

Collaborative Testing Services, Inc. Containerboard Interlaboratory Testing Program

Participant Summary Report #482 (M)- November 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>42X</u>	<u>Roughness - Stylus Method, 42 lb Linerboard</u>
<u>231</u>	<u>42X</u>	<u>Internal Bond Strength, Linerboard, 42 lb Linerboard</u>
<u>234</u>	<u>42X</u>	<u>Coefficient of Static Friction - Inclined Plane, 42 lb Linerboard</u>
<u>237</u>	<u>42X</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

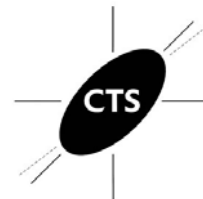


WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
9C9ZEG	876.8	-1.07	76.4	854.4	-1.97	65.6	4	LO
9UMER6	811.0	-2.30 *	44.8	848.8	-2.12 *	103.7	4	LH
A48FWY	885.8	-0.90	38.9	927.5	0.00	65.9	4	TP
ACXPTU	1,005.5	1.35	95.9	971.3	1.18	57.0	4	TR
C3WYNN	1,000.0	1.24	39.8	1,006.8	2.13 *	53.1	4	LM
CXCT8Q	880.7	-0.99	13.2	887.0	-1.09	33.9	4	XX
D4DN4V	999.5	1.23	50.2	937.0	0.25	36.2	4	TC
D77ZZ2	998.2	1.21	72.6	937.9	0.28	59.3	4	LL
DCGLDJ	965.6	0.60	62.4	962.0	0.93	59.2	4	EX
EYCX4A	933.4	-0.01	71.8	932.3	0.13	66.1	4	LG
GZ4MP3	877.8	-1.05	28.9	878.3	-1.33	89.6	4	TS
JJPZGW	1,026.8	1.74	31.4	950.0	0.61	43.9	4	RP
JNKEUQ	932.6	-0.02	29.8	916.9	-0.29	52.3	4	TB
K8WERX	892.8	-0.77	52.3	910.7	-0.45	75.4	4	EX
KQN2WG	930.9	-0.05	64.2	923.7	-0.10	50.1	4	LN
KRW98W	915.6	-0.34	17.2	908.0	-0.53	27.3	4	XX
LKUMNK	998.8	1.22	31.0	959.7	0.87	57.0	4	MC
LKZPV4	919.9	-0.26	58.2	958.1	0.82	65.1	4	XX
MCMZVB	890.5	-0.81	64.1	891.5	-0.97	63.9	4	LO
MTRCKE	973.2	0.74	12.5	975.0	1.28	48.2	4	ER
Q3PBLC	886.8	-0.88	43.8	908.5	-0.51	38.2	4	ES
QA9GHJ	943.9	0.19	47.8	950.8	0.63	52.8	4	XX
TYMJUX	964.7	0.58	101.1	923.5	-0.11	74.4	4	LH
U3GJ7R	928.7	-0.09	33.0	939.2	0.31	59.5	4	LL
VV3RYR	902.6	-0.58	68.9	930.1	0.07	61.9	4	ER

Consensus (All Labs) Results

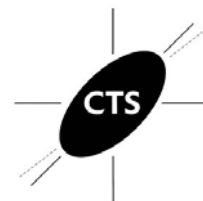
Month Mean	933.68	Grand Mean	927.55
Avg SDr	55.09	Avg SDr	60.67
SD btwn Labs	53.37	SD btwn Labs	37.15
Labs Incd	25	Labs Incd	25

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
2XBFV7	42.8	1.00	4.0	42.1	0.97	3.5	4	TD
6TNW7K	41.8	0.74	1.6	40.9	0.62	1.8	4	LC
9LU76T	37.9	-0.25	1.8	38.8	-0.01	2.1	4	EN
C7MDWF	39.1	0.05	1.3	39.7	0.28	1.1	4	TC
KGZBAN	31.7	-1.82	1.6	32.5	-1.89	1.8	4	WK
YNKXQY	40.0	0.29	2.9	38.9	0.03	3.2	4	LC

Consensus (All Labs) Results					
Month Mean	38.89		Grand Mean	38.83	
Avg SDr	2.39		Avg SDr	2.39	
SD btwn Labs	3.95		SD btwn Labs	3.32	
Labs Incd	6		Labs Incd	6	

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

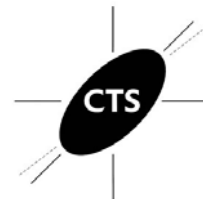
(WK) - Zwick Z005 Crush Tester

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
2DMUEP	41.2	-0.60	2.6	42.8	0.14	1.9	4	LC
2PQBT6	36.9	-2.23 *	1.0	37.0	-2.31 *	1.1	4	XX
2ZYBVY	42.0	-0.30	1.5	43.7	0.52	3.0	3	LC
33X9GB	44.5	0.65	3.6	44.4	0.83	3.0	4	TM
3HHZPW	41.2	-0.59	2.7	40.8	-0.70	2.2	4	EN
48LULX	43.5	0.26	1.4	43.1	0.27	1.6	4	EN
4ALKDX	46.8	1.52	2.1	47.4	2.10 *	1.6	4	EM
7F64WB	44.2	0.54	4.1	43.5	0.44	3.7	4	EM
9WGX2	40.6	-0.82	2.0	40.6	-0.79	2.9	4	EN
A2GEBQ	39.0	-1.44	1.2	41.0	-0.60	1.9	4	TC
A8X7AV	42.7	-0.03	1.3	43.3	0.35	1.8	4	LC
BGACHX	40.7	-0.77	1.4	41.2	-0.52	1.6	4	XX
CU2TBB	49.2	2.42 *	3.2	46.6	1.76	2.2	4	EX
D8VVL3	43.3	0.19	1.3	41.5	-0.38	1.8	4	EM
E9V6CQ	41.3	-0.56	2.1	42.1	-0.16	2.3	4	LC
EFM8CV	42.6	-0.09	1.7	41.6	-0.38	2.1	4	TA
FFAA3P	40.6	-0.82	2.4	41.7	-0.32	2.0	4	TC
FPFAHH	44.4	0.60	1.4	42.9	0.21	2.4	4	LC
FW2HA9	44.7	0.74	1.2	42.9	0.20	1.1	4	TL
H7ZVJ8	44.1	0.49	1.9	41.4	-0.43	3.1	4	EM
JGF2V2	46.8	1.53	1.4	47.7	2.24 *	2.5	4	LC
JV3DDQ	43.2	0.17	2.5	45.7	1.38	2.2	3	LC
LCR32H	41.4	-0.52	3.0	40.4	-0.86	2.9	4	LX
M7DR9N	42.5	-0.10	2.9	41.5	-0.40	2.5	4	LC
MHKTDT	43.1	0.13	1.3	43.2	0.32	1.6	4	TD
PFA44L	43.4	0.23	1.1	43.1	0.30	1.2	4	TC
PJCFDM	43.0	0.08	1.6	44.8	1.01	1.8	3	LC
QW3JF4	42.1	-0.26	1.6	41.6	-0.36	1.7	4	LD
QYFXBH	39.7	-1.18	1.9	40.4	-0.87	2.0	4	TB
RCTEDZ	39.5	-1.23	1.2	41.9	-0.21	1.3	4	TC
TG8DG7	42.7	-0.03	2.1	43.1	0.30	2.0	4	TD
U43ZVK	47.3	1.70	2.4	41.3	-0.48	2.3	4	LC
XHBAE7	47.9	1.92	0.9	43.6	0.51	1.2	4	TC
YZ2F6P	41.6	-0.46	1.3	41.1	-0.57	1.2	4	EM
ZMD66K	39.8	-1.13	1.6	36.5	-2.54 *	1.3	4	CT

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



Consensus (All Labs) Results

Month Mean	42.79	Grand Mean	42.44
Avg SDr	2.06	Avg SDr	2.12
SD btwn Labs	2.65	SD btwn Labs	2.34
Labs Incd	35	Labs Incd	35

Instrument Code List as Reported by the Labs

(CT) - Con-Ten	(EM) - Emerson 1200 Series
(EN) - Emerson 2200	(EX) - Emerson (model not specified)
(LC) - L&W Crush Tester 48	(LD) - L&W Crush Tester 248
(LX) - L&W 506	(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	(TL) - Tech-Lab Systems Compression
(TM) - TMI/Hinde & Dausch	(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	
3XWQRY	112.5	116.2	108.7	117.5	113.7	1.69	8.1	4.0	111.9	1.64	10.8	5.5	16	TB
4BB2B2	120.3*	106.8	109.0	108.0	111.0	0.96	11.3	6.2	110.4	1.16	10.5	4.0	16	AA
4C24Y2	111.4	109.9	111.4	109.3	110.5	0.82	4.9	1.1	108.7	0.63	5.1	1.8	16	XX
4GKAWM	119.3*	122.1X	119.6*	119.5*	120.1	3.41X	10.6	1.3	110.8	1.28	10.9	7.6H	12	AX
4ZRW9N	108.4	108.5	107.1	115.2	109.8	0.64	6.3	3.7	109.1	0.76	5.6	2.4	16	AX
6AWAWV	117.6	111.0	106.0	110.0	111.2	1.00	10.0	4.8	110.1	1.06	11.1	3.6	15	LA
6DLL37	110.7	108.4	109.0	108.4	109.1	0.45	8.8	1.1	106.9	0.05	7.9	1.9	16	TX
7KNAWC	111.9	108.3	109.1	108.9	109.5	0.56	9.0	1.6	106.3	-0.13	10.7	4.9	14	TB
88MKMN	108.3	106.0	104.5	98.7	104.4	-0.82	9.5	4.1	102.0	-1.52	9.7	3.9	16	LA
8FVRAX	115.1	104.7	107.6	108.2H	108.9	0.40	13.7	4.4	107.2	0.14	11.4	4.7	16	LA
93KME3	110.8	106.2	107.3H	104.3	107.2	-0.07	12.9	2.7	106.7	-0.01	11.6	3.1	16	AH
9BZ3MY	108.1	104.9	102.4	109.7	106.3	-0.31	12.7	3.3	108.8	0.65	11.7	4.0	16	TX
A3DGBR	109.2	102.6	95.2*	102.1	102.3	-1.38	9.1	5.7	103.9	-0.89	8.5	3.7	16	LC
A4CXQG	108.3	107.6	107.3	107.0	107.6	0.03	8.7	0.6L	107.3	0.17	10.7	3.7	16	LA
BMDCQE	107.4	117.2*H	104.0	108.2	109.2	0.47	12.7	5.6	106.6	-0.04	11.1	4.4	16	LZ
BNWZJV	113.3	111.2	111.0	102.6	109.5	0.56	9.6	4.8	108.0	0.41	9.2	3.2	16	LZ
D66RTV	115.5	103.9	97.8	102.7	105.0	-0.66	11.3	7.5H	105.2	-0.49	11.2	5.0	16	XX
DCXFDT	108.6	104.9	105.2	112.6	107.9	0.12	11.2	3.6	107.3	0.19	10.0	3.2	16	LA
DVT4NP	93.4X	96.7*	94.5*	95.6*	95.1	-3.31X	9.4	1.4	96.7	-3.19X	8.9	3.5	16	LA
EAQEWT	105.9	114.3H	121.9*	110.4	113.1	1.53	11.7	6.8	105.8	-0.29	9.9	5.9	15	LA
ECVCWM	100.3	99.5	102.9	104.0	101.7	-1.54	7.5	2.1	102.1	-1.46	7.3	3.3	16	AH
EHJD4M	108.0	108.9	104.6	112.6	108.5	0.30	8.4	3.3	107.5	0.23	9.5	2.8	16	AH
F8NT4E	111.3	111.2	113.3H	114.4	112.6	1.38	12.7	1.5	109.7	0.95	11.1	3.1	16	LJ
FYVHTJ	103.9	100.5	107.2	104.9	104.1	-0.88	9.8	2.8	107.0	0.09	10.6	3.5	10	LJ
GLWNFH	No Data	101.6	103.7	102.0	102.4	-1.34	11.2	1.1	102.6	-1.31	11.0	3.9	15	AH
HBTG7G	114.1	100.9	108.6L	104.7	107.1	-0.09	8.6	5.6	109.1	0.75	10.0	3.6	16	LZ
JA8EF9	110.6	100.9	100.2	105.4	104.3	-0.84	11.4	4.8	104.7	-0.64	11.1	4.7	16	AH
K67BXQ	108.4	110.5	115.0	113.6	111.9	1.19	7.9	3.0	105.9	-0.27	11.1	4.5	16	LC
KTXJGC	97.0*	99.8	96.1*	99.6	98.1	-2.50*	6.4	1.9	101.4	-1.71	6.7	3.7	16	TC
KUW684	108.8	107.9	107.5	108.3	108.1	0.19	7.9	0.6L	108.1	0.44	7.9	0.6L	4	TB
LMUDH7	112.6	110.4	106.3	109.6	109.7	0.61	9.8	2.6	111.1	1.39	9.3	2.6	16	TB
LZZ8AH	100.3	106.1	105.4	103.5	103.8	-0.97	8.1	2.6	104.3	-0.77	8.8	2.4	16	LB
MB24UP	111.0	114.3	111.2	121.6*	114.5	1.90	9.2	5.0	114.6	2.49*	10.2	5.6	16	LA
MXAKUZ	110.0	108.7	111.2	110.9	110.2	0.74	8.3	1.1	106.9	0.05	8.5	3.6	16	AX

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					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	Inst
MZ7UM9	100.5	96.6*	101.0	96.2*	98.6	-2.37*	9.4	2.5	99.5	-2.30*	9.8	3.5	16	LA
N4W7JL	108.9	107.0	104.4	102.5	105.7	-0.45	9.2	2.8	106.6	-0.03	10.4	3.7	10	LA
NYK3WP	108.1H	109.7	113.4	107.7L	109.7	0.62	10.0	2.6	104.9	-0.59	10.8	4.1	16	LC
Q6T76E	101.2	99.2	106.4	106.1	103.2	-1.13	10.3	3.6	100.7	-1.92	10.0	3.4	16	AH
QRZMD6	107.7	108.7	105.2	107.4	107.2	-0.05	11.2	1.5	106.0	-0.23	10.2	1.9	16	TB
RAYU6G	107.4	104.7	105.7	106.9	106.2	-0.34	10.2	1.2	106.6	-0.03	10.8	2.5	16	LA
RP6WPH	114.7	102.1	104.3	105.4	106.6	-0.21	10.9	5.5	104.7	-0.63	12.1	4.7	8	TC
RRMUE2	108.2	110.2	110.2	102.0	107.7	0.06	10.9	3.9	107.9	0.36	10.5	4.0	16	AH
RXLG4F	107.2	107.2	107.2	108.9	107.6	0.05	11.1	0.9	105.6	-0.36	12.1	3.6	16	LC
TBVQPP	109.5	108.3	118.5*	106.7L	110.8	0.89	9.2	5.3	112.5	1.82	9.0	5.8	16	LA
TDELVA	107.4	114.7	105.3	113.8	110.3	0.77	11.1	4.7	110.0	1.05	10.6	4.3	16	LA
THRBBC	111.1	108.1	109.1	106.6	108.7	0.35	10.0	1.9	108.2	0.47	9.5	2.0	16	LZ
TTY2DM	111.4	113.2	114.7	108.0L	111.8	1.18	7.6	2.9	109.6	0.92	8.2	3.9	15	LC
TZFY32	No Data	No Data	No Data	112.3	112.3	1.31	10.4	0.0L	109.4	0.85	10.3	3.2	11	LC
U7FXTG	108.2	105.8	104.4	106.0	106.1	-0.36	6.0	1.6	106.3	-0.14	7.5	2.1	16	TB
VF9PD2	110.3	104.8	113.0	111.3	109.9	0.65	10.1	3.5	109.0	0.72	10.3	2.7	14	AA
VZNUJP	108.8	104.4	108.1	103.3	106.2	-0.34	10.5	2.7	105.0	-0.56	10.5	2.8	13	TB
W8G46M	108.1	108.4	104.0	104.5	106.2	-0.32	8.0	2.3	105.7	-0.33	9.7	3.3	14	LA
Z9KB2H	100.7L	100.1	100.9	101.1	100.7	-1.80	7.2	0.5L	101.3	-1.74	8.7	1.1	16	AH
ZFBGG7	104.3	112.9	109.8	107.3	108.6	0.31	9.6	3.7	108.1	0.43	9.3	3.3	16	AH
ZRC3JN	101.3	101.5	102.1	101.0	101.5	-1.59	5.8	0.5L	101.4	-1.68	5.8	0.5L	16	LZ
ZUV86Z	109.8	105.7	111.2	102.0	107.2	-0.07	12.4	4.1	107.8	0.33	11.5	2.9	15	XX
ZWBXM3	103.6	102.5	106.2	97.9	102.5	-1.31	6.8	3.4	102.3	-1.41	8.8	2.6	16	LJ

Consensus (All Labs) Results														
Wk Mean	108.83	106.66	107.08	107.00	Month Mean	107.42			Grand Mean	106.73				
Avg SDr	9.75	9.40	9.85	10.02	Avg SDr	9.78			Avg SDr	9.90				
SD btwn Labs	4.75	4.83	5.47	5.37	SD btwn Labs	3.73			SD btwn Labs	3.15				
Labs Includ	54	55	56	57	SD btwn Wks	3.61			SD btwn Wks	3.73				
Labs Exclud	1	1	0	0	Labs Includ	55			Labs Includ	56				
Labs not rcvd	2	1	1	0										

Containerboard Interlaboratory Testing Program
Analysis 205
Bursting Strength (Mullen), 42 lb Linerboard - 42X2
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	
27LMQA	171.0	166.1	162.0	168.1	166.8	0.98	18.0	3.8	167.4	1.12	22.9	4.7	12	XX
2MNDHD	163.4	153.7	161.6	159.5	159.5	-0.41	18.9	4.2	155.0	-1.13	18.7	4.9	12	LC
34FLBK	161.9	172.1	163.6	162.7	165.1	0.65	17.1	4.7	158.9	-0.43	17.5	6.1	12	AX
3ZU9M7	168.5	166.5	165.3	161.5	165.5	0.73	18.4	2.9	166.0	0.87	22.3	4.0	12	LC
6B48Y7	153.9	153.2	158.0	155.9	155.3	-1.22	22.5	2.1	152.8	-1.53	19.4	3.7	10	LA
6C8JDD	158.2	161.8	161.4	161.7	160.7	-0.17	13.1	1.7	166.6	0.98	15.6	6.7	12	AH
6W66RY	172.0	170.2	166.6	170.3	169.8	1.55	19.3	2.3	164.2	0.54	18.6	6.7	12	LC
7CW386	169.7	164.4	163.7	168.1	166.5	0.92	23.0	2.9	166.2	0.89	23.6	4.3	12	AH
7QM6CX	151.2	159.9	155.1	158.1	156.1	-1.07	18.9	3.8	152.6	-1.57	17.5	4.5	12	LJ
AGUPJ4	168.5	166.0	165.3	174.3	168.5	1.32	21.5	4.1	169.4	1.48	20.8	3.9	12	LA
ARRM4H	172.6	169.3	172.5	177.3	172.9	2.15*	11.8	3.3	172.1	1.97	10.4	3.4	12	AX
BHMY3X	161.5	164.3	163.9	164.3 H	163.5	0.35	26.2	1.3	162.3	0.19	20.5	3.3	12	TX
BLM9X8	159.6	154.6	158.1	162.1	158.6	-0.58	19.6	3.1	156.0	-0.95	18.7	7.4	12	TB
C6L2TC	156.3	160.9	165.6	163.5	161.6	-0.01	18.1	4.0	161.6	0.06	18.1	4.0	4	TB
C8PCWL	No Data	166.6	157.7	151.0	158.4	-0.61	15.6	7.8	158.7	-0.46	17.8	5.6	7	AH
CEQ4ZV	156.6	175.6*	171.3	183.0*	171.6	1.91	20.8	11.1	160.7	-0.09	18.9	10.2 H	12	LA
CVLQ23	156.5	169.7	162.6	152.4	160.3	-0.26	18.4	7.5	164.0	0.51	21.5	6.1	10	LJ
DXJA4F	167.2	166.3	165.4	163.4	165.6	0.75	17.6	1.6	165.8	0.82	17.7	2.5	12	TB
EP6R7D	190.1 X	184.0 X	179.1 X	176.1	182.3	3.95 X	19.8	6.1	175.3	2.56*	21.2	7.2	12	AX
EPHXAP	160.6	169.2	168.4	162.3	165.1	0.66	20.1	4.3	163.5	0.41	22.9	3.9	12	LA
FFVELW	160.3	163.3	155.5	162.5	160.4	-0.24	18.6	3.5	163.2	0.35	15.1	4.2	12	XX
FURUQP	151.2	152.2	165.4	159.9	157.2	-0.85	19.3	6.7	156.6	-0.84	18.1	5.3	12	LB
GKHULF	156.4	149.4	157.5	155.7	154.8	-1.32	19.2	3.6	155.1	-1.12	19.3	3.4	12	AH
GLWEEQ	166.9	164.6	163.8	168.7	166.0	0.83	19.7	2.2	164.4	0.57	19.9	4.3	12	LA
H8HF7W	161.2	165.1	164.2	156.6	161.8	0.02	18.9	3.8	160.4	-0.16	19.3	3.8	12	LZ
H8LPUN	168.7	156.3	156.1	162.8	161.0	-0.13	19.1	6.0	162.1	0.16	17.6	4.5	10	LZ
HMWNK8	160.1 L	160.1 L	159.7 L	160.4 L	160.1	-0.30	5.6	0.3 L	159.8	-0.27	5.8	0.5 L	8	LZ
K7H97G	165.2	158.4	156.1	158.8	159.6	-0.39	18.9	3.9	158.2	-0.56	18.0	4.1	12	LA
KD4ZGF	179.9*	158.0	159.0	156.4	163.3	0.32	22.1	11.1	163.2	0.35	21.5	6.8	12	LA
KFAVKX	170.4	171.5	165.6	173.3	170.2	1.63	20.4	3.3	171.8	1.92	21.1	3.6	12	LA
KMUYZT	153.8	156.8	157.4	162.0	157.5	-0.79	19.9	3.4	157.3	-0.71	20.0	3.0	10	TB
KRFTUK	160.9	162.1	163.7	142.2*	157.2	-0.85	21.3	10.1	158.9	-0.43	18.8	6.8	12	AH
L8UVPF	162.2	155.5	158.1	167.5	160.8	-0.16	19.1	5.2	162.2	0.18	18.6	6.1	12	AH
LG6TEQ	174.7 L	148.3	149.2*	151.6 L	155.9	-1.09	8.9	12.6 H	153.8	-1.35	10.8	12.0 H	12	TB

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
LGJNVL	165.6	165.8	162.5	166.9	165.2	0.68	20.7	1.9	160.7	-0.11	18.8	4.4	10	LZ
LT9RWQ	159.5	164.2	166.1	168.6	164.6	0.56	14.5	3.8	159.0	-0.40	20.2	5.9	12	LC
LZHF2X	No Data	No Data	No Data	162.2	162.2	0.11	22.2	0.0 L	163.4	0.39	20.3	5.2	8	LC
MBUB99	164.1	150.1	164.2	156.4	158.7	-0.56	17.8	6.8	157.3	-0.71	20.0	4.5	12	LA
MEFNHC	168.4	164.8	158.5	165.5	164.3	0.50	16.1	4.2	162.0	0.13	17.0	5.0	12	LZ
MMGVUK	164.2	164.8	162.8	162.4	163.6	0.36	13.7	1.1	160.2	-0.20	15.9	3.7	12	LA
PVMJH4	157.6	149.0	164.2	159.4	157.6	-0.78	18.3	6.3	154.4	-1.24	18.0	5.3	12	AH
Q9BG7P	167.2 L	166.1	148.3 *L	128.2 X	152.5	-1.76	10.3	18.3 H	160.3	-0.18	15.5	11.3 H	12	LC
QAUPNE	161.4	161.6	160.0	159.0	160.5	-0.22	12.3	1.2	157.3	-0.71	11.6	2.7	11	XX
QNZCH6	161.6	159.8	158.1	161.1	160.1	-0.29	19.1	1.6	161.2	-0.01	20.9	2.4	12	TB
QYKHCT	155.8	163.9	160.8	164.5	161.3	-0.07	20.9	4.0	158.9	-0.43	19.4	4.9	12	LA
R6R7PU	154.7	155.7	148.7 *	159.6	154.7	-1.33	22.5	4.5	154.6	-1.20	22.0	3.6	12	LA
T2P4HB	147.6 *	149.7	153.2	143.6 *	148.5	-2.51 *	19.8	4.0	151.1	-1.85	19.9	4.7	12	LA
TZ6EUC	157.5	158.5	154.0	159.8	157.4	-0.81	17.9	2.5	160.6	-0.12	20.4	3.4	12	AA
TZQJDH	159.5	155.5	157.2	153.9	156.5	-0.98	17.9	2.4	156.9	-0.79	19.9	2.9	12	LA
V4F7YV	157.9	157.3	170.5	161.9	161.9	0.05	24.9	6.1	160.3	-0.17	22.1	5.5	12	AH
VGCL9C	164.3	167.4	171.4	173.2	169.1	1.42	22.1	4.0	168.9	1.39	22.4	3.9	12	LA
VJ2ED9	168.2	156.5	169.4	165.9	165.0	0.64	11.4	5.9	164.7	0.63	12.6	6.8	12	AH
VY3XH6	163.0	159.7	164.4	157.6	161.2	-0.09	22.4	3.1	159.7	-0.28	21.4	2.9	8	TC
W2MW3Z	165.3	166.4	171.7	167.7	167.8	1.17	19.9	2.8	168.5	1.33	19.1	2.4	11	AA
WQVKB2	152.4	147.1 *L	151.2 L	147.1	149.4	-2.33 *	9.9	2.7	148.4	-2.33 *	7.8	3.8	12	TC
XYWME	171.0	161.3	163.3	164.6	165.0	0.65	21.8	4.2	166.7	1.00	21.5	6.6	12	LJ
Z3VHMQ	166.8	170.5	168.2	167.4	168.2	1.26	22.2	1.6	169.7	1.53	21.7	3.3	12	TB

Consensus (All Labs) Results														
Wk Mean	162.49	161.23	161.60	162.19	Month Mean	161.65			Grand Mean	161.24				
Avg SDr	19.26	18.95	18.06	18.92	Avg SDr	18.80			Avg SDr	18.89				
SD btwn Labs	6.61	6.80	5.85	7.72	SD btwn Labs	5.23			SD btwn Labs	5.50				
Labs Includ	54	55	55	56	SD btwn Wks	5.48			SD btwn Wks	5.27				
Labs Exclud	1	1	1	1	Labs Includ	56			Labs Includ	57				
Labs not rcvd	2	1	1	0										

Containerboard Interlaboratory Testing Program
Analysis 206
Bursting Strength (Mullen), 69 lb Linerboard - 69Y2
TAPPI Official Test Method T807



Instrument Code List as Reported by the Labs

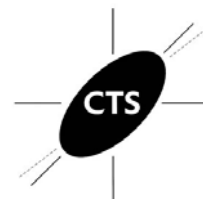
(AA) - Perkins Model A	(AH) - Perkins Model AH
(AX) - Perkins Mullen Tester (model not specified)	(LA) - L & W Bursting Strength Tester
(LB) - L & W Burst-O-Matic	(LC) - L & W Autoline
(LJ) - L & W Bursting Strength Tester J-Type	(LZ) - L & W (model not specified)
(TB) - TMI Monitor/Burst 1000	(TC) - 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	
227CD7	92.9	93.6	95.7	99.0	95.3	0.47	4.9	2.7	93.0	0.11	4.4	2.9	16	LC
2D4PVV	85.2	84.0*	82.5*	81.1*	83.2	-2.04*	3.9	1.8	84.1	-2.02*	3.7	2.0	16	TQ
2ERHHT	91.4	93.5	92.8L	89.8	91.9	-0.24	3.4	1.6	90.2	-0.55	3.6	2.4	16	EM
2RJL6D	90.7	97.5	91.5	91.6H	92.8	-0.04	5.1	3.1	93.3	0.19	4.2	2.1	16	LD
2ULBXT	89.7	93.4	90.0	88.3	90.4	-0.56	4.3	2.1	91.5	-0.23	4.5	1.5	16	TD
3GPC3V	97.5	91.7	93.2	100.3	95.7	0.55	4.1	3.9	94.6	0.50	3.8	2.0	16	LC
3RNZ36	95.0	93.8H	95.6	97.0	95.3	0.47	4.9	1.3	95.8	0.79	3.4	1.4	16	LD
3UGNP7	92.3	89.5	90.9	91.4	91.0	-0.42	4.5	1.2	91.0	-0.36	4.6	1.8	15	LC
3YNQNA	92.2	91.0	89.9	91.6L	91.2	-0.39	2.9	1.0	90.5	-0.47	3.6	6.7H	13	LD
4M9PPZ	100.1	94.9	101.3	93.8	97.5	0.93	4.0	3.7	98.9	1.55	4.2	2.9	16	LC
4V6KPK	92.2	90.5	86.7H	89.7	89.8	-0.67	4.8	2.3	92.1	-0.09	3.8	2.7	16	LZ
62T7E6	101.8	102.6*	104.1*	100.9	102.3	1.93	4.5	1.3	98.8	1.52	4.0	3.3	10	LZ
67JKLY	97.1	98.4	98.3	99.8	98.4	1.11	4.5	1.1	95.2	0.65	3.9	2.7	16	LC
6FYDW2	97.3	93.5	96.0	93.5	95.1	0.42	4.7	1.9	96.6	0.99	4.4	2.9	16	TC
6KT22U	87.1	84.3*	85.9	86.6	86.0	-1.46	4.4	1.2	84.8	-1.86	3.8	1.9	16	TM
7N9NFZ	95.5	97.5	95.8	95.7	96.1	0.64	4.0	0.9	94.1	0.39	4.2	2.9	11	LC
7XHPYK	96.4H	90.2	97.6	90.0H	93.6	0.11	6.0	4.0	92.0	-0.12	5.0	2.8	16	LC
8QN9LT	90.0	89.0	89.7	90.0	89.7	-0.70	4.2	0.5L	88.5	-0.96	4.0	2.5	16	TB
99CQNU	97.3	96.4	101.6	96.2	97.9	1.00	3.4	2.5	96.0	0.84	3.7	2.4	16	LC
9W8JV9	90.6	89.0	87.5	89.0	89.0	-0.83	4.2	1.3	83.4	-2.21*	4.5	4.0	16	EM
AA2HUW	93.3	91.2	89.9	92.3	91.7	-0.29	4.3	1.5	91.1	-0.34	4.1	2.8	16	LC
AGWY7G	93.1	95.2	94.7	96.2	94.8	0.36	5.0	1.3	93.9	0.34	4.3	1.6	16	LC
BBB78M	97.8	92.0	93.8	95.3	94.7	0.35	3.7	2.5	93.1	0.15	3.6	2.0	16	LC
CQYDKT	94.3	95.3	92.7	94.8	94.3	0.25	3.8	1.1	94.6	0.51	3.6	1.4	16	LD
DZ49AW	90.7L	87.4	88.6	89.3	89.0	-0.84	4.4	1.4	88.6	-0.94	4.0	2.3	16	EN
EAMWQG	89.7	91.1	90.7	88.9	90.1	-0.61	3.2	1.0	89.9	-0.62	2.8	1.2	15	TC
EXWPTV	96.6	97.2	95.9	95.8	96.4	0.69	3.0	0.7	96.8	1.03	4.0	2.2	16	LC
F8F2JJ	93.3	91.7	92.4	92.4	92.4	-0.12	4.7	0.7	92.4	-0.01	4.0	1.8	16	EM
FEE6CH	94.2	95.1	105.7*	100.4	98.9	1.21	3.7	5.3	95.8	0.79	4.2	4.7	16	LC
FKMHDE	98.1	96.9	95.9	98.9	97.5	0.92	3.7	1.3	96.1	0.87	3.9	2.2	8	LC
G3MTWC	96.8	97.9	100.4	102.3	99.4	1.31	3.6	2.5	97.8	1.27	3.9	2.5	16	LD
GMP32R	85.9	91.8	89.2H	91.9	89.7	-0.69	5.5	2.8	89.8	-0.65	5.5	2.7	15	LC
HBYMTB	89.6L	90.3L	91.0	87.9L	89.7	-0.69	1.8	1.3	91.7	-0.20	2.8	2.1	16	LZ
HRLMKP	78.2XL	79.8XL	81.4*L	80.9*L	80.1	-2.69*	1.8	1.4	84.2	-1.99	1.7	3.9	16	XX



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	
JAGN2D	95.8	98.9	95.7	103.6	98.5	1.14	3.3	3.7	98.5	1.43	4.2	2.8	16	MB
JRM4NK	87.9 H	65.4 XH	89.3	83.9	81.6	-2.37*	8.8	11.1 H	77.7	-3.57 X	8.0	10.2 H	16	IM
JU3XT7	94.3	94.7	97.8	96.8	95.9	0.59	3.0	1.7	93.4	0.22	3.4	2.3	16	LC
K3RXNA	96.4	95.2	98.6	95.4	96.4	0.70	4.4	1.6	97.1	1.12	4.2	2.4	16	LC
KBEHQG	102.9*	102.7*	102.9	105.1*	103.4	2.15*	3.7	1.1	101.9	2.27*	4.2	1.7	16	LD
KE98KM	93.3	93.9	90.0	90.6	91.9	-0.23	3.5	2.0	89.6	-0.69	3.9	2.6	16	TD
KN9K4M	94.1	96.3	96.9	96.4	95.9	0.60	4.3	1.2	96.5	0.96	3.4	1.6	16	LC
LC4FA8	91.1 H	96.1	91.4 H	92.3 H	92.7	-0.06	8.6	2.3	95.6	0.75	5.7	2.8	16	LC
LXRAK8	93.7	91.8	91.1	95.2	92.9	-0.02	4.0	1.9	94.6	0.52	4.5	2.9	16	LC
M8K7FU	94.4	90.6	91.2	88.0	91.1	-0.41	3.3	2.6	93.7	0.30	3.7	3.2	16	MB
MHKARW	100.0	101.8	106.7*	106.1*	103.7	2.20*	4.1	3.3	102.2	2.35*	5.5	4.0	15	LC
MTGY8R	101.9*	103.6*	97.3	99.0	100.5	1.54	4.4	2.8	96.4	0.95	4.8	6.0 H	8	LZ
NJEC9X	83.7*	88.1	87.2	84.2	85.8	-1.50	4.2	2.2	85.4	-1.71	4.3	1.9	16	LZ
NYVTDZ	83.7* H	75.7 X	91.8 H	96.0	86.8	-1.29	6.5	9.0 H	86.8	-1.37	6.5	9.0 H	4	LZ
P6AP9F	93.3	93.7	93.2	92.4	93.1	0.02	2.5	0.6	92.9	0.10	2.4	2.4	16	EM
PJP7ZD	92.6	92.5	91.0	91.1	91.8	-0.26	3.6	0.9	90.4	-0.50	3.6	2.1	16	EN
Q7FK2X	88.4	87.2	90.5	88.6	88.7	-0.90	3.1	1.3	89.1	-0.83	3.2	1.5	16	EM
QWUKZA	88.2 L	87.4	91.1	91.0	89.4	-0.75	3.4	1.9	91.5	-0.23	3.5	1.9	16	TD
RDNECR	92.3	91.7	91.6	92.3	92.0	-0.22	4.9	0.4 L	90.4	-0.52	3.5	2.0	16	LC
T3A293	88.7	87.2	88.6	88.8	88.3	-0.98	4.1	0.7	88.1	-1.06	4.1	2.1	16	TX
TMMXBR	96.6	94.0	95.3	90.5	94.1	0.22	4.4	2.6	93.8	0.32	4.3	1.6	16	LC
TVG7TX	91.1	90.6	90.9	90.3	90.7	-0.48	5.7	0.4 L	90.3	-0.52	5.6	0.9	16	LC
UUZFVD	97.6	95.2	95.9	No Data	96.2	0.66	3.8	1.2	90.8	-0.41	4.3	4.0	11	MZ
VAQCR8	95.7	96.4	98.9	98.3	97.3	0.89	3.4	1.5	97.2	1.13	3.9	1.9	16	EM
VNBUMW	91.8	95.2	93.8	94.0	93.7	0.14	3.7	1.4	92.5	0.00	3.7	1.8	16	LX
X68WEK	89.6	91.6	93.0	91.8	91.5	-0.32	3.9	1.4	90.9	-0.39	3.8	2.5	16	LC
XBKEYD	94.8	93.8	99.7	94.5	95.7	0.55	4.4	2.7	93.4	0.22	4.2	2.2	16	LX
XD7XYR	89.7	90.4	91.8	91.3	90.8	-0.47	4.3	0.9	87.5	-1.20	4.3	4.6	15	EM
XJTNB2	No Data	94.7	89.6	93.9	92.7	-0.06	4.4	2.7	93.7	0.28	4.2	2.1	15	LC
XWFGUM	No Data	No Data	No Data	96.2	96.2	0.66	3.4	0.0 L	94.5	0.48	4.2	3.3	11	LC
XWMHY	86.6	87.3	86.8	83.9	86.2	-1.43	3.6	1.5	86.6	-1.43	3.4	2.0	16	LD
YCZYWG	82.7*	82.2*	83.9	84.3	83.3	-2.02*	3.3	1.0	84.0	-2.05*	3.8	2.5	16	XX
YXHQU8	95.6	97.7	94.7	96.3	96.1	0.63	4.7	1.3	93.1	0.14	4.2	3.8	16	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
ZJY2C2	94.9	98.5	98.5	98.9	97.7	0.97	4.3	1.9	94.8	0.57	4.8	2.9	15	LC
ZUECQE	91.3	89.5	96.8	107.2*	96.2	0.66	3.8	7.9 H	92.3	-0.05	4.0	5.8 H	10	LC

Consensus (All Labs) Results													
Wk Mean	93.03	93.20	93.41	93.39	Month Mean		93.03		Grand Mean		92.50		
Avg SDr	4.49	4.11	4.44	4.18	Avg SDr		4.32		Avg SDr		4.11		
SD btwn Labs	4.40	4.42	5.17	5.61	SD btwn Labs		4.82		SD btwn Labs		4.15		
Labs Includ	66	65	68	68	SD btwn Wks		2.82		SD btwn Wks		3.02		
Labs Exclud	1	3	0	0	Labs Includ		69		Labs Includ		68		
Labs not rcvd	2	1	1	1									

Instrument Code List as Reported by the Labs

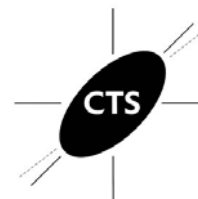
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|---|--|
| (EM) - Emerson 1200 | (EN) - Emerson 2200 |
| (IM) - Instron 4486 | (LC) - L & W Crush Tester 48 |
| (LD) - L&W Crush Tester 248 | (LX) - L & W 506 |
| (LZ) - L & W Crush Tester (model not specified) | (MB) - Messmer Buchel K440 |
| (MZ) - 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	
2DQVK3	152.5	154.4	157.7 H	158.5	155.8	0.79	6.9	2.8	154.7	0.77	7.1	2.7	12	LC
2LXTTD	148.5	146.6	145.8	141.0	145.5	-0.68	4.6	3.2	149.8	-0.03	5.3	5.7	12	LD
2N3DHY	139.2	139.3	141.4	137.5	139.4	-1.55	3.5	1.6	139.8	-1.67	4.2	2.8	12	TB
3EQ9WE	151.6	152.3	147.0	145.9	149.2	-0.15	5.5	3.2	153.3	0.54	5.3	4.4	12	MB
3GRUA7	160.0	145.9	153.7	154.9	153.6	0.48	5.3	5.8	153.7	0.60	5.6	3.5	12	LC
3MACJ8	144.0	141.9	143.9	143.3	143.3	-0.99	5.0	1.0	143.4	-1.09	4.8	2.0	12	EN
4AP3K9	150.2	158.5	153.3	154.7	154.2	0.56	5.2	3.4	152.9	0.47	5.9	3.8	12	LX
4HNRWR	144.3	142.4	142.3	141.7	142.7	-1.08	4.8	1.2	144.8	-0.86	5.0	3.1	12	TD
4LQRU4	146.1	147.9	150.2	153.8	149.5	-0.11	6.3	3.3	149.9	-0.01	6.1	3.4	12	LC
4TPH DU	152.7	160.9	156.9	165.9 *	159.1	1.26	4.8	5.6	158.3	1.36	5.5	3.8	12	MB
6PZJ9A	158.3	155.2	160.9	160.8	158.8	1.22	6.9	2.7	158.8	1.44	6.9	2.7	4	LZ
6Z833R	144.5	148.1	147.5	148.3	147.1	-0.45	4.7	1.7	145.8	-0.69	5.2	1.8	12	TM
7QCMQT	150.4	149.4	149.3	148.6	149.4	-0.11	4.2	0.8	149.3	-0.12	5.1	2.5	12	TD
844JQG	140.5	158.5	152.9	157.9	152.5	0.32	5.4	8.3 H	151.9	0.30	4.8	5.0	12	LZ
8BEYTY	148.6	151.0	153.2	150.6	150.9	0.09	5.3	1.9	152.2	0.35	5.1	2.3	11	XX
8CE7GQ	152.2	150.5	149.1	145.6	149.4	-0.13	5.6	2.8	148.7	-0.21	4.7	2.1	12	TQ
8G4CW9	147.7	157.1	155.5	149.9	152.6	0.33	5.4	4.5	145.2	-0.79	4.8	6.9	10	LC
8Q9EYK	145.4	149.7	145.7	145.1	146.5	-0.54	3.7	2.2	146.7	-0.55	3.9	1.6	12	LC
9HV2XL	153.3	154.7	155.5	157.7	155.3	0.72	5.9	1.8	156.3	1.03	6.0	2.7	12	LC
9M3DCR	139.7	142.3	139.5	140.7	140.5	-1.38	3.5	1.3	150.6	0.10	4.4	8.1 H	12	TD
9UTZRC	149.5	148.8	148.5	147.7	148.6	-0.23	4.9	0.7	146.9	-0.50	4.6	4.8	11	LC
BMC2RK	151.3	149.2	150.2	141.9	148.1	-0.30	4.9	4.3	146.1	-0.64	5.2	3.8	12	EM
BNJGPP	154.1	152.4	151.9	151.2	152.4	0.31	5.0	1.2	152.4	0.39	5.3	1.6	12	LC
BYG3NE	146.5 L	150.0	153.7 L	148.1	149.6	-0.10	3.1	3.1	149.2	-0.12	3.6	2.8	12	LC
CKDK9U	147.5	161.3	150.0	149.8	152.1	0.27	4.9	6.2	152.3	0.38	5.5	5.3	12	LD
CP2AKQ	116.3 X	107.8 XH	151.0	122.4 X	124.4	-3.68 X	7.3	18.7 H	128.2	-3.57 X	11.9	14.8 H	9	IM
D48RNH	155.8	156.0	148.1	150.2	152.5	0.33	5.3	4.0	153.6	0.59	6.4	6.7	12	LC
DCDYV6	145.4	151.2	143.6 H	151.3	147.9	-0.34	8.7	4.0	145.1	-0.81	6.3	4.0	12	LC
DTUMVT	153.7	145.9	149.4	143.2 H	148.0	-0.31	6.5	4.5	150.7	0.11	5.3	4.9	12	TC
DWKUAN	154.8	155.2	153.5	154.4	154.5	0.60	4.3	0.7	152.6	0.43	4.4	4.1	10	LD
EKMZ2L	No Data	155.3	150.2	152.6	152.7	0.35	6.5	2.6	154.1	0.66	6.6	2.2	7	LC
ERFKJE	144.4 L	149.7	147.9 L	144.3 L	146.6	-0.52	2.0	2.7	155.2	0.85	2.2	6.7	12	LZ
EUH2G4	141.2	141.9	141.9	143.4	142.1	-1.16	4.2	0.9	137.3	-2.08 *	5.5	4.0	12	EM
F6MCWH	155.0	149.0	148.5	150.8	150.8	0.08	4.4	3.0	150.9	0.15	4.8	2.2	12	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
FYQTCM	154.7	149.6	147.9	150.5	150.7	0.06	5.8	2.9	150.9	0.15	5.7	3.6	12	EN
GPTG67	143.3 L	138.8	144.6	140.0	141.7	-1.22	4.6	2.7	139.3	-1.76	5.8	2.8	12	LZ
JJFYV9	150.4	153.5	147.6	147.8	149.8	-0.06	5.1	2.7	149.3	-0.12	5.3	3.4	12	LX
KH3MYP	144.2	148.6	144.0	144.2	145.2	-0.71	4.5	2.2	147.9	-0.34	3.8	4.5	12	LC
LR2CPK	148.2	150.4	150.3	149.9	149.7	-0.08	3.8	1.0	147.7	-0.37	3.3	2.0	12	EM
NRAEBA	152.1	153.0	157.1	153.9	154.0	0.54	4.9	2.2	150.6	0.10	4.5	4.3	12	LC
P4HZ9D	157.9	161.4	158.5	155.4	158.3	1.15	4.2	2.5	155.9	0.97	4.1	4.9	12	EM
Q6GWJG	141.6	146.3	141.9	147.2	144.2	-0.85	3.5	2.9	149.6	-0.06	3.2	4.6	12	XX
Q8KXJ7	143.4 L	143.0	150.1	143.3	144.9	-0.76	3.0	3.4	143.3	-1.10	3.2	2.7	12	TC
QAMP78	149.2	149.5	159.7	No Data	152.8	0.36	6.2	6.0	150.6	0.09	5.9	5.5	9	MZ
QWPW7U	149.0	142.9	143.8	148.5	146.0	-0.60	2.7	3.1	149.3	-0.12	2.9	3.1	12	LD
QXE7Z4	157.0	159.7	153.6	155.7	156.5	0.89	4.7	2.5	154.6	0.76	5.4	5.2	12	LC
QZ6CGU	No Data	No Data	No Data	143.8	143.8	-0.92	6.0	0.0 L	148.9	-0.19	5.0	3.7	8	LC
QZUEVC	165.2	162.8	166.6 *	160.5	163.8	1.93	5.1	2.7	158.1	1.33	5.7	6.7	12	LC
R7J7M6	155.4	155.1	146.7	153.3	152.6	0.34	5.3	4.0	153.1	0.51	5.4	4.1	10	LC
T4BBMY	160.9	149.3	149.4	140.7	150.1	-0.03	4.1	8.3 H	152.2	0.36	5.1	6.5	12	LC
TUH2YW	141.7	144.6	142.1	144.9	143.3	-0.99	3.8	1.7	142.9	-1.16	3.5	1.3	12	EM
U69AXP	164.0	154.6	162.5	No Data	160.3	1.44	6.0	5.1	159.6	1.58	6.0	11.0 H	10	LC
UGQJEB	158.8	157.9	151.1	155.9	155.9	0.81	5.7	3.4	154.7	0.76	5.5	5.5	11	LC
UJY2Y8	164.9	166.6 *	166.2 *	164.0	165.4	2.16 *	4.9	1.2	162.8	2.09 *	5.4	3.9	12	LD
UQR3HY	165.0	167.4 *	163.4	168.3 *	166.0	2.25 *	4.6	2.2	168.4	3.01 X	5.1	2.9	12	LD
UW7BYV	130.5 *H	132.8 *	156.3	147.5 H	141.8	-1.20	8.7	12.3 H	141.8	-1.35	8.7	12.3 H	4	LZ
UXYW6L	141.7	140.8	141.1	143.7	141.8	-1.20	4.7	1.3	139.9	-1.66	4.8	6.0	12	XX
VEL4Z4	146.9	145.0	152.3	144.2	147.1	-0.45	7.7	3.6	147.1	-0.48	7.5	2.6	12	EM
VP38EA	152.8	153.0	149.2	157.2	153.0	0.39	4.9	3.3	146.5	-0.58	5.7	9.7 H	12	LC
WHGCNB	161.4	162.5	159.5	160.1	160.9	1.52	6.2	1.3	157.2	1.17	5.6	3.8	12	LD
WK9433	139.9	127.0 X	132.9 *	140.2	135.0	-2.17 *	6.4	6.3	139.7	-1.70	6.6	7.2	12	LC
WQWULC	138.2	134.2 *	128.7 X	130.3 *	132.9	-2.48 *	6.6	4.2	140.4	-1.58	5.9	7.3	12	LC
WV62YA	163.5	165.2 H	158.4	159.9	161.7	1.64	6.2	3.2	165.1	2.48 *	4.8	3.6	12	LC
WY2X66	146.5	149.2	146.7	150.6	148.2	-0.29	5.4	2.0	147.8	-0.37	6.3	2.2	12	TM
XUQQ7H	144.3	144.2	144.8	145.6	144.7	-0.78	6.1	0.6 L	144.6	-0.88	5.8	0.6 L	8	LC
Y6VVDR	138.6	137.9	144.8	141.1	140.6	-1.38	5.3	3.1	138.3	-1.92	4.9	3.9	11	EM
Y9Z28B	158.7	160.5	161.0	157.7	159.5	1.31	5.3	1.5	157.8	1.28	5.3	2.3	12	LC

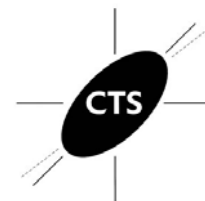


WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	Inst
YVKTUC	162.3	161.0	162.3	165.3*	162.7	1.77	5.3	1.8	160.7	1.74	6.3	3.3	10	LZ

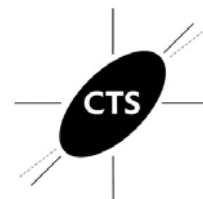
Consensus (All Labs) Results													
Wk Mean	150.17	150.98	150.69	149.88	Month Mean	150.24		Grand Mean	150.01				
Avg SDr	5.09	5.11	5.72	5.17	Avg SDr	5.28		Avg SDr	5.33				
SD btwn Labs	7.75	7.71	6.85	7.58	SD btwn Labs	7.03		SD btwn Labs	6.10				
Labs Includ	65	65	66	65	SD btwn Wks	3.70		SD btwn Wks	4.76				
Labs Exclud	1	2	1	1	Labs Includ	67		Labs Includ	66				
Labs not rcvd	2	1	1	2									

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	
26A6EV	23.8	23.7	23.5	24.0	23.7	-0.53	2.1	0.2	23.8	-0.50	2.2	0.5	14	LW
2GGK8Y	23.1	23.8	23.6	23.0	23.4	-0.93	2.1	0.4	23.5	-0.88	2.2	0.4	16	LU
3EC7LE	22.9	23.1	22.4	22.0	22.6	-1.78	1.9	0.5	22.7	-1.79	2.0	0.6	16	XX
3U9HYP	23.8	25.3	24.7	23.7	24.4	0.13	1.1	0.7	24.6	0.46	1.4	0.8	15	LU
4C23FP	24.8	25.0	25.8	25.6	25.3	1.14	2.3	0.5	25.2	1.05	2.2	0.6	16	LU
4CLGKY	25.2	25.3	25.0	24.7	25.1	0.89	2.0	0.2	24.7	0.57	2.0	0.6	13	LW
4M43N8	24.7	24.5	23.7	24.1	24.2	-0.02	2.5	0.5	24.6	0.44	2.4	1.1	16	LA
69BVYR	22.8	22.5	23.7	23.2	23.0	-1.29	2.5	0.5	23.7	-0.61	2.2	1.1	16	XX
6CZ98N	25.5	25.5	25.1	24.3	25.1	0.92	1.5	0.6	24.7	0.48	1.7	1.0	15	LU
736P4Y	24.1	24.6	23.9	23.8	24.1	-0.14	1.4	0.3	24.3	0.03	1.5	0.3	16	LU
74PK92	24.5	25.5	23.9	25.6	24.9	0.67	2.8	0.8	25.7	1.69	2.5	1.1	16	XX
89FVLQ	24.5	24.2	23.5	24.5	24.2	-0.06	2.4	0.5	23.9	-0.40	2.2	0.4	16	LW
8YTRM6	23.8	24.6	23.9	24.9	24.3	0.07	1.9	0.5	24.2	-0.02	2.3	0.5	14	LW
9XVWJT	24.6	23.4	22.9	22.6	23.3	-0.97	2.1	0.9	24.0	-0.29	2.1	0.8	16	XX
AGRLNM	23.4	22.7	22.9	24.1	23.3	-1.04	1.5	0.6	22.9	-1.51	1.8	0.6	8	LU
BNTN9J	23.8	25.0	24.2	24.2	24.3	0.08	2.0	0.5	24.3	0.12	1.9	0.6	16	LU
BZUWNH	25.1	25.9	24.4	26.5 H	25.5	1.34	4.4	0.9	25.0	0.90	4.0	1.2	15	LW
CGEMY8	24.3	23.9	23.6	24.8	24.2	-0.10	1.7	0.5	23.6	-0.72	1.9	1.5	16	LW
CT94N9	24.6	25.6	24.5	23.8	24.6	0.39	1.8	0.8	24.7	0.50	2.1	1.0	16	LW
CXQW9N	22.0 *L	22.5 L	22.7 L	22.5 L	22.4	-1.96	0.4	0.3	22.8	-1.64	0.4	1.2	15	XX
D29ZMK	24.9 L	24.7 L	25.6 L	25.0 L	25.0	0.86	0.1	0.4	25.2	1.06	0.1	0.8	16	TS
D2B4M3	25.0	23.8	23.5	22.9	23.8	-0.47	2.2	0.8	23.1	-1.34	2.3	1.1	16	LZ
DQXGTF	24.5	24.4	23.7	23.4	24.0	-0.27	1.9	0.5	24.2	0.00	2.1	0.6	16	LW
GMLKVG	25.3	24.5	24.7	23.7	24.6	0.35	2.2	0.7	24.6	0.35	1.9	0.5	15	BK
H82B4Q	22.6 L	24.8 L	23.1 L	21.8 L	23.1	-1.24	0.4	1.2	22.8	-1.61	0.4	0.8	16	LA
L3CHAF	25.1	25.5	26.5	25.9	25.7	1.60	2.1	0.6	25.4	1.26	2.3	0.6	10	XX
L7XNXN	40.9 XL	43.1 XL	41.2 XL	40.3 XL	41.4	18.45 X	0.0	1.2	41.0	18.95 X	0.0	1.1	8	LU
LEUJX8	24.5	25.0	25.0	24.9	24.8	0.62	1.6	0.2	23.8	-0.53	1.7	1.1	15	XX
MGU8YF	25.2	23.5	25.5	24.6	24.7	0.50	2.5	0.9	24.5	0.31	2.3	0.7	16	LW
MLQR6K	24.5	23.0	24.6	23.5	23.9	-0.35	1.8	0.8	23.6	-0.73	1.8	0.7	16	LW
MV36MU	25.0	25.2	24.9	33.1 X	27.1	3.03 X	1.6	4.0 H	24.9	0.75	2.0	3.1 H	14	LA
NNE4H2	23.6	25.8	24.8	25.1	24.8	0.63	2.0	0.9	24.5	0.33	2.0	0.9	16	LW
R8GTJN	23.7	25.1	23.0	23.0	23.7	-0.59	2.2	1.0	23.7	-0.63	2.2	1.0	4	LZ
TVWML6	21.1 X	21.3 X	20.8 *	21.2 *	21.1	-3.36 X	1.6	0.2	20.6	-4.16 X	1.6	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
UBV87K	25.9 L	24.5 L	27.4 *L	25.8 L	25.9	1.77	0.0	1.2	25.6	1.54	1.3	1.6 H	16	LZ
UEQHYT	25.7	24.2	24.8	23.5	24.5	0.31	2.2	0.9	24.4	0.17	1.9	0.8	16	LU
UZQDP2	25.7	24.7	26.2	25.4	25.5	1.35	2.3	0.6	26.0	2.04*	2.4	0.9	16	XX
VTNGEF	22.2	22.6	22.5	22.0	22.3	-2.07*	2.0	0.3	22.8	-1.68	2.0	0.6	16	LU
X8ZNTC	25.5	25.5	25.4	25.2	25.4	1.23	1.3	0.1	25.0	0.89	1.4	0.3	16	LW
XQRFBH	24.2	23.8	25.4	26.2	24.9	0.71	1.4	1.1	25.5	1.40	1.6	0.9	16	LZ
ZH36RT	22.3 L	23.0 L	22.6 L	23.1 L	22.7	-1.62	0.4	0.4	23.3	-1.12	0.4	0.8	16	XX
ZTLXJU	23.1	24.1	24.2	25.2	24.1	-0.14	2.3	0.9	23.9	-0.35	2.1	0.7	16	LW

Consensus (All Labs) Results

Wk Mean	24.24	24.35	24.19	24.08	Month Mean	24.24	Grand Mean	24.24
Avg SDr	1.90	1.82	1.91	2.26	Avg SDr	1.99	Avg SDr	1.99
SD btwn Labs	1.03	0.98	1.27	1.28	SD btwn Labs	0.93	SD btwn Labs	0.88
Labs Includ	40	40	41	40	SD btwn Wks	0.68	SD btwn Wks	0.97
Labs Exclud	2	2	1	2	Labs Includ	39	Labs Includ	40
Labs not rcvd	0	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

Containerboard Interlaboratory Testing Program
Analysis 224

STFI, 69 lb Linerboard - 69Y2
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
2XXBPZ	34.7	35.9	33.4	34.2	34.5	-0.79	2.5	1.1	34.8	-0.77	2.6	0.7	12	XX
3EKARX	33.4 L	33.5 L	34.0 L	34.1 L	33.7	-1.29	0.8	0.4	34.4	-1.00	0.9	1.5	12	XX
3R4RRA	38.3	38.6	39.7	38.3	38.7	1.72	3.5	0.7	38.7	1.71	3.7	1.5	12	LA
4BBFYZ	37.6	36.8	37.1	35.1	36.7	0.48	3.1	1.1	36.4	0.27	2.7	0.9	10	LW
6VK7YL	35.9	36.3	36.1	37.5	36.4	0.34	2.2	0.7	35.8	-0.10	2.1	0.9	12	LW
74DTMP	38.6	38.3	39.1	37.5	38.4	1.51	1.9	0.6	38.4	1.50	2.4	1.2	12	LU
7B6D84	35.8	36.1	34.4	36.6	35.7	-0.07	3.2	0.9	35.9	-0.06	2.8	0.9	12	LW
887G2A	38.1	36.4 L	29.4 *	36.4 L	35.1	-0.47	2.5	3.9 H	36.0	0.00	2.8	2.2 H	12	LA
A3M2NM	34.8	34.4	32.3	33.0	33.6	-1.35	3.2	1.2	34.8	-0.77	3.1	1.5	12	XX
AKE7MP	36.9 L	39.7 *L	38.9 L	39.1 L	38.6	1.66	0.2	1.2	38.6	1.67	0.2	1.8	12	TS
ALWKFD	36.4	36.4	36.3	34.8	36.0	0.07	3.6	0.8	35.8	-0.11	3.0	1.3	12	LU
B222UW	36.5	38.8	37.0	36.9	37.3	0.86	2.9	1.0	38.5	1.59	2.8	1.4	12	XX
CTBLVK	39.2	38.1	38.0	36.8	38.0	1.30	3.1	1.0	38.1	1.31	3.2	1.1	12	XX
DD2DWP	37.1	38.5	38.5	39.1	38.3	1.45	3.1	0.8	38.3	1.46	3.2	0.9	10	XX
DE7PAW	36.5	36.5	36.5	36.4	36.5	0.37	1.8	0.1 L	36.3	0.22	1.9	0.2	12	LW
DLFDE8	36.3	36.4	36.9	36.2	36.5	0.36	2.6	0.3	36.5	0.34	2.6	0.4	12	LU
DT32H2	35.2 L	44.3 XL	38.5 L	37.8 L	39.0	1.86	0.1	3.9 H	37.8	1.14	2.3	2.3 H	12	LZ
DUFZYY	33.4	36.0	34.9	36.4	35.2	-0.41	2.2	1.3	35.7	-0.16	2.5	0.9	12	LW
EAKX73	31.7 *	32.3 *	32.9	33.2	32.5	-1.99	2.3	0.7	32.6	-2.13 *	2.5	0.7	12	XX
FA3MAL	32.4	32.2 *	33.6	34.2	33.1	-1.68	2.7	0.9	33.4	-1.66	2.7	1.2	12	LU
FMBH9H	34.8	36.9 L	35.4	35.5	35.7	-0.12	2.4	0.9	36.1	0.04	2.4	0.9	12	BK
HLLUHR	67.5 XL	68.9 XL	69.8 XL	68.2 XL	68.6	19.62 X	0.0	1.0	67.7	20.12 X	0.0	1.4	8	LU
JFCRDB	33.7	36.1	34.9	35.3	35.0	-0.52	3.5	1.0	35.1	-0.57	3.3	0.8	12	LW
JYQ9HP	33.7 L	33.0 L	33.2 L	33.0 L	33.2	-1.57	0.8	0.3	33.1	-1.84	0.9	1.3	12	LA
K8EEW9	37.8	35.8	38.3	38.2 H	37.5	1.00	8.0	1.2	38.0	1.29	7.8	2.0 H	12	LW
KZBY49	33.5 L	33.8 L	33.2 L	35.0 L	33.9	-1.19	0.7	0.8	34.6	-0.87	0.8	0.9	12	XX
MTAGZT	34.9	35.6	35.1	35.6	35.3	-0.35	2.8	0.4	35.3	-0.45	2.8	0.4	4	LZ
N6QZCA	35.0	34.4	34.5	33.5	34.3	-0.91	2.4	0.6	35.1	-0.54	2.6	1.0	11	LW
N6ZZVJ	36.1	35.5	35.5	34.0	35.3	-0.35	2.1	0.9	35.6	-0.25	2.0	0.8	12	LU
NVGV8Y	36.8	37.8	35.3	37.5	36.8	0.59	2.9	1.1	36.4	0.24	2.8	1.1	10	LW
Q96PXB	33.5	34.4	34.8	34.6	34.3	-0.93	3.1	0.6	34.6	-0.87	3.1	0.6	12	LU
QBJT6A	30.1 X	29.4 X	30.3 *	29.1 X	29.7	-3.69 X	2.1	0.6	30.0	-3.82 X	2.0	1.9	12	LZ
RPUUGQ	35.7	34.7 L	36.0	36.3 L	35.7	-0.11	1.6	0.7	35.6	-0.26	1.6	1.0	8	LZ
RUZQP6	36.3	36.4	36.0	36.8	36.3	0.29	2.9	0.3	36.6	0.36	2.7	0.4	12	LU



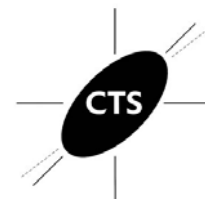
WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	Inst
TB7EB4	35.5	36.2	37.0	35.8 L	36.1	0.15	2.2	0.7	36.0	0.03	2.5	1.7	12	LU
UAUYUA	37.3	35.9	38.0	35.5	36.7	0.48	3.5	1.2	36.9	0.54	3.8	0.9	12	LW
VQ4JAX	38.4	36.0	37.7	36.3	37.1	0.73	3.3	1.1	36.6	0.39	3.0	1.2	12	LW
XEE28W	36.2	37.4	37.5	37.1 L	37.0	0.70	1.8	0.6	37.9	1.24	2.4	2.1 H	12	LU
XNYJNA	35.6	35.0	35.0	34.5	35.0	-0.51	2.1	0.5	34.9	-0.69	2.6	1.0	12	LW
Y83PBG	36.2	34.8	33.5	32.5	34.3	-0.96	2.8	1.6	34.2	-1.13	3.1	1.2	12	LZ
Z8JARY	35.1	35.0	34.7	36.3	35.3	-0.35	2.3	0.7	34.3	-1.07	2.7	1.1	12	LW

Consensus (All Labs) Results														
Wk Mean	35.76	35.95	35.58	35.81	Month Mean	35.86			Grand Mean	36.00				
Avg SDr	2.67	2.68	2.53	3.36	Avg SDr	2.82			Avg SDr	2.87				
SD btwn Labs	1.77	1.74	2.33	1.69	SD btwn Labs	1.67			SD btwn Labs	1.58				
Labs Includ	39	38	40	39	SD btwn Wks	1.22			SD btwn Wks	1.23				
Labs Exclud	2	3	1	2	Labs Includ	39			Labs Includ	39				
Labs not rcvd	0	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
3MRVBE	134.7	0.21	3.3	130.6	0.30	3.4	2	EV
43MXNJ	137.0	0.30	14.3	131.2	0.33	12.8	2	EV
43QFVU	126.1	-0.14	11.0	117.2	-0.37	9.6	2	EV
6TUZJV	106.2	-0.95	18.2	106.2	-0.92	18.2	1	XX
7Z2UKW	110.3	-0.78	10.0	113.4	-0.56	14.1	2	LA
97XJP7	130.3	0.03	10.2	141.2	0.84	10.1	2	EV
B2LWLT	157.6	1.14	17.3	150.4	1.29	16.6	2	EV
BMEW6N	156.7	1.10	17.6	155.9	1.57	14.1	2	EV
BX2QXW	108.4	-0.86	18.1	104.5	-1.01	14.8	2	EV
DTHWYW	130.2	0.03	15.4	128.8	0.21	14.5	2	XX
ENZKDU	86.2	-1.76	12.8	86.6	-1.90	11.2	2	EV
JQBJMX	245.1	4.68 X	28.0	230.7	5.32 X	24.8	2	EV
K3M8CE	255.8	5.12 X	16.1	249.2	6.24 X	16.2	2	EV
KCD87C	192.8	2.56 *	29.7	192.5	3.41 X	31.2	2	EV
KEAHLA	144.6	0.61	15.1	144.6	1.01	15.1	1	EV
KLVBXD	113.9	-0.63	12.7	113.9	-0.53	12.7	1	EV
LJML7D	94.9	-1.40	7.5	94.9	-1.48	7.5	1	EV
PVQWEC	154.0	0.99	14.5	151.0	1.32	17.8	2	EV
Q66D3B	143.6	0.57	12.3	140.5	0.80	12.2	2	EV
QZCHA4	110.5	-0.77	16.9	107.1	-0.87	14.7	2	EV
QZH2J8	121.1	-0.34	13.3	116.7	-0.39	13.2	2	EV
U9VGCZ	128.9	-0.02	13.0	121.3	-0.16	12.2	2	EV
ULYMJR	148.3	0.76	10.7	141.4	0.85	12.7	2	EV
V4M97F	97.3	-1.31	11.8	99.5	-1.25	9.2	2	EV
YZ8LMD	145.0	0.63	22.0	143.2	0.93	18.4	2	XX

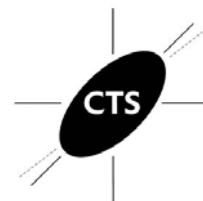
Consensus (All Labs) Results			
Month Mean	129.50	Grand Mean	124.54
Avg SDr	15.13	Avg SDr	13.42
SD btwn Labs	24.67	SD btwn Labs	19.96
Labs Incd	23	Labs Incd	22

Instrument Code List as Reported by the Labs

(EV) - Emveco Microgag 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
34YRVY	274.2	19.08 X	17.0	188.3	8.62 X	14.2	2	SC
7XL96W	86.4	-2.22 *	4.3	86.5	-2.05 *	5.4	2	XX
8HDDL M	88.4	-1.99	4.0	86.7	-2.03 *	5.0	2	TM
94T7EE	109.2	0.37	3.6	109.4	0.35	3.2	2	HY
9HBJLY	110.6	0.53	5.0	111.5	0.57	5.4	2	SC
FVEDVN	106.0	0.01	4.9	104.0	-0.22	4.2	2	HY
GNYCPH	106.8	0.10	7.4	106.7	0.06	7.3	2	SC
GQR2CK	115.2	1.05	7.9	115.2	0.96	7.9	1	SC
GWR7NV	110.4	0.50	9.1	117.1	1.16	10.4	2	HY
JXTEJE	116.0	1.14	9.0	116.0	1.04	9.0	1	TM
MXPNM7	103.8	-0.24	10.0	102.6	-0.36	7.6	2	SC
TEUMYC	113.0	0.80	7.6	111.2	0.54	8.4	2	SC
YD7QEW	112.6	0.75	7.9	113.9	0.82	7.8	2	HZ
YNRYWY	99.8	-0.70	2.7	99.8	-0.66	2.7	1	TM
ZRQBRY	108.8	0.32	5.1	108.8	0.28	5.1	1	TM
ZYAHMB	102.2	-0.43	6.7	101.8	-0.45	5.3	2	TM

Consensus (All Labs) Results			
Month Mean	105.95	Grand Mean	106.09
Avg SDr	6.73	Avg SDr	6.68
SD btwn Labs	8.82	SD btwn Labs	9.53
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 - 42X
 TAPPI Official Test Method T815

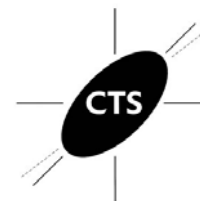


WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
3C2CGE	32.0	1.66	2.8	32.0	1.44	3.0	2	ZZ
4E8KEK	25.8	-0.79	4.2	25.8	-0.75	4.2	1	ZZ
66TT8E	29.2	0.56	2.5	32.0	1.44	2.0	2	ZZ
6KREVV	27.8	0.01	1.6	27.8	-0.04	1.6	1	ZZ
83DDBQ	26.8	-0.39	3.8	28.7	0.28	4.5	2	ZZ
8KMYFZ	29.7	0.75	0.3	27.8	-0.04	2.6	2	ZZ
93BU4E	23.8	-1.56	3.4	22.7	-1.83	3.2	2	ZZ
9YARCT	29.8	0.79	4.4	30.4	0.87	3.4	2	ZZ
AQ3GNR	28.6	0.32	3.8	29.7	0.63	3.2	2	ZZ
CZN9HN	28.2	0.16	4.2	26.3	-0.57	3.5	2	ZZ
EBGG4N	31.9	1.62	2.4	31.5	1.24	1.8	2	ZZ
L33E7F	26.9	-0.36	1.5	25.6	-0.81	1.2	2	ZZ
LQ4QT2	26.5	-0.50	0.4	26.6	-0.48	0.4	2	ZZ
MXLRUG	25.2	-1.01	2.5	27.4	-0.18	3.8	2	ZZ
N2MKRR	25.6	-0.86	5.0	25.8	-0.76	4.2	2	ZZ
Q6BPWM	38.6	4.25 X	4.5	39.2	3.96 X	3.8	2	ZZ
RRE6T2	28.4	0.24	2.6	30.5	0.91	3.3	2	ZZ
RWUF76	29.6	0.71	0.5	30.0	0.73	2.2	2	ZZ
TMVD37	24.6	-1.25	2.6	24.6	-1.16	2.6	1	ZZ
TWNMJG	23.6	-1.64	3.0	22.8	-1.79	3.6	2	ZZ
V2T6YU	25.8	-0.78	2.6	25.8	-0.74	2.6	1	ZZ
VN8PBM	29.5	0.66	1.3	28.3	0.13	1.3	2	ZZ
WMTLZ9	27.1	-0.27	4.0	27.4	-0.20	3.6	2	ZZ
XRMC44	32.7	1.93	1.7	32.7	1.68	1.7	1	ZZ

Consensus (All Labs) Results			
Month Mean	27.78	Grand Mean	27.91
Avg SDr	2.97	Avg SDr	2.96
SD btwn Labs	2.55	SD btwn Labs	2.85
Labs Incd	23	Labs Incd	23

Instrument Code List as Reported by the Labs

(ZZ) - Instruments No Longer Tracked



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
3ZUWJ6	16.4	0.28	4.4	17.5	0.90	3.7	2	GG
4697T8	17.0	0.77	1.8	16.9	0.43	2.4	2	LA
7GTH48	14.5	-1.23	2.9	15.1	-0.79	3.0	2	XX
9BDU3A	15.8	-0.14	1.8	17.1	0.63	1.7	2	XX
9R8VCT	18.1	1.66	3.0	18.1	1.34	3.0	1	LW
BBUL84	14.1	-1.51	5.9	14.8	-1.02	4.3	2	TL
JLDMV6	18.6	2.05 *	3.9	18.6	1.69	3.9	1	HG
LQPNBE	16.9	0.70	2.8	17.3	0.76	3.2	2	TL
MAN7AZ	15.4	-0.51	2.5	15.5	-0.51	2.4	2	HG
NQAEX3	15.3	-0.54	1.5	15.3	-0.65	1.5	1	XX
P3QKM4	15.0	-0.84	2.9	16.0	-0.15	3.2	2	LP
RBM9EY	16.1	0.07	2.9	16.1	-0.10	2.9	1	XX
RVX AFC	16.2	0.13	2.0	16.3	0.06	3.0	2	GA
V27T28	15.0	-0.78	2.6	14.9	-0.93	2.9	2	GS
WM7CMT	14.6	-1.15	1.8	14.6	-1.19	1.8	1	LA
XQUNG3	15.5	-0.42	2.7	15.3	-0.66	2.2	2	LP
Z7DJPP	17.2	0.90	3.0	17.8	1.09	4.6	2	XX
ZRUWLJ	17.6	1.21	1.0	17.8	1.09	1.3	2	LW
ZX879T	15.2	-0.65	2.0	13.5	-1.98	1.6	2	XX

Consensus (All Labs) Results

Month Mean	16.02	Grand Mean	16.25
Avg SDr	2.92	Avg SDr	2.93
SD btwn Labs	1.27	SD btwn Labs	1.41
Labs Incd	19	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



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	
23EHLZ	59.9	59.3	61.9	61.8	60.7	-1.01	3.9	1.3	60.7	-1.33	3.7	2.4	16	MB
2FDP23	64.0	64.0	62.2	63.5	63.4	0.05	3.2	0.8	63.2	0.11	2.9	1.5	16	LC
2J2HDC	64.2	62.7	63.5	62.7	63.2	-0.02	3.8	0.7	63.4	0.18	3.3	1.1	16	LD
2UGAZZ	62.3	60.6	62.8	63.1	62.2	-0.43	3.1	1.1	62.7	-0.19	2.7	1.0	16	LD
3486X9	60.4	61.8	62.8	61.4	61.6	-0.67	2.6	1.0	61.6	-0.84	2.6	1.0	16	TB
46F7BE	69.1	69.8*	67.5	68.5	68.7	2.12*	3.8	1.0	64.6	0.87	3.9	5.5 H	16	MB
4ZKV3N	64.6	64.1	64.8 L	66.4	65.0	0.66	2.6	1.0	63.4	0.18	2.6	1.6	16	LC
6ATYPQ	65.5	63.0	62.9	62.0	63.4	0.02	3.3	1.5	63.3	0.15	3.2	1.4	16	LC
6FC8AG	64.8 L	63.4 H	64.7	63.1 H	64.0	0.27	4.0	0.9	65.1	1.19	2.9	1.1	16	LD
6X6664	68.2	66.1	68.0	67.1	67.4	1.59	3.7	1.0	66.2	1.79	4.0	2.7	5	XX
7P6JGV	61.9	63.4	61.9	62.7	62.5	-0.32	2.2	0.7	62.7	-0.21	3.1	1.0	16	LC
84PXEU	63.2	62.0	63.7	58.3	61.8	-0.59	2.6	2.4	61.8	-0.67	2.5	2.6	15	LC
96DTE8	65.7	67.1	64.5	67.2	66.1	1.11	3.8	1.3	66.1	1.75	3.8	1.3	4	LZ
AZVJGP	55.0*H	58.9H	73.8 X	No Data	62.6	-0.28	5.9	9.9 H	65.2	1.21	6.0	6.1 H	11	LZ
CBBLWR	66.2	65.5	67.5	67.1	66.6	1.28	3.3	0.9	66.5	1.96	3.2	1.2	16	EM
CCA4FU	71.9*	68.8	59.2	64.8	66.2	1.13	3.6	5.5 H	68.5	3.11 X	3.6	4.0 H	11	LC
CJ7EDY	63.0	63.1	63.3	63.0	63.1	-0.08	3.2	0.1 L	62.5	-0.31	2.6	0.8	16	LC
CUPCKB	67.8	65.3	66.9	66.8	66.7	1.33	3.0	1.1	66.1	1.76	2.6	2.5	14	LC
EV6L6U	59.7	60.8	58.7	60.1	59.8	-1.36	1.8	0.8	61.1	-1.11	2.0	1.4	16	LC
FUYLVY	58.7	60.2	59.6	59.3	59.5	-1.50	2.4	0.6	61.2	-1.07	2.8	2.1	10	LC
H2FAUE	62.3	62.0	61.0	61.5	61.7	-0.62	2.9	0.6	61.3	-0.99	2.7	1.0	16	TD
HENTQE	63.8	63.5	64.1	63.3	63.7	0.14	3.0	0.4 L	62.6	-0.25	2.5	1.2	16	LD
JE4PEJ	66.2	62.8	63.8	64.5	64.3	0.40	3.2	1.4	63.3	0.15	3.0	2.1	16	LC
JHDT49	60.8	62.3	61.3	60.7	61.3	-0.79	2.6	0.7	62.3	-0.42	2.6	1.1	15	LC
JJPNNE	66.0	67.2	65.6	64.8	65.9	1.01	3.2	1.0	64.4	0.78	3.3	1.9	16	LC
LCJ3NA	63.6	62.7	61.7	64.9	63.2	-0.04	2.7	1.3	62.4	-0.34	3.2	1.7	16	TD
LH8FDG	62.0	62.0	61.8	59.5	61.3	-0.78	3.3	1.2	61.4	-0.95	3.2	1.3	16	LZ
MYVRYN	63.4	62.6	62.9	62.8	62.9	-0.14	2.4	0.3 L	63.0	0.00	2.8	1.1	16	LC
MZ8QQC	63.1	62.1	62.7	62.8	62.7	-0.24	2.6	0.4 L	62.9	-0.08	2.3	0.9	16	TA
P7W3JT	60.6	No Data	57.7 H	No Data	59.2	-1.61	4.7	2.0	59.2	-2.19*	4.7	2.0	2	LC
PYUBUV	No Data	No Data	No Data	65.3	65.3	0.78	1.8	0.0 L	63.2	0.10	3.3	2.4	12	TM
RCPXXN	67.2	69.0	57.2*	56.8*	62.5	-0.30	3.3	6.4 H	63.5	0.28	3.6	7.7 H	16	LC
TAQKKP	61.7	67.5	64.1	67.4 L	65.1	0.72	3.1	2.8	65.0	1.12	3.1	2.3	16	LZ
TGZBD2	56.0*H	62.4	53.5 XH	64.1	59.0	-1.68	5.6	5.0 H	61.9	-0.65	4.7	3.4	16	EM



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
UJLVVV	65.4	62.9	62.7	62.6	63.4	0.03	3.4	1.3	64.2	0.66	3.2	1.4	16	LZ
UVQ4C3	64.2	64.9	63.5	64.4	64.2	0.37	2.4	0.6	64.8	1.01	3.0	1.7	16	XX
UZ787W	64.4	64.2	63.2	60.7	63.1	-0.07	2.8	1.7	63.6	0.31	3.0	1.0	15	LC
WLRGWE	61.3	61.7	62.9	64.0	62.5	-0.32	2.7	1.2	61.1	-1.08	3.3	1.7	16	LC
WULPEK	66.1	66.0	63.7	67.0	65.7	0.95	3.1	1.4	64.3	0.70	3.5	1.9	16	LC
WYMVM	61.6 _L	62.1 _L	60.5	61.5	61.4	-0.72	1.7	0.7	61.6	-0.82	2.0	1.0	16	LC
X24RJ7	63.4	62.3	61.2	60.4	61.8	-0.58	2.9	1.3	62.2	-0.50	2.8	1.4	14	LD
XVMPFV	56.0*	58.9	57.5	58.4	57.7	-2.19*	2.5	1.3	59.1	-2.24*	2.6	1.4	16	LX
ZDB8P3	70.4	71.0*	69.4* _H	69.1*	70.0	2.61*	4.1	0.9	69.0	3.36 _X	3.7	1.2	16	LD
ZYL84M	63.5	62.9	62.0	62.6	62.8	-0.21	2.6	0.6	63.0	-0.02	3.3	1.2	16	LC

Consensus (All Labs) Results

Wk Mean	63.47	63.63	62.85	63.28	Month Mean	63.30	Grand Mean	63.04
Avg SDr	3.44	2.98	3.17	3.19	Avg SDr	3.26	Avg SDr	3.23
SD btwn Labs	3.55	2.84	2.74	2.89	SD btwn Labs	2.56	SD btwn Labs	1.76
Labs Includ	43	42	41	42	SD btwn Wks	2.42	SD btwn Wks	2.39
Labs Exclud	0	0	2	0	Labs Includ	44	Labs Includ	42
Labs not rcvd	1	2	1	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
6BJ67G	70.6 L	67.8	71.0	69.2	69.7	-1.20	2.2	1.4	69.5	-1.04	1.8	1.1	16	LD
6DWC8Q	69.2	71.9	69.7	71.1	70.5	-0.98	2.0	1.3	68.9	-1.20	2.5	6.8 H	16	XX
9ZMB63	71.8 L	71.8 L	71.8 L	71.7	71.8	-0.61	1.1	0.0 L	72.1	-0.40	1.8	0.8	15	LC
AB66FN	71.7	70.1	70.5	71.9	71.1	-0.80	2.5	0.9	70.6	-0.78	2.4	0.9	16	XX
ETRRW3	81.6	74.6	82.6 *	67.2	76.5	0.71	2.6	7.1 H	74.9	0.28	2.8	3.6	16	LC
EUZE2M	79.8	78.5	78.7	78.5	78.9	1.38	2.8	0.6	77.5	0.95	2.6	2.0	15	LZ
HURQAC	70.7	69.9	70.3	69.3	70.1	-1.09	1.7	0.6	69.2	-1.13	1.6	1.1	16	XX
MT7XGC	72.6	74.6	72.9	73.2	73.3	-0.18	2.6	0.9	72.8	-0.24	2.4	1.4	16	TD
NL2J8U	75.6	76.4	76.1	75.8	76.0	0.57	2.8	0.4 L	77.7	0.99	3.0	1.2	15	MB
NPHQT9	78.8	79.4	78.3	82.1	79.6	1.59	2.7	1.7	79.4	1.42	2.5	1.1	16	XX
P8847R	75.6	79.4	77.8	80.8	78.4	1.25	3.0	2.2	78.4	1.17	3.0	2.2	4	LZ
Q8HWFE	74.4	74.9	75.5	73.4	74.5	0.17	2.4	0.8	73.0	-0.18	2.8	7.8 H	14	LD
RQKHJY	73.7	74.0	74.3	76.7	74.7	0.21	2.4	1.4	74.8	0.28	3.0	3.3	16	TB
XUCHJU	73.4 H	71.8	75.0	74.4	73.6	-0.08	3.1	1.4	76.9	0.78	2.4	2.8	16	EM
XVTD6A	69.9 L	69.6 L	72.2 L	70.2 L	70.5	-0.97	1.0	1.2	70.9	-0.70	1.1	1.8	16	XX
ZE948P	69.0	68.2	70.1	69.7	69.3	-1.31	2.4	0.8	67.1	-1.65	2.4	2.6	16	LZ
ZG9XM2	79.3	78.2	79.1	78.4	78.8	1.34	2.4	0.5	79.5	1.45	2.7	0.9	16	LD

Consensus (All Labs) Results

Wk Mean	73.99	73.59	74.45	73.74	Month Mean	73.94	Grand Mean	73.73
Avg SDr	2.50	2.18	2.58	2.35	Avg SDr	2.41	Avg SDr	2.46
SD btwn Labs	3.93	3.86	3.85	4.37	SD btwn Labs	3.58	SD btwn Labs	4.00
Labs Includ	17	17	17	17	SD btwn Wks	2.06	SD btwn Wks	3.13
Labs Exclud	0	0	0	0	Labs Includ	17	Labs Includ	17
Labs not rcvd	0	0	0	0				

Instrument Code List as Reported by the Labs

(EM) - Emerson 1200 Series

(LD) - L&W Crush Tester 248

(MB) - Messmer Buchel K440

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

(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

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	
4CAF8C	45.5*	39.9	43.1	42.0	42.6	0.27	2.2	2.3	45.4	2.08*	2.8	6.2 H	16	LZ
7JAF6X	42.6 L	41.0	41.1	41.4	41.5	-0.39	2.0	0.7	40.9	-0.47	1.9	1.1	16	EN
9R3WY7	40.8	41.4	41.1	40.7 L	41.0	-0.69	1.4	0.3	41.5	-0.16	1.6	0.5	16	LC
G7RAK8	42.3	43.9	42.1	43.0	42.8	0.39	3.1	0.8	42.7	0.55	2.8	1.1	16	LC
G7XTUB	42.8	40.6	40.7	41.6	41.4	-0.45	2.9	1.0	41.1	-0.37	3.3	1.0	15	LC
GFEVHV	41.4	40.4	41.4	40.8	41.0	-0.69	2.3	0.5	41.3	-0.27	2.8	1.1	16	TB
K34BZE	43.6 H	47.5*	48.2*	No Data	46.4	2.54 X	4.0	2.5	44.7	1.64	3.0	2.0	11	MZ
K7YJ8P	42.0	41.6 L	40.5	40.7	41.2	-0.58	2.3	0.7	41.7	-0.02	2.1	1.8	16	MB
M84VXP	40.7	41.2	41.1	39.2	40.6	-0.96	2.5	0.9	39.6	-1.24	3.3	2.4	16	LC
N2GW98	40.4	43.9	45.9	42.1	43.1	0.53	2.7	2.4	41.9	0.11	2.8	2.8	16	LC
N4KM3F	42.5	41.4	40.4	42.3	41.7	-0.30	2.3	0.9	41.0	-0.43	2.1	1.1	16	TB
PGLBGA	38.0*	35.7*	36.4*	36.3*	36.6	-3.31 X	1.5	1.0	37.5	-2.38*	1.6	1.3	16	WK
R4PEK8	42.2	44.1	43.2	45.9	43.8	0.99	2.3	1.6	42.6	0.45	2.1	1.3	16	LC
T6HGF9	41.1	41.0	41.0	41.3	41.1	-0.66	1.8	0.1 L	41.5	-0.12	2.0	1.2	16	TD
TZVEV9	39.9	39.2	40.1	40.0	39.8	-1.41	2.2	0.4	40.5	-0.69	2.3	0.7	16	LD
UCR6RL	41.0 L	44.4	44.5	44.6 H	43.6	0.86	3.0	1.8	41.6	-0.06	2.5	2.2	10	LC
UJ6WKJ	43.2	45.3	45.4	45.4	44.8	1.57	2.0	1.1	44.3	1.45	2.2	1.0	16	LD
YAPPDD	41.7	42.4	42.1	41.6	42.0	-0.13	2.5	0.4	41.8	0.04	1.9	1.1	16	LC
YVZVK8	40.7	41.4	40.6	40.1	40.7	-0.87	1.9	0.5	41.6	-0.11	2.1	1.0	16	LC

Consensus (All Labs) Results

Wk Mean	41.71	41.91	42.04	41.61	Month Mean	42.18	Grand Mean	41.75
Avg SDr	2.68	2.26	2.32	2.32	Avg SDr	2.47	Avg SDr	2.43
SD btwn Labs	1.60	2.56	2.60	2.25	SD btwn Labs	1.68	SD btwn Labs	1.77
Labs Includ	19	19	19	18	SD btwn Wks	1.28	SD btwn Wks	2.05
Labs Exclud	0	0	0	0	Labs Includ	18	Labs Includ	19
Labs not rcvd	0	0	0	1				

Instrument Code List as Reported by the Labs

(EN) - Emerson 2200 Series

(LD) - L&W Crush Tester 248

(MB) - Messmer Buchel K440

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

(WK) - Zwick Z005 Crush Tester

(LC) - L & W Crush Tester 48

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

(MZ) - Messmer Buchel (model not specified)

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



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	
4367EY	15.5	15.6	15.0	15.7	15.4	1.54	1.2	0.3	14.9	0.70	1.2	0.5	16	XX
637LVD	14.8	14.7	14.4	14.9	14.7	-0.24	1.2	0.2	14.5	-0.20	1.2	1.0	H 16	LW
7VLM4J	15.1	15.1	15.2	14.8	15.1	0.68	1.2	0.2	15.1	1.15	1.2	0.3	16	LU
BKFRXG	13.7	14.0	14.7	13.7	14.0	-1.86	1.4	0.5	13.6	-2.23	X 1.1	1.1	H 16	LZ
HNNNH	14.9	14.6	15.1	15.3	15.0	0.48	1.1	0.3	14.7	0.41	1.1	0.3	16	LW
JR2KTL	14.2	15.2	14.6	14.8	14.7	-0.22	1.2	0.4	14.6	0.00	1.2	0.3	16	LU
LECLTM	14.8	14.5	14.4	14.6	14.6	-0.56	1.1	0.1	14.6	0.16	1.1	0.3	16	LW
MVZH7F	14.8	14.9	14.5	15.3	14.9	0.18	1.3	0.3	14.6	0.01	1.2	0.3	16	XX
VV9J7L	24.2	X 23.7	X 23.1	X 23.5	23.6	21.59	X 2.0	0.5	23.6	21.42	X 2.0	0.5	4	LZ

Consensus (All Labs) Results									
Wk Mean	14.73	14.80	14.75	14.88	Month Mean	14.79	Grand Mean	14.57	
Avg SDr	1.20	1.30	1.12	1.25	Avg SDr	1.22	Avg SDr	1.17	
SD btwn Labs	0.54	0.49	0.32	0.60	SD btwn Labs	0.41	SD btwn Labs	0.42	
Labs Includ	8	8	8	8	SD btwn Wks	0.31	SD btwn Wks	0.60	
Labs Exclud	1	1	1	1	Labs Includ	8	Labs Includ	8	
Labs not rcvd	0	0	0	0					

Instrument Code List as Reported by the Labs

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

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

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

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