

Collaborative Testing Services, Inc. Containerboard Interlaboratory Testing Program

Participant Summary Report #480 (K)- September 2009

[Introduction to the Containerboard Program](#)

[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>ECT3</u>	<u>Edgewise Compressive Strength, Wax (T811), Corrugated board</u>
<u>203</u>	<u>ECT3</u>	<u>Edgewise Compressive Strength by Clamp (T839), Corrugated board</u>
<u>205</u>	<u>42X2</u>	<u>Mullen Burst of Linerboard, 42 lb Linerboard</u>
<u>206</u>	<u>69Y2</u>	<u>Mullen Burst of Linerboard, 69 lb Linerboard</u>
<u>215</u>	<u>42X2</u>	<u>Ring Crush of Linerboard, Rigid Platen Type, 42 lb Linerboard</u>
<u>216</u>	<u>69Y2</u>	<u>Ring Crush of Linerboard, Rigid Platen Type, 69 lb Linerboard</u>
<u>223</u>	<u>42X2</u>	<u>STFI of Linerboard, 42 lb Linerboard</u>
<u>224</u>	<u>69Y2</u>	<u>STFI of Linerboard, 69 lb Linerboard</u>
<u>228</u>	<u>42X2</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	36U3	May 2008 -
42# Linerboard	42X1 42X2	March 2008 - May 2009 June 2009 -
69# Linerboard 69# Linerboard	69Y1 69Y2	July 2008 - March 2009 May 2009 -
Corrugating Medium	CM71 CM72	July 2008 - October 2009 November 2009 -

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

- 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

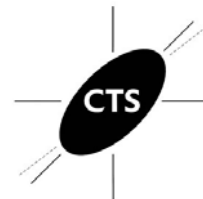


WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
1643XN	910.7	-0.49	66.2	922.5	-0.15	64.1	4	LN
1EXANT	981.8	0.98	55.6	949.8	0.47	59.0	4	LG
1UTF35	898.1	-0.75	77.7	877.0	-1.19	67.4	4	LO
34KZ3U	940.2	0.12	65.8	993.2	1.46	84.1	4	XX
4TCU4K	852.4	-1.69	62.9	877.5	-1.18	64.5	4	LG
74TDUC	779.0	-3.20 X	45.1	869.5	-1.36	113.8	4	LH
9WNC DG	941.7	0.15	54.8	910.3	-0.43	75.1	4	LO
A2FQDX	975.4	0.84	106.1	948.9	0.45	77.3	4	TP
A7MEKJ	854.0	-1.66	44.8	886.4	-0.98	46.3	4	XX
CEVHMN	986.3	1.07	39.1	989.4	1.37	54.7	4	LM
DZGE6Z	939.3	0.10	18.1	1,021.5	2.10*	57.7	4	TR
G6BJPT	837.6	-2.00	48.6	872.1	-1.30	115.1	4	TS
MJFRWK	1,000.4	1.36	31.8	966.9	0.85	38.3	4	ER
MVNPM6	869.5	-1.34	40.7	919.9	-0.21	63.4	4	LH
N9H1EB	949.4	0.31	16.8	905.5	-0.54	44.0	4	TB
NEFZ3D	969.8	0.73	72.2	980.6	1.17	55.3	4	XX
PWYA9C	909.2	-0.52	40.5	909.8	-0.45	29.3	4	XX
RT16EX	990.8	1.16	87.3	955.3	0.59	75.6	4	ER
ST721N	892.6	-0.86	31.7	897.9	-0.72	36.4	4	TC
TFSF6T	977.9	0.90	50.8	918.6	-0.25	57.6	4	LG
TJXWNX	907.4	-0.56	75.6	1,013.2	1.91	63.0	4	MC
ULQEVV	953.6	0.40	99.9	906.7	-0.51	78.3	4	EX
VU85D7	921.2	-0.27	35.6	936.8	0.17	60.3	4	LL
XUSYKV	943.7	0.19	32.4	907.7	-0.49	67.3	4	LL
Y2YR45	943.6	0.19	30.1	937.2	0.18	50.8	4	RP
YCT1D7	1,014.0	1.64	25.1	888.6	-0.93	44.1	4	ES

Consensus (All Labs) Results

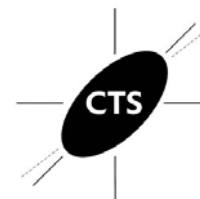
Month Mean	934.42	Grand Mean	929.33
Avg SDr	57.56	Avg SDr	66.25
SD btwn Labs	48.50	SD btwn Labs	43.89
Labs Incd	25	Labs Incd	26

Containerboard Interlaboratory Testing Program
Analysis 201
Top to Bottom Box Compression Strength, Corrugated Boxes - BOX3
TAPPI Official Test Method T804



Instrument Code List as Reported by the Labs

- | | |
|--|--|
| (ER) - Emerson 6200 Series | (ES) - Emerson 8510 |
| (EX) - Emerson Apparatus (Model not specified) | (LG) - TLS / L.A.B. Validator Series |
| (LH) - L.A.B. Compression Tester Model #10610 | (LL) - Lansmont 76-5K |
| (LM) - Lansmont 122-15k | (LN) - Lansmont 152-50k |
| (LO) - Lansmont 152-30k | (MC) - MTI Lab Model 10240 |
| (RP) - Regmed P4000M | (TB) - TMI Monitor/Compression Tester, Model 17-70 |
| (TC) - TMI Monitor/Compression Tester, Model 17-37 | (TP) - Tinius Olsen Model 398 |
| (TR) - Toyo Seiki Model RCT-5TU | (TS) - Tinius Olsen Model CTM |
| (XX) - Instrument make/model not specified by lab | |



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
2QAVEF	31.6	-1.80	1.3	32.7	-8.09X	1.8	4	WK
5HMWVK	42.5	1.00	3.1	42.5	1.58	2.9	4	TD
A45XQU	40.3	0.43	1.7	40.5	-0.42	1.8	4	LC
C5T35A	39.1	0.12	1.2	39.8	-1.11	2.4	4	EN
K3GVP9	37.2	-0.38	2.7	40.7	-0.22	3.1	4	LC
MA8YYB	41.1	0.64	0.7	41.1	0.18	0.7	1	TC

Consensus (All Labs) Results					
Month Mean	38.63		Grand Mean	40.93	
Avg SDr	1.97		Avg SDr	2.34	
SD btwn Labs	3.89		SD btwn Labs	1.01	
Labs Incd	6		Labs Incd	5	

Instrument Code List as Reported by the Labs

(EN) - Emerson 2200

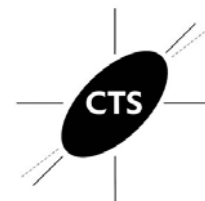
(LC) - L&W Crush Tester 48

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

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

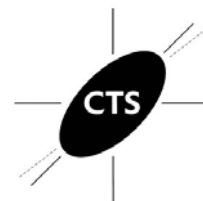
(WK) - Zwick Z005 Crush Tester

Containerboard Interlaboratory Testing Program
Analysis 203
Edgewise Compressive Strength by T839, Corrugated board - ECT3
TAPPI T839



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
2SY7DL	43.2	0.21	1.9	42.8	0.04	1.5	4	EN
379CYJ	44.6	0.81	2.2	44.6	0.70	2.2	1	LC
3F3KJA	42.8	0.07	2.1	42.4	-0.10	2.3	4	LC
46K7DC	42.8	0.06	2.2	41.9	-0.29	3.7	4	TC
4T5DNS	43.3	0.25	1.8	45.6	1.05	1.6	4	TD
5RBYK9	41.8	-0.36	3.4	41.5	-0.42	3.7	4	LC
659DD2	34.0	-3.60 X	3.2	36.7	-2.16*	2.4	4	TK
6L82Z2	41.3	-0.57	2.0	41.0	-0.59	1.9	4	TB
6MVLNT	47.2	1.89	3.0	47.9	1.90	2.2	4	LC
8EBACP	45.3	1.09	0.6	43.3	0.25	1.2	3	TC
8KN185	46.5	1.59	2.0	44.9	0.82	1.5	4	LZ
8RNHBA	41.3	-0.56	2.0	42.2	-0.17	1.4	4	TC
9J6W6H	40.6	-0.86	1.3	39.0	-1.33	1.8	4	LC
BK3NU2	43.5	0.35	2.3	43.8	0.40	2.0	4	LC
BX42FM	41.7	-0.40	1.2	42.2	-0.16	1.2	4	TC
D1QM3L	48.6	2.47 *	1.5	47.2	1.65	2.0	4	EM
E3Y1A6	46.1	1.43	1.3	46.0	1.21	1.5	4	LC
ESGKGZ	46.2	1.49	2.4	45.8	1.12	2.2	4	LC
FHRSQ6	42.4	-0.13	1.6	42.2	-0.17	1.4	4	LX
GBYKCL	42.9	0.10	1.9	43.6	0.33	1.5	4	TD
GYGDVS	36.3	-2.65 *	0.5	34.0	-3.17X	1.4	4	CT
H4EG74	42.4	-0.13	2.2	39.7	-1.07	2.3	4	EM
H9DD5F	41.0	-0.71	1.3	41.7	-0.35	1.3	4	XX
HAE5FV	42.8	0.06	2.1	42.9	0.08	2.4	4	LX
HMHZAL	41.5	-0.50	1.8	41.1	-0.56	1.7	4	EM
K8J6CG	41.1	-0.67	1.6	41.7	-0.34	1.7	4	LD
KWQQNF	40.6	-0.84	1.4	41.1	-0.58	2.3	4	EN
LT5AJ6	42.6	-0.04	3.3	49.4	2.46*	3.2	4	EM
LZJ617	43.6	0.39	2.1	42.3	-0.12	2.8	4	TM
MRGYK1	41.4	-0.53	1.0	42.3	-0.14	1.7	4	TL
N2LPB8	43.0	0.14	2.7	40.8	-0.70	2.6	4	TA
NNR7UF	43.7	0.43	0.8	43.4	0.27	1.8	4	LC
PN45FB	37.9	-1.99	1.1	36.3	-2.33*	1.0	4	XX
SEVAVV	40.0	-1.10	0.6	40.8	-0.69	1.4	4	EM
U6BDWK	43.6	0.37	4.5	46.2	1.28	3.1	4	LC
V7W9EZ	41.8	-0.36	1.7	40.9	-0.66	1.9	4	TC

Containerboard Interlaboratory Testing Program
 Analysis 203
Edgewise Compressive Strength by T839, Corrugated board - ECT3
 TAPPI T839



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
Y65CJ2	40.6	-0.86	2.8	40.7	-0.72	2.3	4	EN
ZBEWJT	42.8	0.05	2.2	42.9	0.09	1.7	4	LC

Consensus (All Labs) Results					
Month Mean	42.67		Grand Mean	42.67	
Avg SDr	2.07		Avg SDr	2.12	
SD btwn Labs	2.41		SD btwn Labs	2.75	
Labs Incd	37		Labs Incd	37	

Instrument Code List as Reported by the Labs

- | | |
|--|--|
| (CT) - Con-Ten | (EM) - Emerson 1200 Series |
| (EN) - Emerson 2200 | (LC) - L&W Crush Tester 48 |
| (LD) - L&W Crush Tester 248 | (LX) - L&W 506 |
| (LZ) - L&W Crush Tester (model not specified) | (TA) - Thwing-Albert (model not specified) |
| (TB) - TMI Monitor/Compression Tester, Model 17-70 | (TC) - TMI Monitor/Compression Tester, Model 17-37 |
| (TD) - TMI Digital Crush Tester, Model 17-09 | (TK) - TLS Compression Tester, Model 5184 |
| (TL) - Tech-Lab Systems Compression | (TM) - TMI/Hinde & Dausch |
| (XX) - Instrument make/model not specified by lab | |

Containerboard Interlaboratory Testing Program
Analysis 205

Bursting Strength (Mullen), 42 lb Linerboard - 42X2
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	
2RJZY6	102.3	108.6	103.3	105.6	104.9	-0.33	10.6	2.8	105.4	-0.22	10.5	4.2	12	LA
2ZN2VX	100.7	104.2	104.2	108.5	104.4	-0.49	10.2	3.2	107.2	0.32	9.8	3.8	15	LA
37XKGN	113.8	104.8	103.6	106.8	107.2	0.31	10.7	4.5	104.5	-0.49	11.0	5.2	15	TB
5GNXGR	104.1	106.6	107.9	105.1	105.9	-0.06	8.4	1.7	104.8	-0.39	7.6	3.6	16	TB
6GB4KP	101.9	105.7	107.3	105.4	105.1	-0.30	10.8	2.3	104.0	-0.64	12.1	3.0	16	LC
72QD6L	109.5	112.3	108.3	103.9	108.5	0.66	10.3	3.5	109.1	0.90	10.6	3.8	16	LZ
73SMJX	98.2*	101.4	105.8	100.7	101.5	-1.29	10.3	3.2	103.8	-0.70	9.5	5.7	12	AH
7M4BWV	109.4	108.0	108.4	105.2	107.8	0.45	10.0	1.8	106.0	-0.04	9.6	3.9	16	AH
7W1Y9E	107.4	106.7	109.3 L	106.7	107.5	0.39	4.7	1.2	109.1	0.91	5.4	1.9	15	XX
7Y16H5	102.8	99.3	102.1	93.8*	99.5	-1.85	9.4	4.1	102.8	-1.00	10.2	3.6	16	LA
8C4UBX	108.6	115.3	No Data	113.8	112.6	1.80	11.9	3.5	110.7	1.39	10.7	3.9	14	LC
8D7RCE	114.8*	116.9*	117.5 X	104.7	113.5	2.05*	9.0	6.0	112.2	1.83	9.5	4.9	16	LA
8KJQ3L	108.6	111.6	112.5	111.4	111.0	1.36	8.9	1.7	110.7	1.40	9.7	3.6	15	LC
9JNHDT	113.8	108.6	No Data	No Data	111.2	1.41	9.7	3.7	108.1	0.60	10.2	3.8	14	LJ
9YCPCM	109.1	104.0	100.9	109.3	105.8	-0.09	12.3	4.1	106.4	0.07	12.1	3.4	16	AX
AJUBEL	108.5	102.3	99.6	102.4	103.2	-0.82	9.5	3.8	105.0	-0.34	10.3	3.0	16	LB
ANGUTQ	104.0	105.9	104.4	97.0	102.8	-0.93	10.7	4.0	107.5	0.40	10.0	5.0	16	AH
BCLAHW	101.1	101.5	101.5	101.7	101.5	-1.31	5.8	0.3 L	101.5	-1.39	5.7	0.4 L	8	LZ
BFAH6C	103.7	103.4	98.9	106.7	103.2	-0.83	11.5	3.2	101.8	-1.31	9.9	3.0	16	LJ
C5A7M9	104.9	105.9	109.2	103.8	106.0	-0.05	8.6	2.3	108.1	0.59	10.5	3.2	16	LJ
C7XSAZ	102.5	98.4	97.6	98.9	99.4	-1.90	9.9	2.2	99.7	-1.96	9.4	2.2	16	AH
D9EF6W	103.4	102.7	102.9	105.8	103.7	-0.68	10.4	1.5	103.4	-0.82	10.0	2.9	12	TB
D9JUNC	104.6	99.1	92.4 X	99.2	98.8	-2.04*	7.6	5.0	97.2	-2.70*	8.9	3.6	16	LA
DYXWM1	107.6	111.2	107.3	106.0	108.0	0.53	9.1	2.2	107.0	0.26	9.4	2.9	14	LZ
EC1LAD	103.9 L	107.6	104.3	103.0	104.7	-0.40	8.2	2.0	102.8	-1.01	7.4	3.3	16	LC
ERRNE6	106.2	110.1	108.3	109.5 L	108.5	0.67	4.7	1.7	110.9	1.45	5.5	3.8	16	AX
FBN973	115.8*	105.3	109.0	113.8	110.9	1.34	12.3	4.7	109.7	1.07	10.4	3.4	16	AA
G2WZCD	105.7	101.8	104.4	102.8	103.7	-0.69	11.1	1.7	104.2	-0.60	10.3	3.1	16	LC
GP6B9R	108.6	112.5	102.5	104.2	107.0	0.23	11.4	4.5	104.3	-0.56	11.5	4.2	16	XX
GXXNLT	103.8	103.0	106.4	99.7	103.2	-0.81	8.6	2.8	102.6	-1.07	9.1	3.1	16	LA
H8A8DE	104.4	105.3	104.8	107.2	105.4	-0.20	7.8	1.2	106.2	0.02	8.4	2.5	16	TX
HZ86NV	107.7	110.0	106.1	110.7	108.6	0.69	10.6	2.1	106.0	-0.03	10.6	3.3	15	XX
JJD8WK	111.4	114.7	113.6*	103.5	110.8	1.29	10.8	5.1	108.6	0.75	10.6	4.0	16	LA
JPKYZQ	107.0	104.7	105.5	103.5	105.2	-0.27	12.0	1.5	105.6	-0.15	11.7	3.3	16	LC

Containerboard Interlaboratory Testing Program
Analysis 205

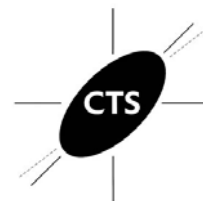
Bursting Strength (Mullen), 42 lb Linerboard - 42X2
TAPPI Official Test Method T807



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	
JS8AYV	107.4	110.5	102.6	106.9	106.9	0.20	10.8	3.3	106.4	0.07	11.0	4.3	16	AH
K3D9RV	109.8	107.6	110.1	101.9	107.3	0.33	9.4	3.8	107.1	0.30	10.0	3.1	14	LZ
K3JZEC	104.6	107.0	108.6	105.5	106.4	0.08	9.1	1.8	104.8	-0.40	10.3	3.7	16	LA
KU2DPA	128.4 X	124.4 X	107.0	No Data	119.9	3.85 X	9.9	11.4 H	117.4	3.42 X	11.2	8.0 H	12	AX
KXB2UD	109.0	117.1 *	111.3	113.3	112.7	1.82	10.0	3.4	113.4	2.21 *	10.0	2.9	16	TB
M3WFH4	105.6	106.6	104.1	104.2	105.1	-0.28	10.0	1.2	105.6	-0.15	9.7	1.4	16	LA
MKZKY8	114.1	117.7 *	104.5	112.3	112.2	1.68	10.1	5.5	111.4	1.59	11.3	4.4	16	LA
NUDXFA	No Data	108.5	112.6	109.2	110.1	1.10	9.9	2.2	111.0	1.47	10.2	3.2	14	AA
PPAN73	113.0	109.8	108.3	108.8	110.0	1.07	10.4	2.1	106.1	-0.01	10.9	3.1	16	TX
Q22GMV	110.4	109.4	106.0	103.9	107.4	0.36	11.6	3.0	108.2	0.64	10.4	3.3	16	LA
QDHBZM	105.7	104.5	100.1	108.8	104.8	-0.38	8.0	3.6	104.1	-0.61	8.8	3.2	16	AX
QT32DP	104.7	109.7	104.5	112.0	107.7	0.44	12.1	3.7	108.4	0.69	11.4	4.8	15	LA
R7G2UU	106.6	101.5	104.1 H	107.9	105.0	-0.31	12.4	2.8	106.5	0.11	11.6	2.8	16	LZ
RY837R	105.8	108.0	101.6	102.2	104.4	-0.49	9.0	3.0	107.4	0.38	9.6	3.7	16	AH
SM38TY	102.2	102.9	101.0	102.1	102.1	-1.14	7.5	0.8	102.7	-1.02	7.0	2.1	16	AH
SN9TAU	110.2	110.1	112.4	112.0	111.1	1.40	11.0	1.2	111.0	1.47	12.4	5.5	15	TB
TKKGBP	107.0 L	104.7	100.7	103.9 L	104.1	-0.58	6.1	2.6	102.7	-1.02	5.2	2.8	16	TC
VZWPK4	101.2	97.1 *	104.4	110.2	103.2	-0.81	7.6	5.5	102.9	-0.97	8.2	3.2	16	AH
XDH5YD	106.1	103.4	100.6	102.6	103.2	-0.83	9.2	2.3	105.9	-0.06	10.9	3.5	16	LA
XY1VW4	101.3	107.9	104.6	109.8	105.9	-0.07	9.8	3.7	108.0	0.57	9.2	3.7	16	AH
YCL3GN	119.4 XH	107.1	102.7	106.4	108.9	0.77	12.6	7.2 H	106.6	0.14	10.3	4.6	16	TB
Z23QCR	98.9	102.3	98.8	96.4 *	99.1	-1.96	9.5	2.4	99.7	-1.93	10.2	3.5	16	LA
ZEL282	108.7	103.3	106.5	103.0	105.4	-0.22	9.5	2.7	106.1	-0.02	10.4	2.6	16	TB

Consensus (All Labs) Results

Wk Mean	106.52	106.71	105.23	105.52	Month Mean	106.14	Grand Mean	106.13
Avg SDr	9.40	9.60	10.11	10.02	Avg SDr	9.86	Avg SDr	9.90
SD btwn Labs	4.06	4.68	3.83	4.44	SD btwn Labs	3.58	SD btwn Labs	3.31
Labs Includ	54	56	53	55	SD btwn Wks	3.29	SD btwn Wks	3.58
Labs Exclud	2	1	2	0	Labs Includ	56	Labs Includ	56
Labs not rcvd	1	0	2	2				



Instrument Code List as Reported by the Labs

(AA) - Perkins Model A

(AX) - Perkins Mullen Tester (model not specified)

(LB) - L & W Burst-O-Matic

(LJ) - L & W Bursting Strength Tester J-Type

(TB) - TMI Monitor/Burst 1000

(TX) - TMI Monitor/Burst (model not specified)

(AH) - Perkins Model AH

(LA) - L & W Bursting Strength Tester

(LC) - L & W Autoline

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

(TC) - TMI Monitor/Burst (Model 13-71)

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

Containerboard Interlaboratory Testing Program
Analysis 206

Bursting Strength (Mullen), 69 lb Linerboard - 69Y2
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	
1PSRPB	162.6	165.6	161.7	172.5	165.6	0.77	21.9	4.9	163.6	0.38	20.7	3.9	11	LA
1QRQFA	159.1	154.2	154.5	154.6	155.6	-0.87	16.4	2.3	155.5	-0.95	17.3	3.3	12	LA
2N4DFK	153.2	156.0	155.4	155.8	155.1	-0.95	11.4	1.3	156.4	-0.80	11.9	1.9	11	XX
3FSV1C	174.4	169.0	170.5	163.2	169.3	1.37	26.1	4.6	165.2	0.66	23.3	4.7	12	AH
46ACKQ	159.7	162.4	166.1	165.5	163.4	0.41	18.5	2.9	163.7	0.41	16.7	2.5	12	LC
4BPJGG	177.3*	163.6	160.3	158.9	165.0	0.68	18.4	8.4	164.7	0.58	20.6	5.6	12	TB
5VPN3H	168.7	172.4	176.2	168.3	171.4	1.72	19.7	3.7	170.8	1.58	22.4	5.2	12	LA
63PCJE	160.5	157.8	181.8*	166.0	166.5	0.92	22.9	10.7 H	165.3	0.67	21.1	7.2	12	LJ
77TL33	152.0	155.2	158.5	159.9	156.4	-0.74	18.9	3.6	155.9	-0.89	19.5	4.6	7	TB
7HJFZ5	154.2	155.5	164.8	157.8	158.1	-0.46	17.6	4.7	158.9	-0.39	18.7	4.7	11	LA
7R61P4	154.4	154.3	153.4	160.4	155.6	-0.86	21.3	3.2	157.4	-0.63	20.8	2.9	12	LA
8J5CE4	168.6	161.7	No Data	No Data	165.2	0.70	21.5	4.9	166.7	0.89	22.8	4.4	10	LJ
8R1AT6	168.4	163.1	157.1	163.5	163.0	0.35	14.8	4.6	161.7	0.08	17.1	3.6	10	LZ
AYT9RH	152.9	169.2	168.4	163.9	163.6	0.44	17.7	7.5	162.1	0.13	18.1	5.9	12	LC
BHN61Q	164.2	160.9	158.2	164.0	161.8	0.15	19.1	2.9	161.6	0.05	18.5	4.9	12	AH
ENSCFQ	163.2	160.4	160.0	152.1	158.9	-0.32	19.3	4.8	161.0	-0.05	20.5	4.4	8	AH
ET41D1	152.4 L	151.5 L	144.5 L	146.4* L	148.7	-2.00	7.5	3.8	151.1	-1.68	10.9	6.6	11	TC
F7PXB3	161.5	160.8	164.3	160.0	161.6	0.12	23.6	1.9	161.2	-0.01	20.9	3.9	12	AA
FHZH7R	159.1 L	160.0 L	159.5 L	159.1 L	159.4	-0.24	6.0	0.4 L	160.2	-0.18	13.5	0.9 L	8	LZ
FLUVSP	177.7*	170.1	169.3	165.3	170.6	1.59	20.6	5.2	170.8	1.57	20.5	4.7	12	LA
G98C29	163.6	161.4	166.0	167.2	164.6	0.60	13.3	2.6	163.4	0.36	15.8	10.5 H	12	AH
G9R56E	164.3	170.7	162.0	163.0	165.0	0.68	13.0	3.9	164.6	0.55	12.9	3.9	8	XX
GBWP1E	155.7	174.2* L	148.2	147.0*	156.3	-0.75	11.8	12.6 H	149.3	-1.96	12.4	11.2 H	12	TB
GF3FR1	146.0	157.0	147.8	150.8	150.4	-1.72	16.2	4.8	155.2	-1.00	18.4	5.0	12	AH
GSLXRC	149.6	155.7	147.0	152.7	151.2	-1.59	19.0	3.8	153.6	-1.26	18.2	3.3	12	LC
HE1RMQ	171.7	157.3	171.4 H	169.7	167.5	1.09	26.2	6.9	168.9	1.25	25.3	4.8	12	XX
JBKV4B	149.0	152.4	159.6	155.5	154.1	-1.11	20.2	4.5	157.6	-0.61	23.3	4.9	12	LC
JPUHDM	153.0	144.3*	150.2	154.3	150.5	-1.71	17.9	4.5	152.8	-1.40	19.5	3.5	10	LA
JTJCMF	170.0	171.8	170.0	169.0	170.2	1.53	23.5	1.1	168.2	1.14	22.4	3.8	10	LA
JVHAG9	191.4 X	188.5 X	No Data	No Data	190.0	4.76 X	20.7	2.1	176.8	2.55*	19.4	9.1 H	10	TB
KEDDCN	160.9	162.6	168.3	174.8	166.7	0.94	23.8	6.3	165.0	0.61	22.5	4.2	12	LC
KX2LTK	170.2	182.2 X	169.7	171.2	173.3	2.04*	20.9	5.9	172.0	1.78	22.0	4.0	12	AX
LGR24D	167.0	147.6	171.7 L	165.1	162.8	0.32	13.0	10.5 H	164.5	0.54	12.4	6.3	12	AH
M1VB23	152.0	154.3	159.7	151.3	154.3	-1.08	23.1	3.8	153.2	-1.33	21.0	5.2	12	LA

Containerboard Interlaboratory Testing Program
Analysis 206

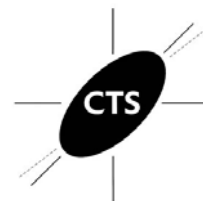
Bursting Strength (Mullen), 69 lb Linerboard - 69Y2
TAPPI Official Test Method T807



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
MEC7GZ	164.5	173.7	166.8	174.0	169.7	1.45	19.7	4.9	171.6	1.70	21.9	4.6	12	TB
MN2C2E	152.8	159.0	165.5	151.0	157.1	-0.63	19.6	6.6	160.3	-0.16	19.9	4.5	12	AH
NAK9Q1	157.5	153.3	143.9	156.4	152.8	-1.33	18.2	6.2	152.4	-1.46	20.0	4.6	8	LA
PL3VUA	No Data	168.3	167.2	170.2 L	168.6	1.26	17.6	1.5	167.4	1.02	20.4	3.5	11	AA
PXBQXM	155.0	153.8	151.5	160.4	155.2	-0.94	19.9	3.8	155.1	-1.01	19.1	3.3	12	AH
QPBU8M	157.4	154.1	159.3	157.3	157.0	-0.64	16.3	2.1	159.5	-0.29	18.3	4.2	10	LZ
RANWYB	163.0	154.8	162.6	160.0	160.1	-0.13	18.6	3.8	163.1	0.31	18.9	5.6	12	AH
RY6Z8T	160.3	164.8	156.5	154.7	159.1	-0.30	22.6	4.5	159.6	-0.26	19.4	3.8	8	LZ
SH4XLS	159.9	163.8	159.1	173.8	164.2	0.54	18.7	6.8	163.6	0.38	20.0	4.2	12	LA
SMGLJ4	155.1	163.0	149.4	159.4	156.7	-0.68	18.7	5.8	156.8	-0.73	18.5	4.1	12	LB
TA5P37	164.8	162.6	161.2	161.8	162.6	0.28	21.1	1.6	159.4	-0.31	21.0	4.8	12	TB
UJ2747	164.1	160.2	155.3	164.2	160.9	0.01	23.3	4.2	161.8	0.09	22.3	3.2	12	LA
VDKSZF	155.3	154.7	148.8	162.3	155.3	-0.92	17.3	5.5	157.5	-0.62	19.4	4.4	12	AX
WAWFZA	165.1	162.2	No Data	162.4	163.2	0.39	21.2	1.6	164.2	0.49	19.5	4.9	11	LC
WPWGEW	156.3	169.7	161.0	162.4	162.4	0.24	16.3	5.6	161.0	-0.04	17.7	4.7	12	LZ
WSKTD2	164.3	161.6	165.0	166.7	164.4	0.58	19.2	2.1	165.5	0.70	18.7	3.3	12	TB
WXX9WY	159.9	155.1	154.1	160.4	157.4	-0.58	21.6	3.2	158.1	-0.52	20.8	3.4	12	LA
XKMY6N	171.6	164.6	170.2	175.9*	170.6	1.59	12.7	4.7	173.9	2.09*	11.4	4.8	12	AX
Y573CC	159.6	168.0	158.8	159.5	161.5	0.09	19.4	4.4	158.4	-0.46	17.6	4.4	12	LA
YR4MKQ	158.4	158.3	164.0	158.9	159.9	-0.16	18.2	2.7	160.4	-0.15	16.4	3.7	12	TX
YTP8XS	155.3	163.5	153.8	167.4	160.0	-0.15	18.7	6.5	153.8	-1.23	18.0	8.6 H	10	TB
Z4XJ7M	146.6	150.2	147.7	149.1	148.4	-2.05*	16.6	1.6	150.9	-1.71	16.8	4.0	8	LJ
ZQS7RP	160.8	158.8	163.5	161.6	161.2	0.05	19.5	1.9	158.5	-0.46	16.9	3.1	12	LA

Consensus (All Labs) Results

Wk Mean	160.44	160.56	160.39	161.43	Month Mean	160.89	Grand Mean	161.25
Avg SDr	18.24	19.02	19.77	18.80	Avg SDr	18.99	Avg SDr	19.11
SD btwn Labs	7.37	6.76	8.33	7.12	SD btwn Labs	6.10	SD btwn Labs	6.07
Labs Includ	55	55	54	55	SD btwn Wks	5.05	SD btwn Wks	4.99
Labs Exclud	1	2	0	0	Labs Includ	56	Labs Includ	57
Labs not rcvd	1	0	3	2				



Instrument Code List as Reported by the Labs

(AA) - Perkins Model A

(AX) - Perkins Mullen Tester (model not specified)

(LB) - L & W Burst-O-Matic

(LJ) - L & W Bursting Strength Tester J-Type

(TB) - TMI Monitor/Burst 1000

(TX) - TMI Monitor/Burst (model not specified)

(AH) - Perkins Model AH

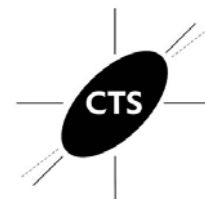
(LA) - L & W Bursting Strength Tester

(LC) - L & W Autoline

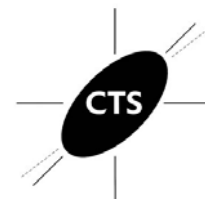
(LZ) - L & W (model not specified)

(TC) - TMI Monitor/Burst (Model 13-71)

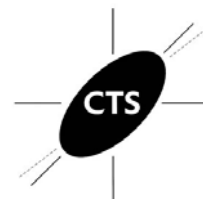
(XX) - Instrument make/model not specified by lab



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
1TF1EV	89.2 L	91.2	88.3	85.2	88.5	-0.85	3.8	2.5	89.5	-0.63	3.4	1.6	16	EN
29NH1N	83.3	83.7 *	81.4	83.6	83.0	-2.07 *	2.8	1.1	84.2	-2.00	3.5	1.7	16	TM
2FE5A6	94.9	96.2	97.4	95.8	96.1	0.84	3.4	1.0	94.4	0.64	3.6	1.3	16	LD
2JQU54	96.5	97.6	93.7	96.6	96.1	0.85	3.2	1.7	96.3	1.13	3.4	2.3	12	LZ
3LE8GL	90.0	90.4	88.6	90.1	89.8	-0.56	3.9	0.8	90.0	-0.50	3.7	3.2	16	TD
4CMRWF	95.2	92.9	92.5	91.0	92.9	0.13	4.7	1.7	90.4	-0.39	4.8	4.1	15	LC
56YJMM	80.4 *	82.0 *	80.4 *	80.0 *	80.7	-2.58 *	3.8	0.9	82.6	-2.39 *	4.0	2.4	16	XX
57JTFQ	95.5 L	95.2	97.5	96.6	96.2	0.87	2.9	1.1	95.5	0.92	3.1	2.0	16	LC
6BD4VL	83.6 H	81.3 *	81.6	82.3 *	82.2	-2.25 *	5.6	1.0	82.4	-2.46 *	4.5	3.0	16	EM
7F4Y5S	87.8 L	88.2	88.1 L	86.5 L	87.7	-1.03	1.6	0.8	87.3	-1.19	3.3	1.7	16	XX
8AJKA5	82.1 *	87.6	80.4 *	84.4	83.6	-1.93	3.9	3.1	83.9	-2.08 *	4.1	1.5	16	TQ
8BYE47	88.0	87.4	86.4 L	88.5	87.5	-1.06	3.8	0.9	87.0	-1.27	3.4	2.4	16	LD
8H65Z5	96.4	86.3	95.1	90.0	92.0	-0.07	3.8	4.7 H	91.1	-0.20	4.2	3.0	14	LC
97U2PS	96.8	97.8	93.1	99.9	96.9	1.03	4.9	2.9	96.0	1.05	4.2	3.0	16	MB
9J9ZNU	92.8	97.5	90.9	92.9	93.5	0.27	4.2	2.8	94.5	0.66	4.3	2.1	16	LD
9LBUCZ	95.1	99.2	95.6	92.8 L	95.7	0.76	3.5	2.6	93.5	0.40	4.2	3.5	16	MB
AHS3VV	91.6	90.7	89.7	89.1	90.3	-0.45	4.1	1.1	88.3	-0.92	4.0	2.7	16	TB
AXSEPD	81.8 *	86.2	87.6	87.8	85.9	-1.43	3.9	2.8	85.9	-1.54	4.5	1.5	16	LZ
B4R5PV	89.6	92.6 H	90.9	91.5	91.2	-0.25	5.7	1.3	90.4	-0.40	5.4	1.2	8	LC
BLGB18	89.9	90.0	92.0	87.5	89.9	-0.54	4.4	1.8	90.3	-0.43	4.5	2.0	16	LC
CAZWY6	94.6	92.7	89.9	90.2	91.9	-0.10	4.2	2.2	91.8	-0.04	4.0	3.9	16	LC
CQADW8	91.6	92.7	92.9	93.0	92.6	0.06	3.8	0.6	92.7	0.21	3.6	1.3	16	LC
D3XYWV	73.7 X	73.8 X	75.4 X	75.4 X	74.6	-3.94 X	3.9	0.9	74.3	-4.53 X	4.3	4.2	12	TB
D8VXLX	90.9	93.6 H	92.5	91.7	92.2	-0.02	5.2	1.2	95.2	0.86	4.5	2.4	15	LC
DW9KMV	93.1	89.7	90.9	94.2	92.0	-0.07	3.5	2.0	90.5	-0.38	3.6	7.2 H	12	LD
EQ5QH1	88.7	95.2	97.3	94.9	94.0	0.39	4.9	3.7	94.6	0.70	3.8	4.5	16	LC
EQPEWF	94.2	96.2 L	95.7	96.6 L	95.7	0.76	1.9	1.0	94.9	0.77	3.1	2.5	16	LD
F3U1MB	No Data	88.2	91.1	97.5	92.3	0.00	3.7	4.8 H	92.7	0.20	4.5	2.9	15	LC
GAP9U9	91.9	93.6	87.5 L	87.4	90.1	-0.49	2.8	3.2	90.4	-0.39	2.7	2.0	16	LC
HD873G	92.4	90.6	92.2	90.8	91.5	-0.18	2.1	0.9	92.2	0.07	2.4	1.9	16	EM
HLWM82	95.1	96.2	93.7	94.9	95.0	0.60	3.3	1.0	94.8	0.75	3.9	1.5	16	LC
HVWHQK	86.5 H	76.4 X	77.6 *H	66.5 X	76.7	-3.46 X	7.5	8.2 H	76.7	-3.91 X	8.5	8.4 H	13	IM
J8UJML	99.3 L	96.5	No Data	96.2	97.3	1.12	2.5	1.7	95.7	0.96	3.8	2.4	14	LC
JLEWV2	93.4	95.7	93.0	87.8	92.5	0.04	4.0	3.3	94.6	0.70	4.4	2.4	15	XX



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
JT6K5K	96.0	93.8	93.9	91.1	93.7	0.31	3.9	2.0	92.9	0.24	4.1	3.3	12	LC
JZD2ML	93.9	89.8	90.9	91.5	91.5	-0.17	3.7	1.7	92.4	0.12	4.3	3.2	16	LX
K68BDH	96.9	97.0	95.3	93.3	95.6	0.74	3.5	1.8	91.7	-0.05	4.6	8.2 H	16	LC
L8E45N	87.5	89.4	83.1	85.5	86.4	-1.32	4.0	2.7	88.2	-0.96	4.2	2.5	16	EN
MNTMKV	87.8	90.5	90.1	93.5	90.5	-0.40	3.7	2.4	89.1	-0.71	3.3	2.1	16	EM
MZM39W	93.3	98.5	97.6	96.0	96.4	0.91	3.9	2.3	95.8	1.00	4.2	2.1	16	LD
N3839B	88.2	83.6 *	83.4 L	87.4	85.7	-1.47	3.2	2.5	87.2	-1.22	4.3	1.7	16	TX
NANR2T	96.4	95.3	95.7	91.6	94.7	0.55	4.0	2.2	94.0	0.54	4.2	1.8	8	LC
PPJB5M	89.2	93.6	92.8	85.4	90.3	-0.45	4.8	3.8	90.2	-0.45	5.3	2.7	16	LC
PT721J	91.6	88.9	No Data	No Data	90.2	-0.45	4.8	1.9	90.1	-0.48	4.3	2.8	14	MZ
R1UB8Y	104.9 *	100.0	103.0	103.6 *	102.9	2.36 *	4.7	2.1	98.7	1.74	5.4	5.0 H	16	LC
RFB7NV	89.7	89.8	88.9	89.1	89.4	-0.65	3.2	0.5	88.5	-0.89	3.4	1.3	16	EM
RQDXDQ	96.5	96.0	95.1	98.9	96.6	0.97	4.7	1.6	94.6	0.70	4.2	2.7	14	LC
RUM4B3	90.7	91.9	91.3	93.9	92.0	-0.07	4.5	1.4	91.8	-0.02	4.7	1.0	16	TD
SGQFK8	95.2	92.9	93.2	96.4	94.4	0.47	3.9	1.6	93.5	0.42	4.1	2.3	16	EM
SU2PRJ	94.8	93.9	93.8	86.3	92.2	-0.02	3.5	4.0	92.7	0.20	3.2	2.5	16	LZ
TCCUP8	94.4	94.7	92.6	91.7	93.4	0.24	4.5	1.5	93.8	0.48	3.9	1.6	16	LC
TLM8M3	92.3	91.1	93.6	92.7	92.4	0.03	4.0	1.0	94.0	0.52	3.9	1.9	16	TD
US2JR3	97.9	94.8	95.6	96.8	96.3	0.89	4.0	1.3	96.8	1.26	4.1	2.1	16	EM
VM8PTG	88.5	90.7	No Data	No Data	89.6	-0.60	3.0	1.5	89.8	-0.55	4.2	2.4	14	LC
VMQVTS	97.9	94.2	99.7	102.7 *	98.6	1.41	3.9	3.5	96.4	1.15	4.2	3.9	16	LC
VQDBF6	91.2 L	90.9	90.5	93.0	91.4	-0.20	3.1	1.1	91.6	-0.08	3.2	1.9	16	LC
W28S5M	91.8	96.2	92.4	95.1	93.8	0.35	2.7	2.1	91.3	-0.17	2.0	2.6	16	LZ
W5FJGE	97.4	97.6	97.9	94.4	96.8	1.01	4.3	1.6	95.5	0.93	4.3	3.3	16	LC
WKFBWA	88.4	88.8	89.3	90.0	89.1	-0.71	2.7	0.7	89.4	-0.66	2.4	1.3	16	TC
WTXX1Y	102.5 *	99.5	102.7	101.7	101.6	2.07 *	4.5	1.5	100.0	2.09 *	4.2	2.2	16	LD
XSKJCQ	98.0	95.3	99.3	98.7	97.8	1.23	3.6	1.8	94.0	0.53	4.0	2.9	16	LC
XXH2NP	87.7	90.2	88.6	95.5	90.5	-0.40	3.7	3.5	90.0	-0.50	3.6	2.2	16	LC
YB3RHX	91.2	92.7	91.5	91.5	91.7	-0.12	3.3	0.7	91.5	-0.11	4.0	1.3	16	LZ
Z3Q1MK	85.9	84.4	79.3 *L	No Data	83.2	-2.02 *	3.1	3.5	84.3	-1.97	3.7	2.5	15	EM
Z7GCFW	98.6	96.3	100.1	100.0	98.7	1.44	4.7	1.8	99.2	1.89	4.2	1.8	16	LC
ZFK9N1	98.2	99.0 H	97.2	97.2	97.9	1.25	4.3	0.9	97.5	1.43	4.5	2.1	16	TC
ZV2HQA	91.2 H	94.0	94.0	92.4	92.9	0.14	5.0	1.4	92.3	0.10	4.3	2.9	15	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	
ZZX7BM	92.7	92.5	101.5	98.9 ^H	96.4	0.92	5.5	4.5	94.5	0.66	4.4	3.2	16	LC

Consensus (All Labs) Results														
Wk Mean	92.28	92.46	91.86	92.42	Month Mean	92.28			Grand Mean	91.92				
Avg SDr	3.81	4.02	4.23	3.98	Avg SDr	3.94			Avg SDr	4.01				
SD btwn Labs	4.82	4.36	5.59	5.04	SD btwn Labs	4.49			SD btwn Labs	3.89				
Labs Includ	66	66	64	63	SD btwn Wks	2.24			SD btwn Wks	2.82				
Labs Exclud	1	2	1	2	Labs Includ	66			Labs Includ	66				
Labs not rcvd	1	0	3	3										

Instrument Code List as Reported by the Labs

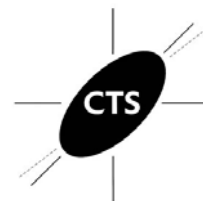
- | | |
|---|--|
| (EM) - Emerson 1200 | (EN) - Emerson 2200 |
| (IM) - Instron 4486 | (LC) - L & W Crush Tester 48 |
| (LD) - L&W Crush Tester 248 | (LX) - L & W 506 |
| (LZ) - L & W Crush Tester (model not specified) | (MB) - Messmer Buchel K440 |
| (MZ) - Messmer Buchel (model not specified) | (TB) - TMI Monitor/Compression Tester, Model 17-70 |
| (TC) - TMI Monitor/Compression Tester, Model 17-37 | (TD) - TMI Digital Crush Tester, Model 17-09 |
| (TM) - TMI/Hinde & Dauch | (TQ) - Thwing-Albert QC-II Series |
| (TX) - TMI Digital Crush Tester (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	
1JUUSZ	149.7	156.3	152.1 L	155.0	153.3	0.47	3.0	3.0	150.6	0.24	2.8	3.4	12	XX
2DZ6YY	157.8	158.4	160.7 L	160.9	159.5	1.24	5.5	1.6	156.0	1.20	5.6	3.6	12	MB
2F98NJ	153.3	151.1	150.2	153.5	152.0	0.31	5.0	1.6	152.9	0.64	5.2	2.6	11	XX
368KM4	153.9	151.3	153.0	153.1	152.8	0.41	5.8	1.1	151.6	0.42	5.6	4.7	12	LD
3XVZFG	155.0	160.1 L	157.8	159.2	158.0	1.06	2.6	2.2	154.4	0.92	3.7	7.9 H	12	LZ
41MMBN	No Data	146.1	146.2	161.7	151.3	0.22	5.8	9.0 H	151.3	0.36	6.1	6.6	11	LC
4588HH	143.5	142.2	143.2	142.4	142.8	-0.84	3.1	0.6 L	143.7	-0.98	3.3	2.1	12	EM
4917HB	157.1	157.8	160.9	160.9	159.2	1.21	6.4	2.0	154.1	0.86	5.8	4.7	12	LC
4BX9Y2	145.3	144.7	144.5	143.7	144.6	-0.62	5.5	0.7 L	144.7	-0.80	4.6	0.5 L	8	LC
4VR138	155.2	151.7	155.0	155.9	154.4	0.61	5.9	1.9	152.1	0.51	6.6	3.8	12	LC
4XQ2LB	153.3	150.2 L	152.2	149.3	151.3	0.21	3.5	1.8	150.5	0.23	3.2	1.3	12	LD
51HMPT	146.0	143.3	143.6	143.7	144.1	-0.68	5.0	1.2	144.1	-0.92	5.8	2.0	12	TM
6CU9JB	147.0	148.3	146.7	157.3	149.8	0.04	6.2	5.0	148.7	-0.10	5.8	4.7	12	LC
6STKCV	141.1	130.5*H	139.9 H	111.2 X	130.7	-2.36*	11.2	13.8 H	126.7	-4.00 X	15.6	10.4 H	9	IM
7FV41Y	145.0	144.7	No Data	No Data	144.8	-0.59	6.0	0.2 L	145.7	-0.63	7.1	6.4	10	MZ
7HEJ5E	148.5	154.3	162.5	166.7*	158.0	1.06	5.7	8.2	154.2	0.88	6.9	8.0 H	8	LC
7JSA5X	158.9	161.9	158.2	155.4	158.6	1.13	5.6	2.7	156.1	1.21	6.2	5.3	10	LZ
7ZFKR1	127.6*	129.2*	130.5*	132.6*	130.0	-2.45*	5.7	2.1	121.1	-4.99 X	6.2	9.2 H	12	TB
8BA7L2	139.7	141.8	No Data	No Data	140.8	-1.10	4.7	1.4	143.5	-1.01	4.4	4.6	10	LC
8BNTVP	160.3	144.9	155.2	154.8	153.8	0.53	3.9	6.4	155.1	1.04	4.4	4.5	12	EM
8EAC9T	152.4	149.5	144.8	148.7	148.8	-0.09	4.0	3.1	148.0	-0.22	3.7	3.3	12	LC
98GSGK	158.1	156.0	154.6	152.2	155.2	0.71	5.2	2.5	153.9	0.83	5.2	3.3	12	LD
99V3D4	159.2	151.8 H	157.4	153.5	155.4	0.74	6.2	3.4	148.8	-0.08	5.2	7.6	10	LC
AF4SWQ	162.2	146.5	153.5	148.3	152.6	0.39	4.7	7.0	151.4	0.38	4.9	3.9	12	TC
AGHK7C	159.2	159.4	156.8	160.3	158.9	1.17	5.8	1.5	158.4	1.62	5.4	2.9	12	LC
APDW9F	171.3*	151.3	167.9*	No Data	163.5	1.75	5.7	10.7 H	158.6	1.66	5.5	11.8 H	9	LC
BNRZT7	149.0	148.1	149.1	153.1	149.8	0.04	4.9	2.2	149.8	0.09	5.3	2.3	12	LC
CYBGMS	148.6	150.4	143.6	155.7	149.6	0.00	4.5	5.0	149.3	0.00	5.7	6.6	12	LD
D7VHP6	147.3	133.8	138.2	145.6	141.2	-1.04	6.0	6.3	142.9	-1.12	5.4	5.3	12	LC
DEQNH7	152.5	154.0	162.9 H	160.4	157.5	0.99	6.4	5.0	153.7	0.79	5.8	6.1	8	LC
DHD28H	151.3	159.4	146.8	145.7	150.8	0.16	4.5	6.2	149.2	-0.01	5.4	4.5	12	EN
EFY8MP	155.8	156.6	153.1	154.9	155.1	0.69	6.8	1.5	152.8	0.62	6.7	3.4	7	LC
EKAVKZ	140.9	153.2	151.6	149.1	148.7	-0.11	4.9	5.5	150.1	0.15	4.3	4.1	11	LC
F1V2WY	147.0	150.2	149.1	148.0	148.6	-0.12	3.9	1.4	149.3	0.01	4.2	3.0	12	TQ



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	
FAC9B8	144.9	146.4	147.0	151.2	147.4	-0.27	4.6	2.7	149.5	0.04	5.2	2.5	12	TD
GEQ13S	146.8	143.1 L	146.6	146.0 L	145.6	-0.49	2.6	1.7	147.6	-0.29	2.9	1.8	12	EM
GJKV1T	156.7	154.5	159.6	141.2	153.0	0.43	5.8	8.1	155.3	1.08	6.0	5.7	11	LC
GWKBD3	139.8	140.7	137.7	No Data	139.4	-1.27	4.8	1.6	138.4	-1.92	5.0	4.5	11	EM
J7P86G	150.4	147.7	147.0	146.0	147.8	-0.22	4.2	1.9	143.9	-0.95	5.8	8.4 H	12	LC
JMN5N8	140.9	142.7	141.5	141.5 L	141.7	-0.98	2.9	0.8 L	142.3	-1.23	3.3	1.7	12	TC
JZUYEK	147.7	141.2	146.1	150.5	146.4	-0.40	4.8	3.9	148.2	-0.19	5.4	3.5	12	LX
KS1989	143.5	146.9	142.6	145.0	144.5	-0.63	4.4	1.9	144.7	-0.81	5.3	3.4	12	TD
KWV2AP	150.1	154.7	149.9	146.0	150.2	0.08	5.2	3.5	150.5	0.23	5.5	2.9	12	LZ
LT7QBJ	145.3	149.9	No Data	154.5	149.9	0.04	4.5	4.6	148.3	-0.17	4.7	3.9	11	LC
LUKA3V	141.7	140.4	145.9	143.3	142.8	-0.84	5.1	2.3	145.9	-0.59	5.0	3.5	11	EM
M7H2NY	151.0	162.4	148.5	156.6	154.6	0.63	5.1	6.2	150.6	0.25	5.2	6.4	12	LC
M9WGJC	147.2	147.0 L	147.8	146.1	147.0	-0.31	3.7	0.7 L	146.7	-0.45	4.3	1.4	12	LC
MEZEZ4	134.1	131.3 *	135.3	132.9 *	133.4	-2.02 *	6.1	1.7	134.5	-2.61 *	5.8	2.2	12	EM
MJ1DJ9	151.8	150.8	154.7	151.5	152.2	0.33	5.2	1.7	154.8	1.00	4.6	3.5	12	TD
MXCXY3	135.0	140.4 H	134.6	138.4	137.1	-1.56	6.8	2.8	139.4	-1.75	6.2	3.4	12	LZ
MZ42JM	144.4	145.9	143.7	140.8	143.7	-0.73	4.3	2.1	140.8	-1.50	4.4	5.1	11	EN
NNJCPM	145.0	154.6	152.5	148.0	150.0	0.06	4.4	4.3	145.3	-0.69	4.2	5.3	11	LC
NRB2PV	169.5 *	169.2 *	170.1 *	163.7	168.1	2.33 *	5.4	3.0	164.0	2.63 *	5.2	8.4 H	12	LD
NYXCC3	131.7 *	131.2 *	134.8	131.3 *	132.2	-2.17 *	5.5	1.7	140.7	-1.52	4.6	6.6	12	XX
P6KHWU	151.3	138.6 H	143.2 H	134.1	141.8	-0.97	8.1	7.3	141.5	-1.37	6.6	6.5	12	LC
Q6KKNY	148.2 H	146.9	144.2	150.8 H	147.5	-0.25	7.9	2.7	146.7	-0.45	6.2	2.4	12	TM
S1GK71	154.0	153.2	158.3	151.3	154.2	0.58	5.0	2.9	153.2	0.71	5.4	2.4	12	LC
SUX6KU	146.1	141.2	144.3	146.6	144.6	-0.62	4.7	2.4	146.4	-0.50	5.1	5.5	12	LC
T2AMM2	153.3	156.1	159.3	152.2	155.2	0.71	6.3	3.2	150.6	0.25	5.8	4.1	12	LZ
U11X7A	137.7	138.4	146.6	139.6	140.6	-1.12	4.2	4.1	139.6	-1.71	5.0	3.1	12	TB
UZMANW	149.1 L	145.8	142.3	143.9	145.3	-0.53	3.0	2.9	149.4	0.03	3.1	3.9	12	LC
V6ZT5N	152.1	149.7 L	152.0	151.1	151.2	0.21	3.9	1.1	151.8	0.45	5.0	2.1	12	LC
VTWBNM	157.3	160.7	155.3	150.0	155.8	0.79	4.8	4.5	156.7	1.33	4.9	4.1	12	MB
VVEM4D	141.8	153.5	150.5	155.2	150.3	0.09	5.2	6.0	150.8	0.27	4.5	4.8	7	LD
WM4N92	147.1 H	149.5	148.5	147.7	148.2	-0.17	7.4	1.0	147.7	-0.27	7.1	2.4	12	EM
WP41B8	165.4	161.7	166.5	164.2	164.5	1.87	4.8	2.1	160.0	1.91	7.5	4.0	12	LD
Z4G1KW	165.8	164.2 L	171.3 *	169.7 *	167.8	2.28 *	3.8	3.3	166.0	2.97 X	4.2	2.4	12	LC



Consensus (All Labs) Results

Wk Mean	149.69	149.09	150.16	150.20	Month Mean	149.54	Grand Mean	149.23
Avg SDr	5.24	5.42	5.49	5.09	Avg SDr	5.32	Avg SDr	5.27
SD btwn Labs	8.46	8.45	8.69	8.25	SD btwn Labs	7.99	SD btwn Labs	5.64
Labs Includ	66	67	64	62	SD btwn Wks	4.28	SD btwn Wks	4.75
Labs Exclud	0	0	0	1	Labs Includ	67	Labs Includ	64
Labs not rcvd	1	0	3	4				

Instrument Code List as Reported by the Labs

- | | |
|--|--|
| (EM) - Emerson 1200 | (EN) - Emerson 2200 |
| (IM) - Instron 4486 | (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 |
| (MZ) - Messmer Buchel (model not specified) | (TB) - TMI Monitor/Compression Tester, Model 17-70 |
| (TC) - TMI Monitor/Compression Tester, Model 17-37 | (TD) - TMI Digital Crush Tester, Model 17-09 |
| (TM) - TMI/Hinde & Dauch | (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	
2BBUZZT	25.3 L	26.0 L	26.2 L	24.7 L	25.6	1.25	0.4	0.7	24.9	0.65	0.4	1.0	16	LA
5J5CEY	25.1	25.0	24.0	24.7	24.7	0.43	2.2	0.5	24.5	0.20	2.3	1.0	16	LA
718LPB	23.3	24.7	24.4	24.1	24.1	-0.11	1.8	0.6	24.2	-0.09	2.0	0.7	16	XX
76FYH3	24.3	25.5	23.8	24.7	24.5	0.31	2.2	0.7	24.3	-0.01	2.3	0.9	16	LW
8LYZ5Y	25.2	24.3	24.6	23.9	24.5	0.27	1.8	0.6	24.3	-0.08	2.0	0.8	16	LW
8XKDYM	23.2	23.7	24.1	24.1	23.8	-0.43	2.2	0.4	23.8	-0.66	2.0	1.5	16	LW
97V8BZ	22.3 L	22.9 L	22.4 L	22.5 L	22.5	-1.60	0.5	0.3	22.8	-1.71	0.4	0.6	16	LA
9WDPR3	24.3	23.8	23.7	24.1	24.0	-0.21	2.1	0.3	23.8	-0.65	1.9	0.4	16	LW
A7ASTB	25.2	24.4	25.0	21.2 *	24.0	-0.25	2.1	1.8 H	25.3	1.15	2.0	5.0 H	16	LW
B3U2M7	23.8	23.0	22.9	23.1	23.2	-0.96	1.5	0.4	23.9	-0.48	1.7	0.7	15	XX
B4N4L3	23.9	23.1	23.6	24.1	23.7	-0.51	2.3	0.4	23.6	-0.78	2.3	0.5	16	LU
BBN97Y	23.5	24.8	25.1	24.0	24.4	0.12	1.3	0.7	25.3	1.12	1.5	1.1	15	LU
CB76NH	26.4	28.3 X	26.5	26.2	26.8	2.45 *	2.6	1.0	25.9	1.81	2.2	1.0	16	XX
CDEHGS	24.8	24.5	25.5	25.7	25.1	0.84	2.5	0.5	25.2	0.96	2.4	0.8	12	XX
ETA77V	26.4	24.8	27.4 *	25.9	26.1	1.79	2.3	1.1	25.4	1.20	2.0	1.4	16	LZ
G1ZVQH	25.1	24.6	26.7	24.7	25.3	0.98	2.3	1.0	25.1	0.92	2.2	0.6	16	LU
G2N8YA	23.4	22.7	22.9	22.9	23.0	-1.18	1.9	0.3	22.7	-1.89	2.0	0.6	16	XX
G2W29H	24.6	25.0	24.6 L	25.1	24.8	0.57	1.1	0.3	25.0	0.73	1.3	0.3	16	LW
HQXNPB	21.6	20.9 *	23.9	23.4	22.5	-1.65	2.4	1.4	23.3	-1.18	2.3	1.7	13	LA
JDVUBS	23.7	23.2	25.0	24.8	24.2	-0.06	2.4	0.8	24.5	0.17	2.2	0.7	14	LW
K2JN9A	24.8	25.4	26.7	23.2	25.0	0.75	2.0	1.5	24.2	-0.11	2.1	1.0	16	XX
K2JR1F	24.1 L	24.5 L	25.1 L	24.4 L	24.6	0.32	0.1	0.4	25.2	1.03	0.1	0.9	16	TS
KDC327	24.2	24.6	23.5	24.7 L	24.3	0.04	1.8	0.6	24.6	0.28	1.7	0.4	16	BK
MUA16M	24.1	24.7	23.6	25.2	24.4	0.18	2.0	0.7	24.3	-0.03	2.2	0.6	16	LW
MZGU1H	26.2	26.2	24.1	26.2	25.7	1.38	1.7	1.1	25.5	1.40	1.6	0.8	8	LZ
N4JXTJ	23.5	24.1	24.0	24.5	24.0	-0.16	2.0	0.4	24.6	0.31	1.9	1.0	16	LU
NQXGWL	23.4	23.0	22.4	22.4	22.8	-1.33	1.9	0.5	23.1	-1.37	2.0	0.6	16	LU
P1LA2L	25.0	24.7	23.5	23.1	24.1	-0.14	1.5	0.9	25.4	1.18	1.8	1.0	15	LU
P7VXRV	21.3 *L	21.1 *L	23.8 L	21.7 *L	22.0	-2.11 *	0.4	1.2	22.7	-1.81	0.4	1.1	16	XX
PTLTM9	23.5	23.3	24.3	24.3	23.9	-0.34	2.0	0.5	23.6	-0.79	2.0	0.8	15	LW
S4W6PL	20.7 *	20.5 *	19.8 X	20.4 X	20.4	-3.63 X	1.5	0.4	20.6	-4.26 X	1.5	1.4	16	LZ
S6Y7DX	23.2	23.8	22.4	24.4	23.4	-0.73	2.1	0.9	23.9	-0.49	2.2	0.6	16	LW
S7KHNS	26.8 H	23.9	25.3	24.3	25.1	0.80	3.8	1.3	24.6	0.32	3.9	1.2	14	LW
SN1CU2	23.4	22.7	22.7	23.4	23.0	-1.11	2.3	0.4	23.1	-1.43	2.2	0.6	16	LZ



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
TRTYQ9	24.0 L	23.0 L	25.0 L	23.2 L	23.8	-0.38	0.4	0.9	23.6	-0.84	0.4	0.6	16	XX
U4N2XE	24.9	24.5	24.3	24.2	24.5	0.22	2.0	0.3	24.3	0.02	1.5	0.7	16	LU
VGJ6M5	25.0	22.8	23.2	25.3	24.1	-0.14	1.9	1.2	24.5	0.15	1.8	0.9	16	LW
XW1W6Q	25.0	25.0	23.5	25.5	24.7	0.49	2.1	0.8	24.2	-0.20	1.8	0.7	16	LU
YQ4J18	No Data	22.9	23.1	25.0	23.7	-0.51	2.4	1.2	24.2	-0.19	2.2	0.6	14	LW
Z1TTT7	24.3	25.2	23.7	24.6	24.4	0.21	2.0	0.6	24.6	0.33	2.0	0.5	12	LW
ZYN4V5	26.9	25.5	25.6	27.7 X	26.4	2.05*	2.4	1.1	26.3	2.21*	2.2	0.9	16	XX
ZZ2PNE	22.4	22.6	22.1	23.1	22.5	-1.57	2.1	0.4	23.2	-1.32	2.0	0.8	8	LU

Consensus (All Labs) Results									
Wk Mean	24.19	23.93	24.25	24.16	Month Mean	24.22	Grand Mean	24.33	
Avg SDr	2.02	1.98	1.98	1.95	Avg SDr	2.00	Avg SDr	1.97	
SD btwn Labs	1.39	1.31	1.28	1.14	SD btwn Labs	1.07	SD btwn Labs	0.87	
Labs Includ	41	41	41	40	SD btwn Wks	0.84	SD btwn Wks	1.16	
Labs Exclud	0	1	1	2	Labs Includ	41	Labs Includ	41	
Labs not rcvd	1	0	0	0					

Instrument Code List as Reported by the Labs

(BK) - Buchel Strip Compression Tester BK-155

(LA) - L & W Autoline

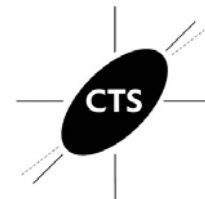
(LU) - L & W 52 without moisture correction (was 53)

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

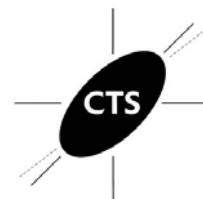
(LZ) - L & W (model not specified)

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

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



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
27VCF3	39.3	38.3	36.7	39.0	38.3	1.33	3.2	1.2	37.9	1.15	4.2	1.0	10	XX
2BU9CF	35.0 L	33.3	35.2	33.1	34.2	-1.11	1.7	1.1	36.2	0.18	2.6	1.9	11	LU
2XJCP8	36.8	35.9	37.5	37.9	37.0	0.57	4.2	0.9	36.7	0.46	3.7	0.9	12	LW
359D75	34.7 L	31.7 *L	36.1	32.4 L	33.7	-1.35	1.0	2.1	33.0	-1.67	1.0	1.3	12	LA
3962MS	37.6	36.2	36.0	36.4	36.6	0.30	3.1	0.7	35.0	-0.55	2.9	1.7	12	LW
46HQNL	36.5	34.9	34.6	35.5	35.4	-0.38	3.4	0.8	35.8	-0.06	3.3	1.4	12	LW
4PG3Y8	34.1	34.0	34.3	34.0	34.1	-1.13	2.7	0.2 L	34.2	-1.00	2.9	0.9	12	LW
86CPA4	37.8	35.5	36.3	36.4	36.5	0.28	2.6	0.9	35.2	-0.43	3.0	1.5	10	LW
8GZP8Y	36.0	34.6	37.4	37.2	36.3	0.16	3.0	1.3	36.0	0.05	2.9	1.3	12	LW
8Q5PAL	34.2	36.3	37.8	33.7	35.5	-0.32	2.9	1.9	35.4	-0.31	3.0	1.3	8	XX
BHEBVW	32.8	34.0	31.9 *	31.8	32.6	-1.99	2.0	1.0	33.5	-1.37	2.7	1.3	8	LU
CTJZ26	33.8	37.7	36.3	38.5	36.6	0.31	2.5	2.1	38.1	1.26	2.6	2.2	10	LU
DJDED4	39.1 L	36.6	37.1	36.8	37.4	0.80	2.1	1.2	38.6	1.56	2.6	1.4	11	LU
DY2A4F	38.1	38.7	39.8	38.9	38.9	1.67	3.2	0.7	38.1	1.24	3.2	1.2	8	XX
E2Z2WC	34.9	36.6	37.7	35.9	36.3	0.15	2.8	1.2	37.8	1.05	2.9	2.1	12	LA
FHK5UE	34.5	37.2	35.8	36.7	36.0	0.00	2.7	1.2	35.8	-0.07	2.6	0.9	12	LW
G6VWAQ	34.5	35.3	36.0	35.4	35.3	-0.43	2.3	0.6	36.0	0.02	1.9	0.7	12	LU
GGH7TC	32.7	35.9	33.4	33.7	33.9	-1.25	3.3	1.4	34.2	-0.99	3.3	1.0	8	LZ
GSLZNG	36.2	36.6	36.1	36.1	36.3	0.13	2.0	0.2	36.7	0.45	1.8	0.7	12	LW
JPNVHV	34.4	34.2	35.7	34.8	34.8	-0.74	2.8	0.7	34.8	-0.62	3.0	0.6	12	LU
MJ71E1	37.9	33.5 L	36.4	34.3 L	35.5	-0.29	2.4	2.0	35.6	-0.21	2.5	1.6	12	LU
MUJVBF	35.1 L	34.0 L	36.5 L	35.1 L	35.2	-0.50	0.9	1.0	34.5	-0.80	0.8	1.1	12	XX
MWEX83	31.5 *	33.2	31.9 *	33.9	32.6	-2.02 *	2.8	1.1	32.8	-1.81	2.5	0.6	12	XX
MXFQKG	39.9 *	37.2	38.2	39.4	38.7	1.55	2.6	1.2	38.8	1.67	2.8	1.0	12	XX
N8CUJU	34.6 L	34.3 L	38.7 L	36.1 L	35.9	-0.08	1.0	2.0	34.3	-0.92	0.9	1.7	12	XX
NHLDZK	No Data	34.6	34.5	35.2	34.8	-0.75	2.6	0.4	35.6	-0.21	2.8	0.8	11	LW
P9CG5K	36.5	35.4	35.6	36.4	36.0	-0.04	2.8	0.5	35.9	-0.01	2.7	0.6	12	LW
PLU2QG	34.9 L	34.0	35.9	37.2	35.5	-0.32	1.7	1.4	35.5	-0.24	1.9	1.6	8	LZ
QFZKWN	27.4 X	29.4 X	29.0 X	30.7 *	29.1	-4.08 X	1.9	1.4	31.6	-2.48 *	2.1	5.7 H	11	LZ
R9ZBD2	35.5 L	37.1	37.1	35.8	36.4	0.20	2.5	0.9	36.5	0.31	2.4	1.0	12	BK
RWAF8	39.7 L	40.0 *L	42.0 XL	38.7 L	40.1	2.37 *	0.2	1.4	39.5	2.07 *	0.3	2.9 H	12	TS
T8S6RN	34.7	35.5	34.4	35.2	34.9	-0.66	2.7	0.5	34.8	-0.63	2.5	0.6	12	XX
V2YQY8	38.0	40.1 *	36.9	41.2 *	39.0	1.76	3.7	2.0	38.5	1.45	3.8	1.7	12	LA
VMLGAB	35.5	36.8	35.0	36.4	35.9	-0.07	2.5	0.8	36.3	0.19	2.4	0.9	6	LW



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
VP81Y3	35.6	32.2	36.0	34.8	34.6	-0.82	2.5	1.7	34.8	-0.64	2.8	1.1	10	LW
VXWGCD	38.3	37.4	38.0	35.8	37.4	0.78	2.8	1.1	37.0	0.60	2.8	1.0	12	LZ
W88414	35.8	35.8	34.0	35.7	35.3	-0.43	2.2	0.9	35.5	-0.23	2.2	0.8	12	LW
WNKNQA	36.8	36.5	36.9	37.1	36.8	0.46	2.7	0.3	36.6	0.40	2.6	0.9	12	LU
X27QZL	37.3 ^H	39.5	40.7 [*]	39.8	39.3	1.93	7.5	1.5	38.2	1.32	7.8	2.3	12	LW
YSSRRX	35.5 ^L	35.2 ^L	34.6 ^L	36.8 ^L	35.5	-0.31	0.7	0.9	35.0	-0.53	0.9	1.2	12	LA
ZZ9E5Z	36.2	35.7	37.1	36.8	36.4	0.24	2.9	0.6	36.5	0.36	2.5	0.8	12	LU

Consensus (All Labs) Results														
Wk Mean	35.96	35.79	36.16	36.01	Month Mean				36.04	Grand Mean				35.92
Avg SDr	3.34	2.66	2.51	2.70	Avg SDr				2.81	Avg SDr				2.87
SD btwn Labs	1.97	1.97	1.82	2.17	SD btwn Labs				1.70	SD btwn Labs				1.74
Labs Includ	39	40	39	41	SD btwn Wks				1.20	SD btwn Wks				1.60
Labs Exclud	1	1	2	0	Labs Includ				40	Labs Includ				41
Labs not rcvd	1	0	0	0										

Instrument Code List as Reported by the Labs

(BK) - Buchel Strip Compression Tester BK-155

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

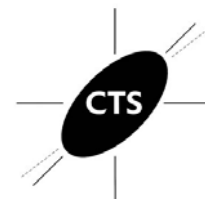
(LZ) - L & W (model not specified)

(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
3YPDUD	100.9	-1.22	11.0	96.2	-1.63	11.3	4	EV
5BA7LX	117.1	-0.34	17.4	111.0	-0.88	14.7	4	LA
8HAJGK	115.3	-0.44	18.5	120.6	-0.39	15.1	4	EV
BE5BCH	148.8	1.36	20.1	165.8	1.92	39.2	2	XX
DFK9ZS	150.2	1.44	25.7	150.2	1.12	25.7	1	EV
E57QV9	110.2	-0.71	11.7	108.6	-1.00	13.6	4	EV
EAVWBB	83.0	-2.18 *	8.3	132.3	0.21	10.0	4	EV
EMAUBD	203.1	4.29 X	22.5	195.9	3.46 X	23.6	4	EV
GT5QWG	137.2	0.74	17.0	127.2	-0.05	14.6	4	EV
J8WNCN	123.8	0.02	18.5	159.6	1.60	30.0	4	XX
JRMJAX	145.4	1.18	16.1	145.7	0.89	20.4	4	EV
KNYBK9	123.9	0.02	9.4	107.8	-1.04	8.6	4	EV
NSEWY7	131.7	0.44	14.9	142.9	0.75	17.7	4	EV
NU227Q	135.0	0.62	15.6	139.0	0.55	17.0	4	EV
QNF8Q2	121.9	-0.09	21.7	125.6	-0.14	15.5	4	EV
QV24VS	91.1	-1.74	8.5	92.9	-1.80	46.6	4	EV
SPAKL8	109.5	-0.76	9.5	113.1	-0.77	10.4	4	EV
WXZYFN	146.4	1.24	10.7	137.7	0.48	11.7	3	EV
XMLXX2	125.7	0.12	10.4	130.0	0.09	13.9	4	EV
Y7V1Q5	119.2	-0.23	5.2	128.7	0.02	6.8	3	EV
Z7PWKX	446.0	17.37 X	0.0	285.4	8.02 X	17.1	2	EV
ZKJ1W4	133.3	0.53	4.1	129.7	0.08	3.6	2	EV

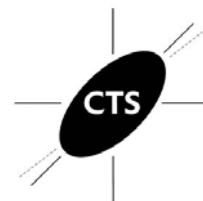
Consensus (All Labs) Results			
Month Mean	123.47	Grand Mean	128.23
Avg SDr	14.79	Avg SDr	20.21
SD btwn Labs	18.56	SD btwn Labs	19.59
Labs Incd	20	Labs Incd	20

Instrument Code List as Reported by the Labs

(EV) - Emveco Microgage Model 210-R

(LA) - L & W Autoline

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



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
1TXVF5	108.0	0.31	8.9	108.5	0.45	7.7	4	HZ
B96QWU	115.8	1.16	1.9	116.7	1.26	5.6	4	TM
BB61GH	120.4	1.67	3.8	121.7	1.76	7.3	3	HY
EMGDJV	95.4	-1.06	7.3	95.6	-0.83	7.3	4	SC
KMWM1K	105.8	0.08	10.8	105.1	0.11	8.7	4	SC
MDUPCN	114.0	0.97	8.7	110.3	0.63	6.9	4	SC
MT76WA	111.2	0.67	4.3	107.3	0.34	5.3	4	HY
P39M1R	104.8	-0.04	4.5	103.2	-0.08	5.3	4	TM
P68XWR	112.8	0.84	3.4	112.7	0.87	6.5	4	TM
PPQE9E	107.4	0.25	8.6	103.7	-0.03	6.8	4	HY
RTWE9F	93.8	-1.23	2.8	96.2	-0.77	6.0	4	TM
T1X1XM	88.6	-1.80	5.6	83.8	-2.00*	6.7	4	XX
WPSZ97	100.6	-0.49	3.5	100.6	-0.33	5.2	4	SC
YN9NQT	104.2	-0.10	4.8	105.6	0.16	6.1	4	SC
YVBSLJ	94.0	-1.21	3.4	88.5	-1.54	7.4	4	TM

Consensus (All Labs) Results			
Month Mean	105.12	Grand Mean	103.95
Avg SDr	6.07	Avg SDr	6.67
SD btwn Labs	9.17	SD btwn Labs	10.05
Labs Incd	15	Labs Incd	15

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

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

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
1T5DNN	27.4	-0.22	3.1	26.8	-0.63	3.2	4	ZZ
2QQ7W7	29.3	0.28	3.0	29.6	0.61	3.4	4	ZZ
3G2ZFL	29.0	0.20	3.5	27.6	-0.26	3.3	4	ZZ
3GW885	32.5	1.13	1.8	29.3	0.45	2.4	4	ZZ
4FMX57	25.8	-0.65	1.6	29.4	0.50	3.6	4	ZZ
7KKA29	32.0	1.00	2.9	33.5	2.28*	4.1	4	ZZ
7XXPXM	37.6	2.49*	2.1	37.2	3.89X	2.9	3	ZZ
AP7ZCW	32.5	1.13	1.0	31.2	1.27	1.5	4	ZZ
B2ZTMX	27.2	-0.28	3.6	29.1	0.37	2.6	4	ZZ
DGDZGD	27.2	-0.28	1.5	28.3	0.02	3.8	4	ZZ
FJ6JSJ	29.4	0.31	4.7	28.7	0.20	3.3	4	ZZ
GSD3LJ	29.0	0.20	1.6	27.7	-0.23	1.8	4	ZZ
JCZ8T7	26.8	-0.38	1.6	28.9	0.30	3.5	4	ZZ
JFUQPU	32.0	1.00	3.1	31.1	1.24	2.6	4	ZZ
LLLYGY	21.6	-1.77	2.3	23.1	-2.20*	1.9	4	ZZ
P4EHFH	23.9	-1.16	2.6	24.6	-1.57	3.3	4	ZZ
PXEQBZ	28.4	0.04	3.0	27.6	-0.28	3.2	4	ZZ
R423KR	26.6	-0.44	3.4	25.7	-1.10	4.1	4	ZZ
RGJMV2	29.2	0.26	1.8	29.1	0.39	3.1	4	ZZ
SYQFMF	25.8	-0.65	1.3	28.7	0.20	2.0	4	ZZ
TPUE84	28.0	-0.06	0.4	28.4	0.08	0.4	4	ZZ
VY9LYA	19.8	-2.25*	4.0	24.8	-1.49	3.7	4	ZZ
XMCASE	28.5	0.06	0.9	27.9	-0.15	1.5	2	ZZ

Consensus (All Labs) Results			
Month Mean	28.24	Grand Mean	28.20
Avg SDr	2.62	Avg SDr	2.99
SD btwn Labs	3.76	SD btwn Labs	2.32
Labs Incd	23	Labs Incd	22

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
2EHLCL	12.6	-1.62	1.3	16.0	-0.17	2.8	4	LA
31CQTJ	13.8	-0.96	2.3	15.9	-0.18	1.6	3	XX
3AWVCN	14.0	-0.84	1.5	17.3	1.07	3.0	4	XX
7FCPMC	15.1	-0.28	2.3	16.5	0.33	3.0	4	GG
ABABL2	17.2	0.86	1.7	17.8	1.56	1.4	2	LW
ACY3JV	15.5	-0.07	1.8	16.7	0.56	3.6	4	HG
AMAXW7	16.8	0.62	2.0	16.3	0.12	2.5	4	LP
BNZUY1	15.4	-0.11	1.6	15.1	-0.93	3.3	4	GS
CAJDGU	15.7	0.02	2.2	16.9	0.69	3.1	4	HG
DD7LK8	11.9	-1.99	2.5	15.4	-0.74	3.2	4	XX
FLE4QB	19.7	2.15 *	5.6	17.8	1.60	3.9	4	XX
GND8LB	16.5	0.45	2.0	14.5	-1.55	2.0	4	LA
QRXGN3	16.4	0.41	1.4	16.7	0.51	3.3	3	XX
RK29FE	17.2	0.85	2.9	20.0	3.66 X	2.8	4	LA
SKT9KY	16.9	0.71	1.0	15.5	-0.57	2.2	4	LP
TR33T7	17.1	0.80	2.9	16.3	0.16	3.5	4	GA
VDQK6W	14.0	-0.84	3.0	15.7	-0.41	3.6	4	TL
VYQC1M	15.3	-0.16	2.7	14.0	-2.06 *	2.8	4	XX

Consensus (All Labs) Results			
Month Mean	15.61	Grand Mean	16.14
Avg SDr	2.47	Avg SDr	2.95
SD btwn Labs	1.88	SD btwn Labs	1.06
Labs Incd	18	Labs Incd	17

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



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
2DA9W5	61.3 H	61.2 H	No Data	No Data	61.3	-0.84	8.8	0.1 L	68.5	3.24 X	4.6	3.7 H	14	LZ
2VMJCR	64.5	61.3	64.8	62.0	63.2	0.01	3.3	1.7	62.9	0.05	3.0	1.6	16	TD
39LWFT	63.8	61.9	62.5	61.0	62.3	-0.37	2.4	1.2	61.6	-0.66	2.4	1.1	16	TB
44UDNF	62.6	63.8	63.1	61.9	62.9	-0.12	3.8	0.8	62.7	-0.05	3.2	1.4	16	LC
4V163Q	64.0	63.6	65.1	63.9	64.2	0.46	3.5	0.7	63.5	0.40	3.4	2.9	16	LC
57BVJ6	64.5	62.7	64.1	64.5	64.0	0.37	2.6	0.9	63.0	0.10	2.4	0.8	16	TA
5DA6BB	59.0	58.8 *	62.0	60.4	60.1	-1.37	3.3	1.5	60.0	-1.56	4.2	1.8	16	LC
5JE3XW	63.6	61.8	65.2	65.8	64.1	0.42	3.0	1.8	62.5	-0.12	3.3	1.7	16	LC
68XHD1	62.5	65.0	63.9	60.1	62.9	-0.11	3.3	2.1	63.2	0.23	3.6	1.5	16	LC
789TBR	No Data	59.7 H	63.3 H	64.2 H	62.4	-0.32	9.0	2.4	63.0	0.15	7.0	3.4 H	15	LX
7C8UYT	62.6	64.8 L	63.1	62.5	63.3	0.05	2.6	1.1	62.7	-0.01	2.4	1.0	16	LC
7HA6MZ	63.2	62.0	59.8	60.8	61.4	-0.75	2.5	1.5	62.0	-0.41	2.9	1.3	12	LD
8JTQNV	68.3 *	66.4	68.5 *	67.3	67.6	2.01 *	3.4	1.0	67.1	2.43 *	3.6	1.9	16	LD
92Z5Z2	64.0	64.9	No Data	No Data	64.4	0.58	3.4	0.6	61.4	-0.75	2.9	1.6	14	LC
9FM99J	65.6	64.6	64.0	64.7	64.7	0.71	2.8	0.7	63.9	0.62	2.9	2.5	16	XX
B77R6G	62.5	64.3	No Data	64.5	63.8	0.29	3.0	1.1	63.2	0.24	2.9	1.0	15	LC
D66WHQ	63.0	65.5	63.8	63.7	64.0	0.38	2.9	1.1	62.3	-0.25	3.2	1.5	16	LC
HNXGB6	62.0	61.7	62.4	60.9	61.8	-0.61	3.8	0.6	60.8	-1.11	3.1	1.7	16	LZ
HTNC9A	61.8	61.5	62.0	61.9	61.8	-0.61	2.2	0.2 L	60.5	-1.28	2.0	0.9	16	LC
J4J72T	67.3	65.8 L	63.8	64.4	65.3	0.99	3.5	1.5	65.6	1.57	3.2	1.8	15	LZ
JSZTLJ	60.1	60.7	59.7	58.0 *	59.6	-1.56	2.2	1.2	60.1	-1.49	2.6	1.3	16	LX
LARQ7W	57.5 *	61.4	61.1	59.5	59.9	-1.45	3.8	1.8	60.9	-1.06	3.9	2.3	16	MB
M43F6C	61.8	64.7	62.8	62.4	62.9	-0.09	2.8	1.3	63.0	0.13	2.8	0.7	16	LD
MCVNR3	No Data	61.5	59.8	60.3	60.5	-1.17	2.5	0.9	61.2	-0.86	2.8	2.0	15	LC
NMVM7F	61.5	60.9	62.4	62.4	61.8	-0.59	2.6	0.7	61.2	-0.87	3.0	1.2	16	TD
NQ3EJ8	61.2	62.7 L	62.6	60.7	61.8	-0.60	1.7	1.0	61.6	-0.66	2.2	1.4	15	LC
NTZCN1	65.4	66.3	62.5	67.4	65.4	1.00	2.3	2.1	66.4	2.03 *	2.7	2.7	15	LC
P99611	52.8 XH	53.1 X	60.4	63.6	57.5	-2.53 *	4.3	5.4 H	60.3	-1.37	3.8	5.4 H	16	LC
Q5H1CR	62.7	63.7	62.6	63.1	63.0	-0.06	2.7	0.5	62.1	-0.35	2.4	0.9	16	LD
S8VAR6	66.2	65.6	64.7	66.0	65.6	1.10	3.5	0.7	64.3	0.84	3.0	1.8	16	LZ
SJ5KS6	57.8 *	59.3	60.2 H	62.7	60.0	-1.40	4.1	2.1	60.6	-1.22	3.3	1.8	16	MB
SJJ7XC	61.7	61.5	No Data	63.2	62.1	-0.44	3.3	0.9	60.8	-1.12	3.3	1.6	15	TM
SQX59Z	62.9 H	66.8	63.9	64.6	64.5	0.63	4.4	1.7	63.2	0.26	4.1	2.6	15	LC
SXKQYZ	No Data	64.7	70.8 X	70.7 X	68.7	2.49 *	4.1	3.5 H	70.2	4.17 X	3.9	4.0 H	15	LC



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
SXLQL5	62.6	62.4	60.2 L	62.3	61.9	-0.55	2.4	1.1	62.5	-0.16	2.1	1.0	16	LC
VGHAXU	63.1	66.8	67.0	65.5	65.6	1.10	3.8	1.8	63.9	0.62	2.9	1.9	16	LC
W4W34S	66.2	65.9	65.5	67.1	66.2	1.36	2.6	0.7	65.8	1.72	2.3	0.9	16	LD
W8LWHZ	66.6	66.3	67.9 *	67.3	67.0	1.73	3.1	0.7	66.9	2.32 *	3.1	1.0	16	EM
WFQJW9	61.6	63.3	63.5	62.8	62.8	-0.15	3.1	0.9	63.5	0.43	3.1	1.4	16	LC
WWL9Z4	67.2	63.4	62.9	63.7	64.3	0.51	3.5	2.0	63.0	0.14	2.8	1.9	16	LC
XTF4ZP	61.6	62.8	62.3	64.0	62.7	-0.20	2.9	1.0	63.0	0.14	2.6	1.2	15	LC
Y19RAL	61.6	62.2	61.0	62.0	61.7	-0.64	3.3	0.5	63.4	0.36	3.0	1.2	16	LC
Y38LPW	64.4	64.8	62.7	63.8	63.9	0.34	2.7	0.9	63.9	0.61	3.2	1.6	16	LD

Consensus (All Labs) Results											
Wk Mean	63.07	63.30	63.07	63.17	Month Mean	63.13				Grand Mean	62.76
Avg SDr	3.44	3.71	3.25	3.28	Avg SDr	3.64				Avg SDr	3.19
SD btwn Labs	2.42	2.13	2.10	2.24	SD btwn Labs	2.24				SD btwn Labs	1.78
Labs Includ	39	42	38	40	SD btwn Wks	1.57				SD btwn Wks	1.89
Labs Exclud	1	1	1	1	Labs Includ	43				Labs Includ	41
Labs not rcvd	3	0	4	2							

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



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
2AM26G	79.5	80.1	79.2 L	78.3	79.3	1.28	2.2	0.8	79.4	1.37	2.5	1.3	16	LD
3CL1WU	71.0	73.3	70.6	71.5	71.6	-0.33	1.9	1.2	73.7	0.02	2.3	1.5	16	TD
4975EV	No Data	77.8	76.5	77.2	77.2	0.84	2.1	0.6 L	76.6	0.71	2.6	1.6	15	LZ
6CLGA3	69.7	70.9	69.2	68.6	69.6	-0.75	1.1	1.0	71.0	-0.64	1.8	3.2	16	XX
75T9LV	73.6 H	74.3	70.9	74.5	73.3	0.04	3.1	1.7	74.4	0.19	2.8	1.4	16	LC
7BE78X	69.7	69.4	70.8	70.1	70.0	-0.66	2.1	0.6 L	70.6	-0.74	2.2	0.8	16	XX
BP9WML	74.1	76.8	76.4	76.3	75.9	0.58	2.6	1.2	76.7	0.73	2.7	1.4	16	TB
CC3S53	78.7 H	76.1	74.7	75.7	76.3	0.66	3.2	1.7	74.0	0.07	2.9	8.7 H	12	LD
DK2D7N	79.2	78.8	81.0	79.9	79.7	1.37	2.5	1.0	79.2	1.34	2.5	1.1	16	XX
ETFN59	68.9	69.9	68.0	68.9	68.9	-0.88	1.9	0.8	69.1	-1.09	2.2	0.9	16	LD
FHX7C3	68.9	68.0	68.8 L	66.4	68.0	-1.07	1.5	1.1	69.5	-1.01	1.7	1.8	16	XX
FQ2KKG	72.6	72.3	73.3	73.1	72.8	-0.06	1.6	0.4 L	72.2	-0.35	1.7	1.1	15	LC
KF2E1C	68.2	67.0	66.8	66.8 L	67.2	-1.24	1.7	0.7	65.7	-1.92	2.8	2.7	16	LZ
V5QQX4	77.9	77.9	77.0	78.9	78.0	1.00	2.2	0.8	78.3	1.12	2.3	1.1	16	LC
VL26VL	78.3	77.5	78.7	78.1	78.2	1.05	3.3	0.5 L	78.2	1.10	2.9	1.4	16	MB
ZAXV6S	44.1 X	71.6	70.9 H	71.1	64.4	-1.82	2.9	13.5 H	69.9	-0.91	2.9	7.3 H	15	XX

Consensus (All Labs) Results

Wk Mean	73.59	73.85	73.30	73.47	Month Mean	73.15	Grand Mean	73.66
Avg SDr	2.13	2.16	2.46	2.44	Avg SDr	2.32	Avg SDr	2.45
SD btwn Labs	4.34	4.14	4.40	4.49	SD btwn Labs	4.78	SD btwn Labs	4.15
Labs Includ	14	16	16	16	SD btwn Wks	3.52	SD btwn Wks	3.23
Labs Exclud	1	0	0	0	Labs Includ	16	Labs Includ	16
Labs not rcvd	1	0	0	0				

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	
3MMNPR	41.5	41.5	42.2	43.3	42.1	0.20	2.0	0.9	42.4	0.50	1.8	1.1	16	TD
4ECVGN	41.5	41.1	No Data	42.7	41.8	0.05	3.8	0.8	40.8	-0.40	3.3	1.0	15	LC
4FB2WM	46.4*	40.2	40.5	45.7	43.2	0.71	2.6	3.3 H	41.6	0.07	2.9	2.8 H	15	LC
7TCMA9	38.9	37.2	37.9*	38.1	38.0	-1.73	3.2	0.7	40.4	-0.61	3.5	2.8 H	16	LC
95NGY7	44.2	44.6	44.9	42.6 L	44.1	1.13	1.8	1.0	42.5	0.59	2.2	1.7	16	MB
EFQQ9C	38.4	37.4	35.3 X	35.7* L	36.7	-2.35*	1.6	1.5	37.8	-2.09*	1.6	1.1	16	WK
GPCCME	41.8	40.2 H	39.4	43.7	41.3	-0.18	3.6	1.9	41.0	-0.26	3.0	1.5	16	TB
GV9BMM	43.8	43.9	44.8	44.7	44.3	1.24	2.2	0.5	44.2	1.55	2.3	1.3	16	LZ
HGWJ2N	45.6	46.9*	No Data	No Data	46.2	2.16*	2.6	0.9	44.3	1.60	2.6	1.2	14	MZ
J7YTJE	No Data	40.6	41.1	38.8 H	40.2	-0.72	4.1	1.2	38.6	-1.65	2.9	2.1	15	LX
JYV1LR	41.4	41.8	41.1	40.9	41.3	-0.19	2.3	0.4	42.0	0.32	2.1	1.0	16	LC
K2BK76	42.7	45.2	43.3	42.9	43.5	0.87	2.5	1.1	44.2	1.58	2.4	1.9	16	LZ
K6ZVXQ	39.8	42.1	No Data	No Data	40.9	-0.35	2.5	1.6	39.6	-1.06	2.3	1.5	14	LC
KVHD5J	42.1	42.0	42.5	43.5	42.5	0.40	2.2	0.7	41.8	0.20	2.0	0.9	16	LC
MBKTHH	42.1	43.1	42.4	42.3	42.5	0.37	2.7	0.4	43.4	1.08	2.6	1.3	16	LC
NMZXBZ	41.5	39.9	41.1	39.1	40.4	-0.62	2.4	1.1	41.2	-0.13	2.2	1.7	16	TB
PNE3K3	40.9	42.0 L	41.8	41.5 L	41.6	-0.06	1.5	0.5	41.2	-0.14	1.5	0.8	16	LC
S45W66	39.9	40.5	41.4	41.1	40.7	-0.45	2.6	0.7	40.5	-0.58	2.1	0.9	16	LD
UYP6Z2	40.4	40.7	41.3	41.5 L	41.0	-0.34	1.3	0.5	41.6	0.07	1.3	1.2	16	LC
WB8DZZ	40.3	41.0	41.5	42.9	41.4	-0.12	2.3	1.1	40.3	-0.65	1.8	1.0	16	EN

Consensus (All Labs) Results														
Wk Mean	41.74	41.58	41.70	41.73	Month Mean	41.68			Grand Mean	41.48				
Avg SDr	2.35	2.57	2.46	2.85	Avg SDr	2.60			Avg SDr	2.40				
SD btwn Labs	2.09	2.35	1.76	2.49	SD btwn Labs	2.11			SD btwn Labs	1.75				
Labs Includ	19	20	16	18	SD btwn Wks	1.23			SD btwn Wks	1.55				
Labs Exclud	0	0	1	0	Labs Includ	20			Labs Includ	20				
Labs not rcvd	1	0	3	2										

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

(LD) - L&W Crush Tester 248

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

(MZ) - Messmer Buchel (model not specified)

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

(LC) - L & W Crush Tester 48

(LX) - L & W 506

(MB) - Messmer Buchel K440

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

(WK) - Zwick Z005 Crush Tester

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



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	
5QPH5D	13.1	13.2	13.2*	11.6X	12.8	-7.35X	1.1	0.8	13.8	-1.51	1.1	1.2	16	LZ
88A8VP	14.4	14.7	15.4	14.7	14.8	0.27	1.1	0.4	14.4	-0.39	1.1	0.5	15	LW
BF1WZH	15.8	15.0	14.3	14.7	15.0	0.84	1.2	0.6	15.8	2.09*	1.1	3.8H	16	LW
EBCJP5	15.3	14.1	14.5	14.4	14.6	-0.64	1.1	0.5	14.4	-0.51	1.1	0.4	16	LW
H5VMWU	15.5	15.6	14.6	14.7	15.1	1.27	0.9	0.5	14.7	0.19	1.1	0.9	15	LW
K4FU34	14.4	14.2	14.3	14.8	14.4	-1.15	1.2	0.3	14.4	-0.44	1.1	0.3	16	LU
R1MG36	14.3	14.4	14.6	14.3	14.4	-1.24	1.1	0.1	14.5	-0.26	1.1	0.2L	16	XX
UWKJEA	14.6	14.7	15.3	15.5X	15.0	1.08	1.1	0.5	15.1	0.78	1.1	0.4	16	LU
XYS4HZ	14.6	14.5	14.7	14.6	14.6	-0.43	1.1	0.1L	14.7	0.05	1.2	0.2L	16	XX

Consensus (All Labs) Results											
Wk Mean	14.66	14.48	14.55	14.60	Month Mean	14.73				Grand Mean	14.64
Avg SDr	1.20	1.08	1.02	1.15	Avg SDr	1.11				Avg SDr	1.10
SD btwn Labs	0.80	0.66	0.63	0.16	SD btwn Labs	0.27				SD btwn Labs	0.54
Labs Includ	9	9	9	7	SD btwn Wks	0.42				SD btwn Wks	1.40
Labs Exclud	0	0	0	2	Labs Includ	8				Labs Includ	9
Labs not rcvd	0	0	0	0							

Instrument Code List as Reported by the Labs

(LU) - L & W 52 without moisture correction (was 53)
 (LZ) - L & W (model not specified)

(LW) - L & W 53 with moisture correction (was 53M)
 (XX) - Instrument make/model not specified by lab