93.1	91.7	89.5	94.1	92.1	0.09	9.7	2.0	93.2	0.28	10.7	2.7	12	AH
KDHQ5J	99.6	97.4	93.5 L	93.5 L	96.0	1.24	5.4	3.0	94.1	0.57	8.3	2.2	12	AH
KNASCU	95.0	94.7	94.2	98.5	95.6	1.12	9.5	2.0	94.9	0.82	8.6	2.2	12	LJ
LFU7C3	92.7	86.1	89.7	92.7	90.3	-0.44	10.0	3.1	89.5	-0.92	8.8	4.0	10	TB
M15S7G	94.5	86.4	95.2	90.3	91.6	-0.06	10.3	4.1	90.8	-0.49	11.1	3.5	12	XX
NCC4RP	No Data	91.0	No Data	No Data	91.0	-0.25	6.8	0.0 L	90.6	-0.56	7.6	1.9	3	TB
NNA2KF	93.2	91.8	94.2	93.7	93.2	0.43	10.3	1.0	93.5	0.38	9.8	1.7	12	LZ
NSZ45V	92.0	93.3	92.5	92.8	92.6	0.24	9.3	0.5	92.5	0.06	9.7	2.5	12	AA

Containerboard Interlaboratory Testing Program
Analysis 207

Bursting Strength (Mullen), 36 lb Linerboard - 36U3
TAPPI Official Test Method T807



WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	
P19N8S	90.7	95.2	94.1	94.2	93.6	0.52	9.0	2.0	95.3	0.95	8.4	2.5	12	AX
P2F9E5	94.2	94.3	92.1	90.5	92.7	0.28	9.4	1.8	92.4	0.01	9.7	1.4	12	TB
PEZEA7	86.6	88.9	85.4*	86.1	86.8	-1.49	8.3	1.5	85.9	-2.09*	8.9	2.5	11	LA
PKMNFD	84.7	85.4	92.4	93.0	88.9	-0.87	5.9	4.4	89.8	-0.84	7.2	3.2	11	TC
PMMSGU	96.3	98.3	95.1	98.6	97.1	1.56	10.8	1.7	96.4	1.33	10.6	1.4	12	AA
PZZ4GN	89.6	88.2	92.0	87.3	89.3	-0.75	7.7	2.1	91.6	-0.25	8.6	3.5	12	LA
T5Q7BM	93.9	95.7	95.7	No Data	95.1	0.98	11.5	1.0	92.9	0.19	11.1	2.4	9	LA
TLBAHK	96.0 L	97.5 L	96.5 L	96.4 L	96.6	1.41	3.3	0.6	94.4	0.68	4.5	4.2	12	TX
TMEDNM	92.8	92.1	93.4	89.2	91.9	0.02	9.1	1.9	91.5	-0.26	9.3	2.5	12	AH
U7LVXG	91.5	91.1 L	89.7	92.4	91.2	-0.19	4.8	1.1	90.4	-0.64	4.1	2.1	12	XX
ULYRWE	97.1	90.6	92.1	92.6	93.1	0.38	9.8	2.8	100.0	2.47*	9.1	5.5 H	12	TB
US9GFJ	93.8	83.8	87.6	92.9	89.5	-0.67	10.1	4.7	88.7	-1.18	8.3	3.5	8	AX
UUTENW	94.4	91.0	90.4	92.8	92.2	0.10	9.2	1.8	92.2	-0.04	8.9	1.7	12	AH
UZ64KC	91.3	90.7	90.3	93.9	91.6	-0.07	9.7	1.6	92.8	0.15	8.8	2.5	12	LZ
VKQ1KF	94.5	96.3	92.7	92.7	94.1	0.67	10.7	1.8	92.6	0.08	10.3	4.8	12	AX
VKYAXN	92.9	93.2	89.2 H	92.6	92.0	0.05	12.4	1.9	94.9	0.82	9.7	3.2	12	LA
VLJRQV	84.2	82.5*	81.9 XL	83.2*	83.0	-2.62*	5.7	1.0	87.6	-1.54	7.9	4.0	12	TB
VNXNHS	92.1	No Data	93.6	92.9	92.9	0.32	10.7	0.7	92.6	0.09	10.3	2.1	7	TB
VWL25X	95.5	97.0 H	89.7	97.5	94.9	0.92	12.4	3.6	91.3	-0.32	9.7	3.6	12	LC
W1SXH5	92.1	94.1	90.2	93.9	92.6	0.23	7.8	1.8	91.1	-0.41	7.4	3.0	12	AH
W6F88P	97.8	95.1	89.3 L	84.0	91.6	-0.07	5.8	6.2 H	97.8	1.77	7.5	9.0 H	12	AH
YUFB5D	87.4 L	91.8	98.0	No Data	92.4	0.17	9.8	5.3 H	95.3	0.96	9.7	4.9	7	TB
YWMWV	93.0	90.4	95.5	90.5	92.3	0.16	7.6	2.4	90.8	-0.50	9.0	3.3	12	LA
ZBD1Q9	91.8	92.4	92.8	94.0	92.7	0.27	8.1	0.9	92.7	0.13	8.5	0.9	11	LA

Consensus (All Labs) Results										
Wk Mean	92.00	91.52	92.22	92.27	Month Mean	91.80		Grand Mean	92.33	
Avg SDr	9.42	8.99	8.61	8.91	Avg SDr	8.95		Avg SDr	9.09	
SD btwn Labs	3.98	4.18	3.10	4.17	SD btwn Labs	3.38		SD btwn Labs	3.09	
Labs Inclid	57	56	54	53	SD btwn Wks	2.56		SD btwn Wks	3.28	
Labs Exclid	0	0	3	0	Labs Inclid	58		Labs Inclid	58	
Labs not rcvd	1	2	2	5						

Containerboard Interlaboratory Testing Program
Analysis 207

Bursting Strength (Mullen), 36 lb Linerboard - 36U3
TAPPI Official Test Method T807



Instrument Code List as Reported by the Labs

(AA) - Perkins Model A	(AH) - Perkins Model AH
(AX) - Perkins Mullen Tester (model not specified)	(LA) - L & W Bursting Strength Tester
(LB) - L & W Burst-O-Matic	(LC) - L & W Autoline
(LJ) - L & W Bursting Strength Tester J-Type	(LZ) - L & W (model not specified)
(TB) - TMI Monitor/Burst 1000	(TC) - TMI Monitor/Burst (Model 13-71)
(TX) - TMI Monitor/Burst (model not specified)	(XX) - Instrument make/model not specified by lab



WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	
1HZFMY	95.0	94.1	99.8	95.9	96.2	0.97	4.4	2.5	92.2	0.24	4.3	3.1	16	LC
2V6FM4	88.0	88.9	89.9	88.6	88.8	-0.56	3.7	0.8	89.8	-0.27	3.4	2.2	16	EN
3FHSYX	80.7*	85.2	81.7	80.3*	81.9	-2.00	3.2	2.2	83.2	-1.71	3.6	2.4	16	EN
3RNLKB	95.0	95.9	96.3	97.4	96.2	0.96	5.0	1.0	94.4	0.72	5.1	2.0	16	LD
3YE4LC	87.2	83.4	88.4	85.4	86.1	-1.13	3.1	2.2	84.3	-1.46	3.3	2.9	16	TQ
479NGR	103.1*	101.9*	100.6	101.6	101.8	2.14*	5.2	1.0	99.7	1.88	5.0	3.6	16	LZ
5JGPKA	90.4	92.9	90.1	95.3	92.2	0.14	3.9	2.4	92.9	0.41	4.1	2.3	16	LC
6KKC8T	96.1	94.4	95.0	96.1	95.4	0.81	4.2	0.8	93.8	0.59	3.9	2.0	16	TD
7DXDGQ	93.3	96.8	96.2	95.3	95.4	0.81	4.1	1.5	94.9	0.84	4.0	2.0	16	LD
7G7HA6	97.9	95.4	98.6	101.6	98.4	1.43	4.7	2.6	94.2	0.67	7.1	5.2	12	LZ
7QM6FU	90.2	90.6	92.8	90.7	91.1	-0.09	3.8	1.2	88.4	-0.58	3.7	4.5	16	TD
7SDZJQ	80.2*	78.1*	79.6*	82.3	80.1	-2.39*	4.8	1.7	80.1	-2.38*	4.8	1.7	4	MB
7Z48NF	No Data	No Data	81.1	No Data	81.1	-2.17*	6.9	0.0 L	81.1	-2.16*	6.9	0.0 L	1	MB
93GSKF	89.3	97.8	94.4	89.4	92.7	0.25	4.1	4.1	93.0	0.42	6.0	11.4 H	16	LZ
9CPTBE	92.2	93.6	93.4	89.0	92.1	0.11	4.0	2.1	92.4	0.29	4.0	1.5	15	LC
9L8ET5	90.8	96.6	93.2	93.2	93.5	0.40	4.6	2.4	93.3	0.49	4.1	2.1	16	LC
9MTVMD	98.7	93.3	83.0	94.4	92.4	0.17	4.5	6.7 H	91.9	0.18	5.7	4.5	8	LC
ACSZK8	88.8	84.3	81.3	No Data	84.8	-1.40	3.8	3.7	89.9	-0.25	4.1	16.8 H	11	LC
AGDPHS	91.0	92.1	92.2	91.8	91.8	0.05	3.4	0.5	91.7	0.15	4.1	1.1	12	TD
AU5AQ8	87.0	88.7	90.3	86.8	88.2	-0.69	5.4	1.6	81.8	-2.01*	4.6	4.7	16	EM
AWN7U5	91.2	92.2	83.1 H	84.9 H	87.9	-0.76	6.8	4.5	87.8	-0.70	6.5	3.0	12	EM
BFP3PZ	95.6	92.4 L	95.3	No Data	94.4	0.61	4.1	1.8	91.5	0.10	4.5	3.5	9	LC
BNC3QR	87.6	90.2	89.0 L	89.7	89.1	-0.50	3.1	1.1	89.6	-0.31	3.4	2.2	16	LC
CQPKWA	99.8	101.9*	99.3	105.4*	101.6	2.10*	3.9	2.8	99.3	1.79	4.2	2.9	9	LC
CXHVN7	93.1	88.9	95.2	89.2	91.6	0.01	3.5	3.1	87.3	-0.82	4.1	3.5	16	EM
E4XAA2	82.3	85.9	84.2	82.8	83.8	-1.61	3.4	1.6	84.5	-1.42	3.4	2.8	16	TM
ELPX91	90.6	96.8	97.9	88.7 L	93.5	0.41	3.8	4.5	85.4	-1.21	3.7	13.4 H	16	LC
EZTSQM	98.2	97.9	95.6	91.7	95.9	0.90	3.5	3.0	96.7	1.23	4.1	3.9	16	LC
FGBGKK	96.5	97.4	94.2	93.8	95.5	0.83	4.1	1.8	94.4	0.72	3.9	1.8	16	EM
G6VQYV	88.7	88.8	87.4	90.1	88.8	-0.58	4.6	1.1	91.6	0.11	4.3	3.3	15	LC
GCHYKU	99.0	98.2	92.8	96.6	96.7	1.07	3.9	2.8	94.9	0.84	4.2	2.7	16	XX
GL185A	93.1	92.9	95.9	99.4	95.3	0.79	4.6	3.0	94.6	0.76	4.5	2.9	13	MB
H3H4HN	88.6	86.6	86.0	92.9	88.5	-0.62	4.4	3.1	87.5	-0.77	4.3	2.5	16	LZ
H5PRRM	89.1	90.0	89.9	91.3 L	90.1	-0.30	2.6	0.9	89.6	-0.32	4.0	1.6	16	LD



WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	Inst
HXPT5Y	89.9	88.3	91.3	90.4	90.0	-0.32	3.7	1.3	89.5	-0.34	3.3	1.3	16	LZ
JDVD2T	93.6	93.4	95.2	100.4	95.7	0.86	4.6	3.3	96.1	1.10	4.4	2.6	16	LC
JUJKDT	83.4	82.8	84.5	86.6	84.3	-1.50	3.6	1.7	84.0	-1.54	3.3	2.6	16	LD
K8HX3P	96.6	92.8	96.0	98.5	96.0	0.93	4.5	2.4	94.3	0.71	4.1	2.9	16	LD
M3PTQG	90.6	90.5	90.9	90.4	90.6	-0.19	4.8	0.2 L	93.0	0.42	4.1	1.9	16	LC
M8F18Q	87.3	86.2	84.0	86.1	85.9	-1.17	6.0	1.4	87.1	-0.85	5.1	1.9	16	LD
MKG168	97.7	96.3	94.2	99.6	97.0	1.13	4.2	2.3	96.9	1.26	4.4	1.5	16	LC
NN1S9V	89.4	84.9	No Data	93.6	89.3	-0.46	3.5	4.3	87.9	-0.67	4.0	3.5	14	LC
PTCVXC	89.2 H	85.7 H	81.5 H	86.1 H	85.6	-1.23	15.1	3.2	87.2	-0.83	13.3	11.6 H	16	IM
PXU7V5	95.8 H	97.4	96.6	92.5	95.6	0.84	6.4	2.2	95.0	0.85	5.4	3.1	16	LC
QF36KD	98.0	No Data	No Data	No Data	98.0	1.35	4.4	0.0 L	99.2	1.76	3.9	5.7	10	LC
RX3Y1R	86.1 L	87.4	89.7	89.6	88.2	-0.69	3.3	1.8	88.6	-0.54	2.9	1.9	12	TC
SS99Y2	86.3	89.3	89.2	87.8	88.1	-0.70	3.9	1.4	87.3	-0.81	4.2	1.9	16	EM
SYRXEQ	99.8	98.2	99.9	100.5	99.6	1.68	4.4	1.0	96.7	1.22	3.9	3.1	16	LC
T8WFRY	85.8	93.9	91.8	93.4	91.2	-0.06	5.0	3.7	86.9	-0.90	5.1	5.3	16	LZ
T9JQEZ	90.4	82.8	84.8	83.0	85.2	-1.31	5.7	3.6	85.6	-1.19	5.0	2.3	16	TX
V3WWWD	94.5	92.9	91.4	92.4	92.8	0.26	4.5	1.3	93.5	0.53	4.4	2.6	16	LC
W51KGG	106.0 XL	107.8 XL	107.1 XL	No Data	107.0	3.22 X	1.8	0.9	98.5	1.62	2.3	7.2	15	LC
WHV2Y9	89.1	86.6	89.6	93.8	89.8	-0.36	4.0	3.0	89.8	-0.27	5.2	2.6	16	LC
WQ6N7B	91.7	92.2	93.0	93.4	92.6	0.22	4.1	0.7	91.9	0.18	3.7	1.1	16	LC
WUJGAN	89.0	92.9	88.4	93.4	90.9	-0.12	5.0	2.6	92.0	0.21	4.1	2.4	16	LC
X77LCT	95.8	93.7	93.9	95.1	94.6	0.65	3.4	1.0	94.9	0.84	3.8	1.8	16	LC
XPCUNE	91.6	No Data	No Data	No Data	91.6	0.02	3.5	0.0 L	91.3	0.06	4.0	2.0	5	LD
XT3HRY	93.7	93.8	95.5	97.2	95.1	0.73	4.6	1.7	96.9	1.27	4.2	2.1	16	LC
Z4XHEM	88.2	91.2 L	89.7	90.9 L	90.0	-0.32	2.5	1.4	89.7	-0.30	5.4	0.9	16	LC
ZMGQUA	89.0 H	84.5	91.4	91.3	89.0	-0.52	5.4	3.2	91.4	0.08	4.7	3.2	16	LX
ZNUH4Z	No Data	90.4	92.0	94.0	92.2	0.14	4.2	1.8	91.4	0.07	4.3	4.1	15	MB

Consensus (All Labs) Results

Wk Mean	91.80	91.45	91.20	92.21	Month Mean	91.52	Grand Mean	91.05
Avg SDr	4.50	4.74	4.54	5.18	Avg SDr	4.75	Avg SDr	4.71
SD btwn Labs	5.22	5.07	5.35	5.33	SD btwn Labs	4.80	SD btwn Labs	4.61
Labs Includ	59	57	57	55	SD btwn Wks	2.53	SD btwn Wks	4.56
Labs Exclud	1	1	1	0	Labs Includ	60	Labs Includ	61
Labs not rcvd	2	3	3	6				



Instrument Code List as Reported by the Labs

(EM) - Emerson 1200

(IM) - Instron 4486

(LD) - L&W Crush Tester 248

(LZ) - L & W Crush Tester (model not specified)

(TC) - TMI Monitor/Compression Tester, Model 17-37

(TM) - TMI/Hinde & Dauch

(TX) - TMI Digital Crush Tester (model not specified)

(EN) - Emerson 2200

(LC) - L & W Crush Tester 48

(LX) - L & W 506

(MB) - Messmer Buchel K440

(TD) - TMI Digital Crush Tester, Model 17-09

(TQ) - Thwing-Albert QC-II Series

(XX) - Instrument make/model not specified by lab



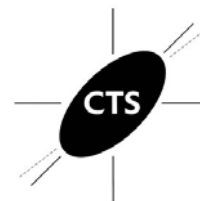
WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	
1PYPQZ	70.8	67.7*	68.2*	67.3 X	68.5	-2.10*	3.9	1.6	68.6	-2.34*	4.2	2.1	12	EN
24QVCZ	84.5	83.4	77.5	78.3	80.9	0.62	4.3	3.5	80.7	0.81	4.2	3.1	11	LC
27QQTA	77.1	76.7	82.5	82.5	79.7	0.35	5.1	3.2	81.9	1.12	4.7	2.8	12	LC
2R722Z	79.7	75.8	76.3	75.9	76.9	-0.26	4.9	1.9	76.7	-0.24	4.6	1.6	8	TD
2V92GP	79.1	73.1	82.9	85.1	80.1	0.43	4.7	5.3	79.5	0.50	5.0	4.0	10	MB
2XA7KH	73.4	78.5	77.9	81.2	77.8	-0.08	3.9	3.2	78.1	0.13	4.0	2.9	12	LC
5ALW34	89.0*L	79.9	76.1	80.0	81.2	0.68	3.6	5.5	79.1	0.39	3.8	3.9	12	LC
6A9AMT	79.1	80.1	78.7	80.2	79.5	0.31	3.7	0.7	79.2	0.42	3.5	0.7 L	12	TD
6RFGTH	76.8	79.5	78.2	74.2	77.2	-0.20	3.9	2.2	77.5	-0.04	4.2	1.5	12	LC
766ZRR	No Data	78.3	78.9	78.5	78.6	0.11	4.3	0.3 L	79.6	0.53	4.6	3.8	11	MB
7AC8J9	84.2	84.1	87.1	87.0*	85.6	1.64	5.2	1.7	82.5	1.28	4.8	3.5	12	LC
7XX5WY	76.1	77.3 L	78.3	78.0	77.4	-0.15	2.6	1.0	77.3	-0.09	3.2	1.8	12	EN
9199MK	73.8	74.8	74.2	77.4	75.0	-0.67	2.9	1.6	74.7	-0.76	3.8	1.5	12	LC
94F7DC	85.1	84.3	82.7	95.5 X	86.9	1.92	4.9	5.8	83.9	1.65	4.6	4.7	10	LC
9BAH59	77.5	75.4	80.0	77.5	77.6	-0.11	4.8	1.9	73.7	-1.00	4.2	3.1	12	EM
9DMUKS	77.1	81.1	78.4	80.7	79.3	0.26	3.3	1.9	78.0	0.09	4.2	2.1	12	TD
BTXV8Z	74.8	72.2	80.1	79.5 L	76.7	-0.32	3.3	3.8	76.4	-0.30	3.7	3.1	12	LD
CKPVY3	79.2	81.1	76.9	79.1	79.1	0.21	5.5	1.7	79.6	0.53	5.6	3.0	12	EM
CWHXZ5	77.1	67.2*	66.4*	No Data	70.2	-1.72	3.6	5.9	69.3	-2.17*	4.2	14.6 H	9	LC
EFJSJ7	75.2	81.7 L	77.9 L	77.8 L	78.2	0.01	2.4	2.7	77.7	0.03	5.1	1.7	12	LC
FJFD8P	78.6	77.5	77.1	76.2	77.4	-0.16	3.7	1.0	77.5	-0.04	4.0	3.0	12	LD
FUM8P1	67.9*	70.8	73.4	67.3 X	69.8	-1.80	3.0	2.8	73.5	-1.07	3.8	3.2	12	TM
GLK5JV	68.4*L	68.0*	67.1*	No Data	67.8	-2.24*	2.0	0.7	67.3	-2.66*	2.7	1.1	11	LC
GLMSAT	79.3	76.4	79.0	77.2	78.0	-0.03	3.9	1.4	78.3	0.19	3.8	1.5	12	LX
GW6PBD	88.8*	91.8 X	88.1*	88.6 X	89.3	2.45*	5.4	1.7	85.6	2.07*	4.9	4.9	12	LZ
HBFSCY	74.9	78.5	75.4	78.0	76.7	-0.31	5.2	1.8	74.3	-0.84	4.5	3.5	12	EM
HGYUUQ	82.2	77.7	78.2	83.5	80.4	0.50	4.3	2.9	78.3	0.18	4.3	3.1	12	LD
J95SS5	78.7	83.3	85.5	81.5	82.3	0.91	4.5	2.9	85.4	2.01*	4.6	3.3	12	LZ
JNFMJV	74.6	85.6	81.1	77.3	79.7	0.34	4.3	4.8	73.3	-1.12	4.1	6.4	12	LC
JUQP9G	80.1	80.7	82.0	82.5	81.3	0.71	4.3	1.1	81.5	1.02	4.4	1.5	12	EM
KDY6YR	76.2	75.8	73.3	73.4	74.7	-0.75	2.9	1.5	77.4	-0.04	3.5	2.6	12	LC
KM72XL	74.9	73.9	71.6	77.3	74.4	-0.80	5.1	2.4	73.6	-1.05	4.5	3.2	12	LZ
KY1LDB	82.3	81.2	82.9	83.7	82.5	0.97	4.3	1.0	81.7	1.06	4.2	1.3	12	LD
L75HEE	78.6 H	85.3 H	79.5 H	78.6 H	80.5	0.52	13.7	3.3	72.6	-1.30	10.7	17.3 H	12	IM

Containerboard Interlaboratory Testing Program
Analysis 217

Ring Crush, 36 lb Linerboard - 36U3
TAPPI Official Test Method T822



WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	Inst
L8CVVV	69.8	72.1	73.6	75.8	72.8	-1.15	5.7	2.5	76.7	-0.23	5.1	4.5	8	LZ
LBMCFR	80.8	78.3	77.5	80.8	79.4	0.27	4.3	1.7	78.3	0.19	4.2	2.2	12	LC
LFY9XM	77.3	77.9	78.1	78.6	78.0	-0.03	3.1	0.5	77.7	0.03	3.8	1.3	11	LC
LTQULQ	73.7	82.2	81.5	No Data	79.1	0.22	4.1	4.7	76.5	-0.28	3.9	4.5	7	LC
LXGP1X	76.2	73.3	No Data	81.9	77.2	-0.21	4.2	4.4	75.9	-0.43	3.9	3.1	11	LC
N4QWGZ	83.3	83.7	96.5 X	77.3	85.2	1.55	4.5	8.1 H	82.6	1.29	4.8	6.1	8	LC
NV9YAK	83.1	83.2	85.3	78.0 H	82.4	0.94	5.2	3.1	82.1	1.17	4.4	2.0	11	LC
PY777M	No Data	75.0	No Data	No Data	75.0	-0.68	3.2	0.0 L	74.7	-0.75	3.8	0.4 L	2	LD
QVDF13	72.6	70.8	72.3	75.2	72.7	-1.17	3.9	1.8	73.0	-1.19	4.1	1.7	12	EM
RU4N5R	76.6	75.3	74.2	75.4	75.4	-0.59	3.4	1.0	74.8	-0.72	3.0	1.2	11	TC
SAB2ZU	No Data	No Data	67.4 *	No Data	67.4	-2.33 *	4.3	0.0 L	77.1	-0.12	4.9	13.7 H	2	MB
SX5E6K	71.8	71.9	61.8 X	No Data	68.5	-2.09 *	3.1	5.8	76.0	-0.41	3.5	6.2	11	LC
SXR3CL	81.6	83.8	80.4 H	83.2	82.3	0.91	5.8	1.5	82.2	1.19	5.5	2.0	8	LZ
T6L5R4	73.0	74.7	72.5	73.7	73.5	-1.01	2.6	1.0	73.2	-1.14	2.4	1.2	8	LD
T73QLK	81.0	78.6	78.2	80.3 L	79.5	0.31	3.9	1.3	79.8	0.57	3.8	1.6	12	LC
TTGD9A	84.9	No Data	No Data	No Data	84.9	1.48	4.6	0.0 L	81.8	1.08	4.4	2.9	9	LC
UIHY4J	85.1	82.4	82.4	80.8	82.7	1.00	4.4	1.8	81.8	1.08	5.1	1.8	12	LD
U89G5L	75.8	74.9	81.8	74.0 L	76.6	-0.32	2.8	3.5	73.0	-1.19	4.7	7.7 H	12	TQ
UKZAC8	78.0	79.1 L	76.8	76.7	77.7	-0.10	3.5	1.1	79.8	0.57	4.0	2.2	12	LC
URBYRB	78.6	72.4	74.6	78.2	75.9	-0.47	4.4	3.0	75.2	-0.62	4.0	3.0	12	LC
VRMD6W	75.3	77.3 H	78.3	78.2	77.3	-0.18	6.4	1.4	74.7	-0.75	4.8	4.7	12	LZ
VUFZEE	85.8	81.9	80.8	83.6	83.0	1.08	4.4	2.2	76.7	-0.23	4.0	6.8	12	XX
W9ELVE	83.2	78.4	77.9	77.5	79.2	0.25	4.2	2.7	80.3	0.70	4.1	2.1	12	LC
WELTZJ	78.3	76.0	80.1	77.9	78.1	-0.01	2.7	1.7	78.4	0.22	2.9	1.1	12	LZ
WT9CXZ	82.5	81.5	81.8	84.7	82.6	0.99	3.8	1.4	81.2	0.93	4.3	1.8	12	LC
XE6PHW	82.7	82.5	80.7	78.7	81.2	0.67	4.4	1.9	81.6	1.04	4.4	1.7	11	LC
XXS441	80.2	79.0	84.2	80.5	81.0	0.63	3.1	2.2	78.5	0.23	4.1	2.7	12	LC
ZZU71T	72.6	74.0	71.4	72.8	72.7	-1.18	4.4	1.1	73.1	-1.18	4.1	1.5	12	TX



Consensus (All Labs) Results

Wk Mean	78.28	77.75	77.98	78.93	Month Mean	78.10	Grand Mean	77.60
Avg SDr	4.76	4.37	4.48	4.52	Avg SDr	4.48	Avg SDr	4.42
SD btwn Labs	4.73	4.55	4.78	3.19	SD btwn Labs	4.58	SD btwn Labs	3.85
Labs Includ	59	59	57	51	SD btwn Wks	2.94	SD btwn Wks	4.61
Labs Exclud	0	1	2	4	Labs Includ	62	Labs Includ	62
Labs not rcvd	3	2	3	7				

Instrument Code List as Reported by the Labs

(EM) - Emerson 1200

(IM) - Instron 4486

(LD) - L&W Crush Tester 248

(LZ) - L & W Crush Tester (model not specified)

(TC) - TMI Monitor/Compression Tester, Model 17-37

(TM) - TMI/Hinde & Dauch

(TX) - TMI Digital Crush Tester (model not specified)

(EN) - Emerson 2200

(LC) - L & W Crush Tester 48

(LX) - L & W 506

(MB) - Messmer Buchel K440

(TD) - TMI Digital Crush Tester, Model 17-09

(TQ) - Thwing-Albert QC-II Series

(XX) - Instrument make/model not specified by lab

Containerboard Interlaboratory Testing Program

Analysis 223

STFI, 42 lb Linerboard - 42X1

TAPPI Provisional Test Method T826



WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	Inst
1QPDSM	25.0	No Data	25.4	26.3	25.6	0.58	2.4	0.7	24.7	-0.23	2.2	1.1	6	LU
4HKHD6	26.6	26.2	24.0	26.5	25.8	0.81	1.9	1.2	25.6	0.73	1.5	0.8	16	XX
4UKLZY	25.0 L	25.1 L	24.2 L	24.2 L	24.6	-0.27	0.4	0.5	24.8	-0.11	0.5	0.8	16	LA
4X82MD	23.5	23.6	24.0	24.8	24.0	-0.84	1.9	0.6	24.3	-0.62	2.1	0.6	15	LW
5K4WH7	25.1	25.1	24.7	24.8 L	24.9	0.00	1.2	0.2	25.7	0.89	1.6	0.9	16	LU
7TAUH1	25.7	26.7 *	25.4	24.5	25.6	0.57	2.5	0.9	25.4	0.55	2.7	1.1	16	LW
A172XX	25.9	26.3	28.2 *	25.6	26.5	1.40	2.6	1.2	26.1	1.33	2.4	0.7	16	XX
AY3WQB	25.3	24.3	25.4	24.8	25.0	0.03	2.2	0.5	24.7	-0.20	2.0	0.9	16	LU
C3ED4X	25.7	25.7 L	25.1	25.9	25.6	0.61	1.0	0.3	26.6	1.82	1.5	1.0	16	LU
C3J76X	27.2 *	25.5	27.6	No Data	26.8	1.67	2.3	1.2	25.6	0.81	3.9	1.8 H	9	LW
C8DD8L	23.7	25.5	25.4	25.0	24.9	-0.02	2.2	0.8	24.8	-0.05	2.1	0.6	16	LW
DELRWH	23.5 L	23.6 L	22.7 L	24.4 L	23.5	-1.26	0.5	0.7	24.0	-0.97	0.4	1.1	16	XX
DL9SD2	24.8	25.2	24.7	No Data	24.9	-0.04	2.2	0.3	24.5	-0.43	2.2	0.9	14	LW
FML2QZ	32.6 X	31.8 X	28.3 *	30.4 X	30.8	5.25 X	2.1	1.9 H	30.7	6.17 X	2.1	1.2	11	LZ
HUQT67	25.2	24.2	23.4	25.3	24.5	-0.35	2.0	0.9	24.5	-0.46	1.9	1.1	16	LU
JBTTQL	22.6	23.2	22.6	21.7 X	22.5	-2.16 *	2.6	0.6	22.8	-2.22 *	2.5	0.7	16	LW
KYYC8S	25.2	24.7	25.1	No Data	25.0	0.06	2.0	0.3	25.2	0.38	2.4	0.5	15	LW
L2G988	25.0	25.2	24.6	25.1	25.0	0.02	1.3	0.3	25.1	0.27	1.8	0.4	16	BK
L33RY2	24.6	25.1	25.6	25.2	25.1	0.17	2.2	0.4	24.8	-0.14	2.2	0.5	16	LU
LCZVPP	No Data	23.8	No Data	No Data	23.8	-1.06	1.3	0.0 L	24.2	-0.72	2.0	0.5	6	LW
LH7CTJ	23.4	23.7	22.9	24.5	23.6	-1.18	2.1	0.7	23.5	-1.46	2.0	0.7	16	LW
LQZB1C	24.4	23.9	24.3	24.8	24.3	-0.53	1.6	0.4	24.9	0.06	1.8	0.5	16	LU
LZ6EMG	25.1	25.0	24.3	25.5	25.0	0.03	2.1	0.5	24.9	-0.03	2.1	0.7	16	LW
NNR9EB	23.9	23.7	No Data	No Data	23.8	-0.99	1.8	0.1 L	24.1	-0.87	2.2	0.6	14	LW
P1CVBQ	25.7	26.6	26.7	26.5	26.4	1.31	2.3	0.5	25.8	0.95	2.3	0.6	16	LW
P3KKWT	24.6	25.4	No Data	25.6	25.2	0.27	1.5	0.5	24.4	-0.54	1.8	1.1	11	BK
P7RDDJ	22.4 L	25.2	25.1	24.5	24.3	-0.57	1.7	1.3	24.3	-0.59	2.0	1.1	16	LW
PBWJR4	25.1	24.0	24.5	24.3	24.5	-0.39	1.2	0.5	24.6	-0.34	1.7	0.6	16	LW
PG43RH	24.4	25.0	26.1	24.8	25.1	0.14	1.9	0.7	24.4	-0.56	2.2	1.3	16	XX
SQJMES	23.0	24.6	27.6 L	No Data	25.1	0.11	1.5	2.3 H	23.9	-1.08	2.2	1.5	15	LW
SQWSLP	20.1 X	18.6 X	19.2 X	18.2 X	19.0	-5.34 X	2.1	0.8	21.2	-3.92 X	2.1	3.5 H	12	XX
SWMJBB	26.9	No Data	No Data	No Data	26.9	1.78	2.8	0.0 L	26.5	1.68	2.1	0.5	10	XX
TY8KSJ	23.8	24.3	24.6	24.6	24.3	-0.55	2.2	0.4	24.4	-0.53	2.1	0.5	16	XX
TZ3BXX	25.5	24.8	24.5	23.9	24.7	-0.24	2.4	0.7	24.6	-0.28	2.3	0.8	16	LZ



WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	
WHEHYQ	No Data	No Data	27.8	No Data	27.8	2.60*	2.6	0.0 L	26.4	1.62	2.4	2.0 H	2	BK
XLE387	22.4	22.3*	24.2	20.4 X	22.4	-2.32*	2.2	1.5	23.3	-1.74	2.1	1.4	16	LA
XYYL3W	25.6	25.0	26.3	25.8	25.7	0.66	2.6	0.5	26.0	1.21	2.6	1.2	14	LW
YLB41Z	No Data	24.4 L	25.5 L	24.5 L	24.8	-0.15	0.1	0.6	27.0	2.27*	0.1	2.6 H	15	TS
YVKQ8S	26.0	25.0	26.3	26.1	25.8	0.80	2.2	0.6	25.2	0.31	2.5	1.3	16	LZ
ZV3CLL	24.1	23.8	24.6 L	24.1 L	24.1	-0.71	0.9	0.3	24.2	-0.72	1.4	0.7	16	LZ

Consensus (All Labs) Results									
Wk Mean	24.74	24.73	25.18	25.07	Month Mean	24.93	Grand Mean	24.88	
Avg SDr	2.03	1.84	2.00	1.90	Avg SDr	1.97	Avg SDr	2.10	
SD btwn Labs	1.21	0.97	1.47	0.74	SD btwn Labs	1.11	SD btwn Labs	0.94	
Labs Includ	35	35	35	28	SD btwn Wks	0.80	SD btwn Wks	1.04	
Labs Exclud	2	2	1	4	Labs Includ	38	Labs Includ	38	
Labs not rcvd	3	3	4	8					

Instrument Code List as Reported by the Labs

(BK) - Buchel Strip Compression Tester BK-155

(LA) - L & W Autoline

(LU) - L & W 52 without moisture correction (was 53)

(LW) - L & W 53 with moisture correction (was 53M)

(LZ) - L & W (model not specified)

(TS) - TMI Monitor/STFI Compression Tester, 17-33

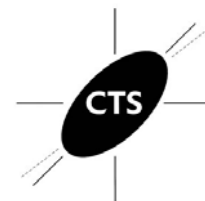
(XX) - Instrument make/model not specified by lab

Containerboard Interlaboratory Testing Program

Analysis 225

STFI, 36 lb Linerboard - 36U3

TAPPI Provisional Test Method T826



WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	Inst
1D9NNQ	20.9	21.1	20.7	20.2	20.7	-0.45	2.3	0.4	20.5	-0.63	1.9	0.8	12	LZ
1PL5U8	No Data	20.4	No Data	No Data	20.4	-0.75	1.5	0.0 L	20.5	-0.67	1.5	0.1 L	3	LW
31CDS2	18.8	19.0*	18.8*	18.6*	18.8	-2.53*	1.9	0.2	19.5	-1.82	1.9	1.0	12	LW
39GKAH	19.7	21.0 L	21.1 L	20.9 L	20.7	-0.48	0.6	0.7	21.0	-0.10	1.0	0.8	12	LZ
44ELV4	21.7	22.5	22.0 L	22.8	22.3	1.25	1.0	0.5	22.7	1.95	1.3	0.8	12	LU
4BY6FA	21.7	22.1	22.6	21.7	22.0	0.98	2.0	0.4	21.6	0.68	1.9	0.5	12	LW
52RR92	22.0	20.9	20.4	21.1	21.1	0.02	1.9	0.7	21.2	0.14	1.9	0.6	12	LW
5HD8YW	21.0	21.1	21.4	22.8	21.6	0.50	1.5	0.8	21.5	0.51	1.8	0.5	10	LW
5THDVK	19.9	20.8	20.5	21.2	20.6	-0.56	1.7	0.6	20.3	-0.85	1.6	0.8	12	LU
5UE8VF	No Data	No Data	23.0	No Data	23.0	2.11*	1.7	0.0 L	23.0	2.30*	1.7	0.0 L	1	BK
6FA581	21.4	21.9	23.2	23.4*	22.5	1.48	1.8	1.0	21.9	1.03	2.0	0.8	11	XX
6JMBZG	20.6	20.8	21.3	20.8	20.9	-0.27	1.7	0.3	20.8	-0.28	1.8	0.5	12	BK
76NL9L	22.5	21.5	22.2	20.9	21.8	0.70	1.8	0.7	22.2	1.27	1.9	0.6	12	LW
7HVWV5	20.8	21.3	21.4	21.4	21.2	0.12	1.8	0.3	21.1	0.02	1.7	0.3	12	XX
8SF4TJ	21.2	22.0	21.0	20.4 L	21.2	0.07	1.2	0.6	20.5	-0.63	1.4	0.6	12	LW
9GBVNZ	21.9	20.6	22.0	No Data	21.5	0.42	1.8	0.8	20.7	-0.40	1.8	0.9	7	LW
9YZ4RQ	19.5	20.4	No Data	No Data	19.9	-1.27	1.6	0.6	20.0	-1.25	1.6	0.7	10	LW
CGSU58	21.0	21.1	20.7	20.8	20.9	-0.24	1.7	0.2	20.7	-0.37	1.6	0.4	12	LU
D9BEYW	20.8	20.4	20.7	20.1	20.5	-0.65	2.0	0.3	20.7	-0.41	1.9	0.4	12	LW
DRQMMR	22.9	19.6	20.4	23.5*	21.6	0.55	2.0	1.9 H	20.2	-0.96	1.7	1.9 H	12	LA
ECYQS1	20.0	20.8	20.6	No Data	20.5	-0.70	1.6	0.4	20.6	-0.49	1.6	0.3	9	LW
EN2EW3	21.3	21.1	21.4	20.8	21.2	0.05	1.6	0.2	20.5	-0.61	1.5	0.8	11	BK
ES88DT	19.0	22.2	20.9	19.5	20.4	-0.76	1.8	1.4	20.8	-0.29	1.8	1.1	12	LW
FEE9ZV	23.4	22.8	23.0	No Data	23.1	2.12*	2.1	0.3	22.7	1.91	2.1	0.6	11	LW
FXAPBF	19.3 L	18.5* L	19.2 L	21.1 L	19.5	-1.72	0.3	1.1	20.3	-0.89	0.3	1.1	12	XX
FYVWMA	20.5	20.3	20.8	21.4	20.8	-0.36	1.7	0.5	21.0	-0.07	1.9	0.9	12	LZ
GFFPHT	18.7	19.1	20.9	No Data	19.5	-1.71	1.7	1.1	20.1	-1.09	1.7	0.8	11	LU
HBSNLK	21.6	No Data	No Data	No Data	21.6	0.54	1.5	0.0 L	22.7	1.96	1.8	0.7	5	XX
KBKPK2	20.9	No Data	20.9	21.5	21.1	-0.01	1.6	0.4	20.5	-0.63	1.5	0.7	7	LU
KR86NC	No Data	20.9 L	21.2 L	21.7 L	21.2	0.15	0.1	0.4	24.4	3.89 X	0.1	5.5 H	11	TS
KT5G2D	21.9	21.2	21.3	21.7	21.5	0.45	1.4	0.3	21.2	0.20	1.5	0.5	12	LU
L3LNCM	23.2	22.0	21.2	21.2	21.9	0.86	1.1	0.9	22.0	1.15	1.3	0.8	12	XX
N1WA8F	19.9	20.0	20.0	21.0	20.2	-0.96	1.6	0.5	20.1	-1.12	1.7	1.2	12	LW
Q9KQ84	21.6	21.9	21.4	21.8	21.7	0.61	1.3	0.2	21.4	0.39	1.4	0.5	12	BK



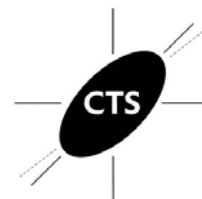
WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	
QMHK1J	22.4	22.2	21.3	21.5	21.8	0.79	1.6	0.5	22.4	1.57	1.5	0.9	12	LU
W2FHQB	16.3 X	17.0 X	16.2 X	15.9 X	16.3	-5.19 X	1.4	0.5	20.7	-0.35	1.8	3.6 H	12	XX
WSABPM	20.5	21.1	23.7 *L	No Data	21.8	0.76	1.4	1.7 H	20.6	-0.55	1.7	1.3	11	LW
XPXYAZ	21.7	22.1	21.3	20.7	21.5	0.39	1.4	0.6	21.1	0.10	1.6	0.4	12	LW
YKUR37	19.2	21.2	22.0	22.0	21.1	-0.02	2.0	1.3	21.2	0.20	1.9	0.8	11	XX
Z8FCHE	31.7 X	30.7 X	30.4 X	30.3 X	30.8	10.54 X	1.9	0.6	30.5	10.91 X	1.8	0.6	7	LZ
ZJZRW3	18.4 L	20.5 L	18.5 *L	21.5 L	19.7	-1.49	0.5	1.6	20.2	-0.92	0.4	1.1	12	LA

Consensus (All Labs) Results									
Wk Mean	20.88	21.01	21.19	21.26	Month Mean	21.11	Grand Mean	21.05	
Avg SDr	1.70	1.52	1.60	1.62	Avg SDr	1.61	Avg SDr	1.66	
SD btwn Labs	1.29	0.99	1.11	1.02	SD btwn Labs	0.92	SD btwn Labs	0.87	
Labs Includ	36	36	36	30	SD btwn Wks	0.81	SD btwn Wks	0.99	
Labs Exclud	2	2	2	2	Labs Includ	39	Labs Includ	39	
Labs not rcvd	3	3	3	9					

Instrument Code List as Reported by the Labs

- (BK) - Buchel Strip Compression Tester BK-155
- (LU) - L & W 52 without moisture correction (was 53)
- (LZ) - L & W (model not specified)
- (XX) - Instrument make/model not specified by lab

- (LA) - L & W Autoline
- (LW) - L & W 53 with moisture correction (was 53M)
- (TS) - TMI Monitor/STFI Compression Tester, 17-33



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
13F3Q7	157.6	0.83	20.3	145.0	0.08	17.8	4	XX
2CMQCJ	139.9	0.22	13.1	106.2	-0.83	6.9	4	EV
68FZEZ	98.0	-1.24	9.1	111.9	-0.69	10.0	3	EV
6BL6VD	171.9	1.32	34.8	110.0	-0.74	19.1	4	EV
6JEX1D	168.8	1.22	12.5	168.8	0.64	12.5	1	EV
79B9EF	128.0	-0.20	5.7	125.4	-0.37	5.6	4	EV
7UKD94	111.8	-0.76	11.0	112.1	-0.69	10.5	4	EV
82EPUZ	171.0	1.30	5.3	165.1	0.56	8.5	4	EV
9HBB23	243.1	3.79 X	12.0	236.1	2.22*	13.8	4	EV
AUD24B	138.1	0.16	8.6	139.1	-0.05	8.2	3	EV
D6RL3G	112.4	-0.74	7.8	112.6	-0.67	6.7	4	EV
E75A6U	110.4	-0.81	13.0	106.2	-0.83	10.8	4	EV
EWEJPM	1,968.4	63.57 X	196.7	781.5	15.02X	114.9	3	EV
FD5MG3	363.6	7.97 X	180.4	191.5	1.18	90.3	4	XX
FML5BN	135.2	0.05	9.1	133.6	-0.18	9.0	3	XX
JHFGLR	140.9	0.25	11.2	144.8	0.08	8.2	3	EV
JZB9TG	133.3	-0.01	12.8	167.4	0.61	20.2	4	XX
L9C7ZH	108.6	-0.87	2.2	223.1	1.92	13.1	4	XX
LVRHJL	103.8	-1.03	11.9	101.4	-0.94	14.5	4	EV
MDRJUJ	111.4	-0.77	20.4	109.0	-0.76	11.6	4	EV
N4C6TE	103.1	-1.06	12.0	112.2	-0.68	14.1	4	EV
PSHRHP	0.3	-4.62 X	0.0	88.3	-1.24	9.5	3	EV
SBZZBL	167.0	1.16	14.3	217.0	1.77	21.4	4	XX
UNDQ8M	146.6	0.45	10.5	141.6	0.01	10.6	4	EV
Y767GX	88.3	-1.57	2.9	83.4	-1.36	3.8	4	EV
YNRKER	194.1	2.10 *	26.4	182.4	0.96	19.8	4	EV

Consensus (All Labs) Results

Month Mean	133.66	Grand Mean	141.37
Avg SDr	14.49	Avg SDr	22.01
SD btwn Labs	28.86	SD btwn Labs	42.62
Labs Incd	22	Labs Incd	25

Instrument Code List as Reported by the Labs

(EV) - Emveco Microgag Model 210-R

(XX) - Instrument make/model not specified by lab



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
15DXK2	91.4	-1.23	8.3	99.0	-0.41	7.6	2	SC
2217GK	103.4	0.29	4.0	101.8	0.00	5.4	2	TM
8H9LF9	99.8	-0.16	7.9	99.8	-0.29	7.9	1	SC
8MMLEM	93.0	-1.03	4.3	99.5	-0.33	3.9	2	SC
9HP9B9	94.2	-0.88	7.3	96.5	-0.77	7.0	2	TM
9PCJPJ	95.7	-0.69	9.2	95.7	-0.89	9.2	1	SC
AR8RWA	112.8	1.49	5.9	111.2	1.36	8.5	2	HZ
E11CCW	114.0	1.64	9.0	115.1	1.93	7.3	2	TM
ESMR17	109.0	1.00	5.8	108.5	0.97	5.1	2	HY
J4CQQR	101.0	-0.01	5.3	98.2	-0.53	4.2	2	SC
L82APL	94.4	-0.85	7.0	93.7	-1.18	5.6	2	SC
NB82TY	109.0	1.01	8.7	111.4	1.39	7.5	2	TM
Q53KBU	135.2	4.33 X	16.8	127.0	3.66X	11.9	2	HY
R22QDC	94.2	-0.88	8.0	94.2	-1.11	8.0	1	TM
RE9LLL	91.0	-1.28	7.8	93.9	-1.15	10.4	2	TM
RQY9VF	112.0	1.39	5.6	106.3	0.65	5.5	2	HY
U719Z7	103.2	0.27	11.1	104.4	0.37	8.0	2	HY
VGGF9F	100.5	-0.08	6.0	206.6	15.22X	23.9	2	SC

Consensus (All Labs) Results			
Month Mean	101.09	Grand Mean	101.82
Avg SDr	7.36	Avg SDr	7.16
SD btwn Labs	7.86	SD btwn Labs	6.89
Labs Incd	17	Labs Incd	16

Instrument Code List as Reported by the Labs

(HY) - Huygen Digitized Scott Internal Bond Tester

(HZ) - Huygen Internal Bond Tester with AccuPress

(SC) - Scott Internal Bond Tester (Manual)

(TM) - TMI Monitor/Internal Bond Tester

Containerboard Interlaboratory Testing Program
 Analysis 234
COF Inclined Plane (Slide Angle), 42 lb Linerboard - 42X1
 TAPPI Official Test Method T815



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
1HRTKZ	29.0	0.21	3.7	29.4	0.41	3.0	2	ZZ
2LBXUH	26.6	-0.52	2.7	25.7	-0.87	2.4	2	ZZ
4AJJP3	34.8	1.96	2.7	32.7	1.58	2.8	2	ZZ
5C71F2	27.3	-0.30	1.2	27.1	-0.38	0.9	2	ZZ
7PTAZC	26.6	-0.52	2.6	26.6	-0.55	2.0	2	ZZ
7PZC6W	23.4	-1.48	3.5	27.2	-0.34	3.2	2	ZZ
AMWATH	21.6	-2.03 *	3.4	21.6	-2.30 *	3.4	1	ZZ
DF4WU2	28.5	0.06	0.7	28.0	-0.06	0.7	2	ZZ
DJM8C4	27.4	-0.27	2.6	25.6	-0.90	5.3	2	ZZ
ET24UA	30.0	0.51	2.0	30.2	0.71	2.2	2	ZZ
FXFELQ	33.0	1.42	1.5	31.8	1.25	2.6	2	ZZ
HG1AF4	31.7	1.03	1.2	30.5	0.81	2.6	2	ZZ
LB84RH	23.6	-1.42	5.0	24.7	-1.22	4.3	2	ZZ
LP6ZJX	28.4	0.04	1.0	27.4	-0.27	1.5	2	ZZ
M69WGM	26.2	-0.64	3.6	24.6	-1.25	2.7	2	ZZ
MHCUZM	27.7	-0.19	4.7	28.6	0.14	4.4	2	ZZ
QD81XN	30.0	0.51	0.7	30.0	0.64	0.7	1	ZZ
S5WX7L	28.4	0.03	6.2	28.4	0.08	6.2	1	ZZ
TT3P8J	27.0	-0.39	5.0	29.0	0.29	4.1	2	ZZ
VV3PD8	28.4	0.03	1.5	29.0	0.29	1.4	2	ZZ
WQQ7E4	35.4	2.14 *	7.1	34.7	2.28 *	5.1	2	ZZ
WSMIQP	26.8	-0.45	0.3	26.7	-0.52	0.4	2	ZZ
YBTK2M	29.2	0.27	2.5	28.8	0.22	3.2	2	ZZ

Consensus (All Labs) Results			
Month Mean	28.30	Grand Mean	28.18
Avg SDr	3.36	Avg SDr	3.21
SD btwn Labs	3.31	SD btwn Labs	2.86
Labs Incd	23	Labs Incd	23

Instrument Code List as Reported by the Labs

(ZZ) - Instruments No Longer Tracked

Containerboard Interlaboratory Testing Program
Analysis 237

Air Resistance, 42 lb linerboard - 42X1
TAPPI Official Test Method T460



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
18D2E9	17.5	0.21	3.6	16.3	-0.13	3.5	2	HG
4V9Z4A	16.1	-0.23	2.3	14.5	-0.91	1.8	2	TL
7MTFJ2	16.4	-0.13	1.9	16.3	-0.10	4.2	2	LW
8WRZFG	24.2	2.30 *	1.1	19.8	1.47	1.4	2	XX
A69QCY	16.3	-0.17	1.4	19.1	1.18	1.5	2	LP
BP1L57	14.1	-0.87	2.0	13.5	-1.37	2.1	2	XX
DXHY8V	16.8	-0.02	3.2	17.0	0.21	4.0	2	HG
EFAA6V	18.5	0.50	2.8	19.2	1.22	4.2	2	GG
JDYASX	12.6	-1.33	2.6	14.4	-0.98	2.8	2	XX
LYADLD	15.9	-0.31	2.4	19.8	1.47	4.6	2	GA
RRXPTS	24.9	2.52 *	0.4	24.4	3.56 X	1.5	2	LW
TY6466	19.0	0.67	4.9	17.7	0.53	4.2	2	XX
UPXSSN	19.5	0.83	3.2	18.0	0.67	3.7	2	GA
W4K67M	14.0	-0.90	0.8	13.5	-1.38	1.7	2	XX
WCEB1N	16.8	-0.03	2.7	15.5	-0.47	2.3	2	LA
XCXYDG	15.9	-0.30	4.0	19.5	1.33	3.0	2	XX
XNBUVM	15.8	-0.33	2.6	15.2	-0.62	2.3	2	GS
YLKG5U	14.3	-0.79	3.8	14.9	-0.77	3.6	2	HG
Z2XGY5	13.2	-1.14	3.3	13.9	-1.20	3.7	2	LA
ZPHVUR	15.4	-0.47	3.7	16.2	-0.16	4.8	2	XX

Consensus (All Labs) Results

Month Mean	16.86	Grand Mean	16.54
Avg SDr	2.85	Avg SDr	3.32
SD btwn Labs	3.20	SD btwn Labs	2.20
Labs Incd	20	Labs Incd	19

Instrument Code List as Reported by the Labs

(GA) - Gurley Precision #4340 Automatic Densometer
 (GS) - Gurley Hill S-P-S Tester #4190
 (LA) - L & W Autoline
 (LW) - L & W Gurley Densometer, Oil Flotation
 (XX) - Instrument make/model not specified by lab

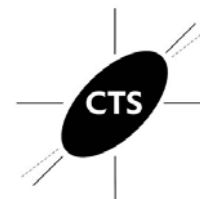
(GG) - Gurley Precision #4320 Densometer
 (HG) - Technidyne - Hagerty Model #1
 (LP) - L & W Air Permeance Tester SE 166
 (TL) - Teledyne Gurley Densometer #4110, Oil Flotation

Containerboard Interlaboratory Testing Program
Analysis 240

Flat Crush Strength (CMT), 26 lb Corrugating Medium - CM71
TAPPI Official Test Method T809



WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	Inst
1AHB7J	No Data	No Data	61.2	No Data	61.2	-0.90	2.6	0.0 L	61.2	-0.90	2.8	0.0 L	2	MB
1FW8D2	60.4	62.2	61.1	62.2	61.5	-0.79	3.3	0.9	60.4	-1.23	3.2	2.2	15	LC
293RYN	70.8	65.2	60.7	65.4	65.5	0.60	2.6	4.1 H	67.1	1.54	2.8	3.1	16	LZ
2X3R25	56.8	56.3*	56.8*	58.1	57.0	-2.33*	2.5	0.8	60.5	-1.19	2.6	3.0	16	LC
39AXBA	65.3	63.1	61.1	61.1	62.7	-0.39	3.4	2.0	61.0	-0.99	3.2	1.9	16	LC
5FGHD5	67.9	63.8	64.1	63.4 H	64.8	0.35	4.1	2.1	64.5	0.48	3.8	1.6	16	LC
6FBFT5	62.6	64.4	64.1	63.5	63.7	-0.05	2.8	0.8	65.5	0.89	3.0	3.0	16	LC
6S2CU3	64.2	61.7	62.1	65.9	63.5	-0.10	3.2	1.9	61.7	-0.68	2.7	1.7	16	LC
7S6YDQ	No Data	62.1	60.5	60.4 L	61.0	-0.96	2.3	0.9	62.3	-0.42	2.9	1.8	15	MB
8B2QA9	59.1	64.9	65.5	66.2	63.9	0.05	3.0	3.3	60.5	-1.17	4.2	3.3	16	TD
91Q6TX	71.0	65.8	64.2	64.6	66.4	0.89	2.6	3.1	66.0	1.12	2.4	2.3	16	LC
9ZFFJ5	64.0	64.8	64.9	65.1	64.7	0.32	3.4	0.5	66.8	1.45	3.7	2.4	16	LZ
ALLCF1	63.4	66.1	65.0 H	64.6	64.8	0.34	5.0	1.1	61.7	-0.70	3.8	2.8	16	LC
AZ6N8Y	69.1	69.2	67.6	No Data	68.6	1.66	3.0	0.9	65.7	0.98	3.0	2.9	8	LC
B5UBHE	63.6	63.0 L	64.9	62.5	63.5	-0.11	1.8	1.0	62.6	-0.31	3.3	0.9	16	LC
BG9JKU	64.9	No Data	65.8	70.0* L	66.9	1.06	3.5	2.7	66.0	1.10	3.5	2.1	14	LZ
BHYK17	58.5	62.1	No Data	57.0*	59.2	-1.58	3.6	2.6	62.4	-0.40	4.7	3.4	14	LC
CPXZ5Q	62.4	60.5	64.3	61.1	62.1	-0.59	2.6	1.7	62.0	-0.54	2.7	1.4	16	TM
CZJ3QW	70.0	68.6	74.9 X	No Data	71.2	2.54*	3.1	3.3	68.1	1.95	2.8	3.0	11	LC
DGLZNL	65.0	64.6	61.6	63.5	63.7	-0.04	2.5	1.5	63.6	0.12	3.0	2.0	16	XX
DNJ9LT	61.4	60.9	61.9	63.6	62.0	-0.63	3.1	1.2	63.5	0.06	3.0	2.9	16	LC
FHHU2A	65.2	73.4 X	62.7	64.4	66.4	0.91	2.7	4.8 H	61.7	-0.66	4.2	5.9 H	13	MB
GDTMHS	60.1	61.5	58.3	56.6*	59.1	-1.60	2.7	2.1	59.8	-1.45	2.6	1.4	16	LX
GE4G4K	66.1	66.8	66.7 L	67.6	66.8	1.04	2.5	0.6	66.5	1.29	2.1	0.5	16	TM
GNR26R	62.9	62.7	63.9	63.4	63.2	-0.19	2.1	0.5	62.7	-0.27	2.3	0.6	16	LD
HXZSM1	62.6	64.0	66.0	66.3	64.7	0.32	2.4	1.7	64.9	0.65	2.1	1.5	6	TU
J3S11S	58.6	58.6	58.9	60.0	59.0	-1.64	3.7	0.7	60.6	-1.15	3.4	1.9	16	TB
JCEZSX	62.0	65.1	65.1	66.6	64.7	0.30	4.3	1.9	61.1	-0.93	3.5	2.6	16	LC
JJNZ6E	59.9	62.7	62.2	62.2	61.8	-0.69	2.9	1.3	61.2	-0.89	2.7	1.1	16	LC
JXKN71	58.3 H	No Data	61.3	63.0	60.9	-1.00	4.9	2.4	60.7	-1.09	5.3	4.1 H	6	LC
LSUQ62	63.2	61.9	63.9	62.7	62.9	-0.29	3.7	0.8	62.8	-0.24	3.2	1.5	16	LD
MVUNAM	No Data	66.1	No Data	No Data	66.1	0.80	2.7	0.0 L	65.9	1.05	2.9	1.1	6	LD
NL2RSS	59.1	48.5 X	50.0 XH	No Data	52.5	-3.87 X	4.9	5.7 H	58.8	-1.90	4.2	5.5 H	12	LC
PEAGJ1	63.4	61.1	63.0	62.7	62.6	-0.42	2.2	1.0	63.2	-0.07	2.7	1.2	16	LC



WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	
QQCWLA	65.3	67.7	67.5	64.5	66.3	0.85	3.3	1.6	65.9	1.05	2.9	1.3	16	EM
R3R87X	63.6	60.8	61.6	61.3 H	61.8	-0.67	3.9	1.2	64.2	0.37	3.6	2.7	14	LC
TTCLRN	69.2	69.9*	69.3*H	69.5*	69.4	1.95	4.2	0.3 L	69.4	2.53*	4.2	0.3 L	4	LZ
URYXVG	63.8	63.7	62.0	60.7	62.6	-0.42	2.2	1.5	62.7	-0.26	2.7	2.0	15	TM
UUM94D	64.4	63.0	61.5	62.0	62.7	-0.37	2.4	1.3	63.2	-0.06	2.6	1.0	16	LC
UUMTW2	65.8	63.5	66.2	68.2	65.9	0.73	3.0	1.9	65.0	0.69	3.0	1.8	16	LD
UYBBVL	73.5*	69.1	67.6 H	66.8	69.3	1.88	4.2	3.0	64.0	0.27	5.2	6.0 H	16	LX
VAZTQB	64.2	63.3	62.9	63.8 L	63.6	-0.08	1.9	0.6	63.7	0.16	2.3	0.5	16	LC
Y5ZQJ2	64.3	60.5	64.5	60.9	62.5	-0.43	2.9	2.1	62.1	-0.50	3.1	1.6	12	TD
YHYDWH	64.3	64.7	63.7	60.8	63.4	-0.14	2.8	1.8	63.1	-0.12	2.8	1.9	16	LC
YP1BLM	63.2	63.5 H	64.2	63.1	63.5	-0.10	3.6	0.5	63.2	-0.05	3.5	1.1	16	LC
YPJW9B	69.3	71.8*	67.5	67.8	69.1	1.83	3.6	2.0	68.3	2.05*	4.1	2.1	15	LD
Z2B5ZW	60.8	61.4	63.0	62.8	62.0	-0.61	2.5	1.1	61.2	-0.89	2.4	1.2	16	LC
ZECEBD	61.5	62.3 L	61.1	No Data	61.6	-0.74	1.6	0.6	62.4	-0.40	1.9	1.4	14	LC
ZN7EUC	60.7	62.9 L	61.7	63.0	62.1	-0.59	2.4	1.1	62.6	-0.32	2.6	1.2	16	TA

Consensus (All Labs) Results

Wk Mean	63.82	63.81	63.42	63.46	Month Mean	63.78	Grand Mean	63.35
Avg SDr	3.08	3.10	3.33	3.02	Avg SDr	3.12	Avg SDr	3.26
SD btwn Labs	3.70	3.02	2.63	2.98	SD btwn Labs	2.91	SD btwn Labs	2.41
Labs Includ	46	44	45	43	SD btwn Wks	1.91	SD btwn Wks	2.46
Labs Exclud	0	2	2	0	Labs Includ	48	Labs Includ	49
Labs not rcvd	3	3	2	6				

Instrument Code List as Reported by the Labs

(EM) - Emerson 1200 Series

(LD) - L&W Crush Tester 248

(LZ) - L & W Crush Tester (model not specified)

(TA) - Thwing-Albert Model QC II-XDS

(TD) - TMI Digital Crush Tester, Model 17-09

(TU) - TMI Universal Crush Tester (TMI K440)

(LC) - L & W Crush Tester 48

(LX) - L & W 506

(MB) - Messmer Buchel K440

(TB) - TMI Monitor/Compression Tester, 17-70

(TM) - TMI/Hinde & Dauch

(XX) - Instrument make/model not specified by lab

Containerboard Interlaboratory Testing Program
Analysis 250

Fluted Edge Crush Strength (CFC), 26 lb Corrugating Medium - CM71
TAPPI Official Method T824



WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	
6G67YJ	79.8	73.5	73.2	73.7	75.1	0.36	2.3	3.2	74.3	0.16	2.8	3.2	16	LZ
6LAT68	66.7	67.0	65.5	67.5	66.7	-1.11	2.2	0.8	67.4	-1.34	1.9	1.1	16	XX
6SEH2U	73.9	71.8	73.5	73.9	73.3	0.05	2.6	1.0	73.9	0.08	2.5	1.0	16	TD
9HX5A1	66.4 ^H	65.5 ^H	64.9 ^H	65.1 ^H	65.5	-1.32	6.0	0.6	65.0	-1.85	6.1	1.6	16	TB
CD4DHT	77.6	77.4 ^H	77.5	77.7	77.6	0.80	3.5	0.1 ^L	78.9	1.15	3.6	2.0	16	LC
HGH5VP	71.5	70.3	73.7	No Data	71.8	-0.21	2.8	1.7	71.7	-0.40	2.7	1.3	8	XX
KN5T56	72.7	70.7 ^L	72.7	70.6	71.7	-0.23	1.6	1.2	71.6	-0.43	2.0	0.7	16	LC
P3JDAL	74.9	79.8	74.8	73.3	75.7	0.48	2.5	2.8	76.3	0.58	2.6	2.1	16	LD
PA3TKQ	76.9	75.1	76.6	77.5	76.5	0.62	2.2	1.0	76.1	0.54	3.2	1.5	16	LZ
PUHKY1	83.5	82.9	81.4	84.8	83.2	1.79	2.7	1.4	80.8	1.57	3.1	2.2	13	MB
R8DGD4	68.1	69.6	68.7 ^L	66.0	68.1	-0.86	2.5	1.5	68.7	-1.05	2.0	1.0	16	LD
UD65WD	71.7	No Data	No Data	No Data	71.7	-0.23	2.6	0.0 ^L	72.6	-0.22	2.5	1.8	6	LD
VBTP6T	58.8 [*]	59.2 [*]	61.6 [*]	60.2	60.0	-2.30 [*]	3.0	1.2	66.8	-1.45	2.9	5.0 ^H	14	LC
WCJ8TC	81.8	77.9	75.7	75.0	77.6	0.81	2.4	3.1	77.5	0.84	2.7	1.8	16	LZ
WJS2RZ	75.0	76.8	78.5 ^L	75.8	76.5	0.62	2.1	1.5	77.4	0.82	2.8	1.2	16	LC
XW7Z48	71.1	71.8	70.6	No Data	71.2	-0.32	2.3	0.6	72.9	-0.14	2.5	1.9	12	LC
YX5KQ1	79.2	78.6	78.7	79.1	78.9	1.04	2.4	0.3 ^L	78.9	1.15	2.6	2.0	16	XX

Consensus (All Labs) Results

Wk Mean	73.50	72.98	72.98	72.86	Month Mean	72.99	Grand Mean	73.58
Avg SDr	2.63	2.80	3.00	2.99	Avg SDr	2.83	Avg SDr	3.00
SD btwn Labs	6.27	6.04	5.50	6.46	SD btwn Labs	5.67	SD btwn Labs	4.64
Labs Includ	17	16	16	14	SD btwn Wks	1.65	SD btwn Wks	2.08
Labs Exclud	0	0	0	0	Labs Includ	17	Labs Includ	17
Labs not rcvd	0	1	1	3				

Instrument Code List as Reported by the Labs

(LC) - L & W Crush Tester 48

(LZ) - L & W Crush Tester (model not specified)

(TB) - TMI Monitor/Compression Tester, 17-70

(XX) - Instrument make/model not specified by lab

(LD) - L&W Crush Tester 248

(MB) - Messmer Buchel K440

(TD) - TMI Digital Crush Tester, Model 17-09

Containerboard Interlaboratory Testing Program
Analysis 255

Ring Crush (RCT), 26 lb Corrugating Medium - CM71
TAPPI Official Test Method T822



WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	
36SYZ1	40.2 ^H	39.3	41.2	39.7	40.1	-0.03	3.9	0.8	40.9	0.09	3.3	1.3	16	LD
4MZKM3	40.2	41.3	40.8	41.6	41.0	0.18	2.9	0.6	41.3	0.27	2.5	0.8	16	LD
5DEGPT	42.9	43.4	43.0	42.7	43.0	0.70	1.8	0.3	42.9	0.88	1.8	0.9	16	TD
5UVTHT	40.7	40.8	38.9	39.9	40.1	-0.04	1.9	0.9	40.9	0.08	2.1	1.1	16	LC
64X5B7	42.6	42.9	43.0	43.2	42.9	0.68	2.0	0.3	43.2	0.98	2.4	1.8	16	XX
67K226	43.1	43.3	44.4 ^L	43.5 ^L	43.6	0.84	1.2	0.6	42.1	0.57	1.4	1.1	16	LC
C1W5KP	30.5 [*]	30.7 [*]	29.9 ^{*L}	29.1 [*]	30.1	-2.57 [*]	1.5	0.7	27.2	-5.28 ^X	1.2	1.9	16	TM
DTG8AV	42.9	44.4	43.1	40.5	42.7	0.62	3.0	1.6	43.6	1.17	2.8	1.7	16	LC
EBSF43	32.9	35.0	33.2 ^L	33.2 ^L	33.6	-1.68	1.1	1.0	39.2	-0.57	1.4	9.4 ^H	10	TU
F4CXH8	43.6	44.5	47.6	46.7	45.6	1.35	2.3	1.9	43.7	1.21	2.4	2.1	13	MB
G9Z4G2	39.3	39.2	No Data	No Data	39.2	-0.26	1.7	0.1 ^L	40.2	-0.16	1.5	0.7	14	WK
J1BMY4	45.1	45.2	45.0	45.2	45.1	1.23	2.4	0.1 ^L	41.6	0.36	3.0	3.5	16	LZ
LRT6GU	42.1	42.1	41.6	43.4	42.3	0.51	1.9	0.8	42.1	0.57	1.9	1.2	16	LC
M3VYPS	36.4	35.7	37.0	37.6	36.7	-0.90	3.4	0.8	37.7	-1.16	3.4	2.8	16	LX
P62DNG	41.4	38.4	36.3	No Data	38.7	-0.39	1.9	2.5 ^H	38.4	-0.87	2.2	1.8	12	LC
PW47DG	39.7	39.7 ^L	40.2	39.5	39.8	-0.13	1.7	0.3	40.4	-0.11	1.9	0.9	16	EN
TJM4Z8	35.1	35.8	35.5	40.2 ^H	36.7	-0.91	3.8	2.4 ^H	35.1	-2.17 [*]	3.3	2.8	15	LC
VB3J6L	37.0	39.6	39.8	37.4	38.5	-0.45	2.9	1.5	38.5	-0.86	2.9	1.5	4	MB
VDSQPW	44.6	44.8	46.3	47.4	45.8	1.40	2.9	1.3	42.2	0.62	2.9	3.4	16	LC
VWUX7A	40.8	40.9	39.8	40.0	40.4	0.03	2.3	0.6	40.7	0.01	2.1	0.6	16	LC
WNV7XD	34.4 ^H	34.7	32.2 ^H	33.1	33.6	-1.68	4.8	1.2	34.2	-2.54 [*]	4.0	1.5	16	TB
X81GT9	43.6	42.3	42.9	41.4	42.5	0.58	2.3	0.9	42.5	0.73	2.0	0.9	16	LC
ZFNR1Q	39.2	40.3	41.4	41.7	40.6	0.10	3.4	1.1	40.1	-0.20	3.3	1.1	16	LC
ZHGK7	42.0	43.6	45.0	No Data	43.5	0.83	2.9	1.5	43.5	1.11	2.7	2.7	9	LC

Consensus (All Labs) Results									
Wk Mean	40.00	40.32	40.36	40.34	Month Mean	40.25	Grand Mean	40.65	
Avg SDr	2.61	2.71	2.95	2.42	Avg SDr	2.66	Avg SDr	2.58	
SD btwn Labs	3.83	3.75	4.58	4.47	SD btwn Labs	3.96	SD btwn Labs	2.55	
Labs Includ	24	24	23	21	SD btwn Wks	1.18	SD btwn Wks	2.67	
Labs Exclud	0	0	0	0	Labs Includ	24	Labs Includ	23	
Labs not rcvd	0	0	1	3					

Containerboard Interlaboratory Testing Program
Analysis 255

Ring Crush (RCT), 26 lb Corrugating Medium - CM71
TAPPI Official Test Method T822



Instrument Code List as Reported by the Labs

(EN) - Emerson 2200 Series	(LC) - L & W Crush Tester 48
(LD) - L&W Crush Tester 248	(LX) - L & W 506
(LZ) - L & W Crush Tester (model not specified)	(MB) - Messmer Buchel K440
(TB) - TMI Monitor/Compression Tester, 17-70	(TD) - TMI Digital Crush Tester, Model 17-09
(TM) - TMI/Hinde & Dauch	(TU) - TMI Universal Crush Tester (TMI K440)
(WK) - Zwick Z005 Crush Tester	(XX) - Instrument make/model not specified by lab

Containerboard Interlaboratory Testing Program
 Analysis 261
 STFI, 26 lb Corrugating Medium - CM71
 TAPPI Provisional Test Method T826



WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	Inst
2WENU3	No Data	14.2	14.4	14.8	14.5	-0.49	1.0	0.3	15.9	1.55	1.2	1.3 H	13	LW
32SN41	13.6	14.0	13.8	13.9	13.8	-1.98	0.9	0.2	14.3	-1.06	1.1	0.4	16	LU
3APDV3	14.4	16.0	14.5	13.9	14.7	0.05	1.0	0.9 H	14.4	-0.80	1.1	0.6	16	LW
6RWWQ6	14.9	15.0	15.0	14.4	14.8	0.37	1.0	0.3	14.6	-0.47	0.8	0.6	12	LZ
B9L6V2	14.6	15.2	14.8	No Data	14.9	0.61	1.1	0.3	14.8	-0.25	1.1	0.4	14	LW
EGGXFT	14.4	14.4	14.6	15.1	14.6	-0.05	1.2	0.3	14.6	-0.48	1.1	0.3	16	LU
FM4LB3	No Data	No Data	16.4 X	No Data	16.4	4.17 X	1.0	0.0 L	16.0	1.83	1.1	0.5	2	BK
PPF9TN	15.3	15.4	15.3	15.6	15.4	1.79	1.2	0.1	15.3	0.68	1.3	0.2	16	LW
WPCTRV	14.3	14.6	14.7	14.5 L	14.5	-0.34	0.9	0.2	14.7	-0.37	0.9	0.3	16	BK
XKTERM	14.7	No Data	14.4	14.9	14.7	0.04	1.0	0.2	14.5	-0.63	1.0	0.5	6	LU

Consensus (All Labs) Results									
Wk Mean	14.53	14.86	14.60	14.63	Month Mean	14.66	Grand Mean	14.91	
Avg SDr	1.01	1.06	1.01	1.12	Avg SDr	1.05	Avg SDr	1.08	
SD btwn Labs	0.49	0.65	0.41	0.59	SD btwn Labs	0.41	SD btwn Labs	0.62	
Labs Includ	8	8	9	8	SD btwn Wks	0.38	SD btwn Wks	0.59	
Labs Exclud	0	0	1	0	Labs Includ	9	Labs Includ	10	
Labs not rcvd	2	2	0	2					

Instrument Code List as Reported by the Labs

(BK) - Buchel Strip Compression Tester BK-155

(LU) - L & W 52 without moisture correction (was 53)

(LW) - L & W 53 with moisture correction (was 53M)

(LZ) - L & W (model not specified)