

Collaborative Testing Services, Inc. Containerboard Interlaboratory Testing Program

Participant Summary Report #541 (L) - October 2014

[Introduction to the Containerboard Program](#)

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

Analysis	Sample Lot	Analysis Name
<u>201</u>	<u>BOX8</u>	<u>Box Compression Strength, Corrugated Boxes</u>
<u>202</u>	<u>ECT7</u>	<u>Edgewise Compressive Strength, Wax (T811), Corrugated board</u>
<u>203</u>	<u>ECT7</u>	<u>Edgewise Compressive Strength by Clamp (T839), Corrugated board</u>
<u>205</u>	<u>42B4</u>	<u>Mullen Burst of Linerboard, 42 lb Linerboard</u>
<u>207</u>	<u>36Z2</u>	<u>Mullen Burst of Linerboard, 36 lb Linerboard</u>
<u>215</u>	<u>42B4</u>	<u>Ring Crush of Linerboard, Rigid Platen Type, 42 lb Linerboard</u>
<u>217</u>	<u>36Z2</u>	<u>Ring Crush of Linerboard, Rigid Platen Type, 36 lb Linerboard</u>
<u>223</u>	<u>42B4</u>	<u>STFI of Linerboard, 42 lb Linerboard</u>
<u>225</u>	<u>36Z2</u>	<u>STFI of Linerboard, 36 lb Linerboard</u>
<u>228</u>	<u>69C</u>	<u>Roughness - Stylus Method, 69 lb Linerboard</u>
<u>231</u>	<u>36Z</u>	<u>Internal Bond Strength, Linerboard, 36 lb Linerboard</u>
<u>234</u>	<u>36Z</u>	<u>Coefficient of Static Friction - Inclined Plane, 36 lb Linerboard</u>
<u>237</u>	<u>36Z</u>	<u>Air Resistance - Gurley Method, Linerboard, 36 lb Linerboard</u>
<u>240</u>	<u>CM73</u>	<u>Flat Crush Strength (CMT) of Medium, 26 lb Corrugating Medium</u>
<u>250</u>	<u>CM73</u>	<u>Fluted Crush of Medium, 26 lb Corrugating Medium</u>
<u>255</u>	<u>CM73</u>	<u>Ring Crush of Medium, 26 lb Corrugating Medium</u>
<u>261</u>	<u>CM73</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 80 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	36Z1	June 2010 - December 2011
	36Z2	February 2012 - Current
42# Linerboard	42B2	June 2012 - April 2013
	42B3	May 2013 - Current
69# Linerboard	69A2	January 2013 - September 2013
	69C1	November 2013 - Current
Corrugating Medium	CM73	December 2012 - Current

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.

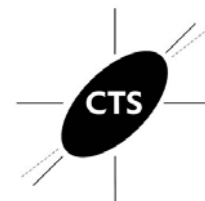
Flags assigned to Weekly Means:

- 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).

Containerboard Interlaboratory Testing Program
Analysis 201
Top to Bottom Box Compression Strength, Corrugated Boxes - BOX8
TAPPI Official Test Method T804



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
2ARJHC	745.2	-0.79	25.6	723.3	-1.20	37.3	3	LL
49MYRE	754.6	-0.61	18.1	767.9	-0.21	33.3	4	LG
4Q498L	863.8	1.44	21.5	786.5	0.21	34.0	4	ER
6YC2EV	781.4	-0.11	52.8	707.6	-1.55	39.4	4	LH
6ZC2GG	765.4	-0.41	31.0	759.3	-0.40	54.9	3	ER
8MVVHJ	887.5	1.89	52.9	866.4	1.98	42.3	2	LS
9D6W3X	819.7	0.61	31.4	830.1	1.17	37.1	4	ER
CZKL3X	733.2	-1.02	46.7	737.0	-0.89	39.5	3	TO
FEWZW8	851.6	1.21	15.1	840.2	1.40	17.8	4	LM
GH47PH	852.6	1.23	16.3	780.7	0.08	19.8	4	TB
J79JU8	743.4	-0.83	42.4	754.6	-0.50	65.5	4	ER
JL2AUA	750.4	-0.69	60.0	760.3	-0.38	59.9	4	LL
JQCGUE	772.2	-0.28	105.1	759.3	-0.40	74.7	4	EX
N6ZVHX	728.0	-1.12	58.9	770.5	-0.15	61.8	4	LG
P4HLM3	814.8	0.52	42.9	741.9	-0.79	41.8	4	LL
PH34E7	836.2	0.92	22.5	837.4	1.34	32.9	4	LN
PXDRNZ	726.8	-1.14	54.7	757.7	-0.44	52.7	4	ES
R4DNPC	843.0	1.05	30.5	847.0	1.55	29.4	3	LH
RC7YY8	727.1	-1.13	32.9	727.8	-1.10	33.1	4	LG
Y6HLZ7	748.7	-0.73	69.7	790.3	0.29	71.4	4	LS

Consensus (All Labs) Results

Month Mean	787.27	Grand Mean	777.28
Avg SDr	46.77	Avg SDr	46.69
SD btwn Labs	53.15	SD btwn Labs	45.02
Labs Incd	20	Labs Incd	20

Consensus By Method

Test Method	Group Mean	SD btwn Group	Difference from Grand Mean	Labs Included
Hot melt adhesive sealing	776.81	60.48	10.46	6
Clip sealing	787.07	50.39	0.20	13
Tape sealing	852.60	0.00	65.33	1

Containerboard Interlaboratory Testing Program
Analysis 201
Top to Bottom Box Compression Strength, Corrugated Boxes - BOX8
TAPPI Official Test Method T804



Instrument Code List as Reported by the Labs

(ER) - Emerson 6200 Series

(EX) - Emerson Apparatus (Model not specified)

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

(LM) - Lansmont 122-15k

(LS) - Lansmont Squeezer

(TO) - Tinius Olsen Model not specified

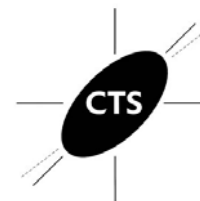
(ES) - Emerson 8510

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

(LL) - Lansmont 76-5K

(LN) - Lansmont 152-50k

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



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
49MYRE	43.1	1.66	1.6	42.5	1.50	2.7	4	LC
8MVVHJ	36.3	-1.53	1.5	38.1	-0.44	1.4	2	EM
B6ZWF2	39.6	0.01	1.1	40.0	0.41	1.7	4	TB
EALMHE	40.7	0.51	2.1	35.9	-1.42	2.3	4	XX
PH34E7	39.9	0.17	2.3	41.4	1.02	1.7	4	EN
R4DNPC	36.9	-1.24	1.0	36.6	-1.11	1.0	2	TC
T7XWD3	40.1	0.24	1.5	38.6	-0.21	1.3	2	WK
Y6HLZ7	39.9	0.17	1.2	39.7	0.25	1.8	4	LD

Consensus (All Labs) Results

Month Mean	39.56	Grand Mean	39.10
Avg SDr	1.59	Avg SDr	1.80
SD btwn Labs	2.15	SD btwn Labs	2.27
Labs Incd	8	Labs Incd	8

Instrument Code List as Reported by the Labs

(EM) - Emerson 1200 Series

(LC) - L&W Crush Tester 48

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

(WK) - Zwick Z005 Crush Tester

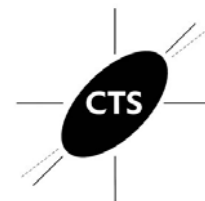
(EN) - Emerson 2200

(LD) - L&W Crush Tester 248

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

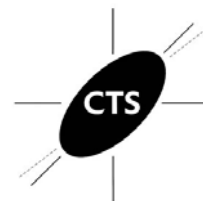
(XX) - Instrument make/model not specified by lab

Containerboard Interlaboratory Testing Program
Analysis 203
Edgewise Compressive Strength by T839, Corrugated board - ECT7
TAPPI T839



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
2ARJHC	42.5	0.02	1.6	41.3	-0.59	1.8	3	LC
2LXUPY	47.2	3.16 X	0.6	44.7	1.71	1.3	3	LC
3WU37G	44.6	1.39	1.1	42.9	0.52	2.0	4	XX
49MYRE	42.9	0.27	1.4	42.5	0.28	2.0	4	LC
4KY9BY	42.0	-0.31	1.6	40.7	-0.95	2.2	4	LD
4Q498L	43.5	0.67	2.1	43.0	0.56	1.7	4	EN
6YC2EV	42.5	0.03	3.9	39.0	-2.13*	2.8	4	EM
6ZC2GG	45.1	1.78	1.0	44.5	1.60	1.1	3	TD
84YPMX	43.0	0.33	1.2	43.6	0.99	1.1	2	TC
8MVVHJ	41.4	-0.69	2.6	43.0	0.58	1.9	2	EM
9D6W3X	42.1	-0.24	0.9	41.1	-0.72	1.1	4	EM
9YKEAU	43.3	0.54	1.7	43.6	0.98	1.3	4	TG
ARGP7V	40.9	-1.03	1.2	42.6	0.30	1.3	4	CT
B6ZWF2	41.7	-0.48	1.3	41.8	-0.25	1.3	4	TG
CP37XA	43.2	0.48	1.2	42.7	0.40	1.6	4	LD
CZKL3X	39.2	-2.19*	2.2	40.2	-1.30	1.7	2	TB
D99VQX	42.2	-0.17	1.5	42.0	-0.11	1.2	3	TM
DFURV9	43.4	0.59	2.3	42.0	-0.08	1.8	2	TX
EKJQKM	43.0	0.34	1.7	42.6	0.30	1.6	4	LC
FEWZW8	42.2	-0.20	1.5	41.8	-0.22	1.3	4	EM
GH47PH	42.2	-0.14	0.4	42.8	0.47	0.6	3	LC
H397DA	42.6	0.10	1.4	40.4	-1.17	1.0	4	LC
J79JU8	45.1	1.73	1.0	44.5	1.58	1.5	4	LD
JQCGUE	40.1	-1.53	1.4	40.4	-1.16	1.4	4	TL
N9GKJL	41.0	-0.94	1.5	41.4	-0.51	1.3	4	TK
P4HLM3	43.2	0.50	1.1	42.1	-0.03	1.4	4	BU
PH34E7	43.4	0.62	2.5	43.8	1.14	1.8	4	EN
PXDRNZ	44.4	1.32	1.3	44.1	1.33	1.3	4	LD
R4DNPC	41.4	-0.71	0.9	39.9	-1.51	1.1	2	TC
R6LXG9	29.5	-8.59 X	0.7	36.6	-3.76 X	0.8	4	LC
RC7YY8	39.4	-2.03*	1.8	38.9	-2.16*	2.3	4	EM
RHUGE4	43.7	0.84	1.6	41.5	-0.40	1.5	2	LD
UL9XMY	39.7	-1.83	1.1	36.8	-3.64 X	1.7	2	TB
UPLZ8A	40.8	-1.10	1.3	41.5	-0.40	1.5	4	EX
VZKTDE	44.4	1.29	2.3	43.6	1.00	2.1	3	LC
Y6HLZ7	42.7	0.14	1.7	42.3	0.13	1.7	4	LD

Containerboard Interlaboratory Testing Program
 Analysis 203
Edgewise Compressive Strength by T839, Corrugated board - ECT7
 TAPPI T839



WebCode	Monthly Results			Cumulative Results				Inst
	Mean	CPV	SDr	Mean	CPV	SDr	Months	
ZMXE4Z	43.4	0.61	1.1	41.9	-0.18	1.2	4	LC

Consensus (All Labs) Results			
Month Mean	42.46	Grand Mean	42.14
Avg SDr	1.68	Avg SDr	1.60
SD btwn Labs	1.51	SD btwn Labs	1.48
Labs Incd	35	Labs Incd	35

Instrument Code List as Reported by the Labs

- | | |
|--|--|
| (BU) - Buchel Digital Crush Tester | (CT) - Con-Ten |
| (EM) - Emerson 1200 Series | (EN) - Emerson 2200 |
| (EX) - Emerson (model not specified) | (LC) - L&W Crush Tester 48 |
| (LD) - L&W Crush Tester 248 | (TB) - TMI Monitor/Compression Tester, Model 17-70 |
| (TC) - TMI Monitor/Compression Tester, Model 17-37 | (TD) - TMI Digital Crush Tester, Model 17-09 |
| (TG) - TMI Digital Crush Tester, 17-76 | (TK) - TLS Compression Tester, Model 5184 |
| (TL) - Tech-Lab Systems Compression | (TM) - TMI/Hinde & Dausch |
| (TX) - TMI (model not specified) | (XX) - Instrument make/model not specified by lab |

Containerboard Interlaboratory Testing Program
Analysis 205

Bursting Strength (Mullen), 42 lb Linerboard - 42B4

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
37JQ46	106.2	110.8	100.6	113.4	107.7	0.84	10.9	5.6	101.3	-0.82	9.8	7.8 H	16	TB
3WU37G	98.1	100.7	98.9	97.3	98.7	-1.43	10.2	1.5	97.5	-1.93	9.3	1.9	16	LA
3XC7NE	112.0	110.6	105.9	114.6 *	110.8	1.61	8.1	3.7	110.5	1.82	8.3	3.4	16	TB
49MYRE	110.6	105.4	110.8	106.1	108.2	0.97	9.2	2.9	107.1	0.82	10.6	2.3	14	LZ
4KY9BY	95.8	100.0	98.3	104.3	99.6	-1.22	9.6	3.6	102.7	-0.44	9.6	3.6	15	AA
6KV8LH	102.7	105.0	104.5	102.1	103.5	-0.22	10.7	1.4	101.8	-0.69	10.0	2.7	16	TB
7HME8A	99.7	103.7	106.6	104.4	103.6	-0.20	8.1	2.9	104.5	0.08	8.6	2.7	16	LC
7RB7U3	101.9	106.5	106.3	104.0	104.7	0.06	10.9	2.2	103.7	-0.15	11.0	2.9	16	LJ
8WHWW9	107.8	110.3	109.2	107.0	108.6	1.06	5.0	1.5	108.3	1.16	6.3	2.3	16	LA
93LGXB	97.9	100.4	105.3	101.5 H	101.3	-0.80	12.3	3.1	102.6	-0.45	11.3	2.4	16	LA
93LKME	110.5	107.9	105.3	107.5	107.8	0.86	8.0	2.1	105.5	0.38	9.1	2.8	16	LZ
ALRC8T	105.9	108.0	99.6	102.0	103.9	-0.13	7.4	3.8	102.7	-0.42	7.8	4.8	16	LC
ARGP7V	109.7	104.0	113.4 *H	103.5	107.7	0.82	16.7	4.8	104.3	0.02	15.2	4.9	16	XX
ATTKU9	107.7	110.9	109.7	108.4	109.2	1.21	8.0	1.4	107.6	0.98	7.3	2.3	16	AH
B2HCV7	103.6	109.2	99.9	No Data	104.2	-0.04	8.7	4.7	103.8	-0.12	10.8	2.5	15	AH
B7VG88	103.0	98.1	99.1	98.9	99.8	-1.18	10.3	2.2	100.0	-1.20	10.2	2.3	16	LA
CP37XA	102.2	105.7	100.1	104.7	103.2	-0.31	8.3	2.5	108.9	1.33	8.4	8.0 H	16	TB
CZKL3X	101.0	99.6	98.2	94.6 *	98.4	-1.53	11.2	2.8	99.1	-1.45	10.2	2.7	16	LA
D2XDVE	100.4	99.3	103.0	100.3	100.7	-0.93	9.0	1.6	99.5	-1.33	9.1	3.9	12	LC
FEWZW8	97.1	102.0	102.4	102.4	101.0	-0.87	8.6	2.6	100.7	-1.01	7.4	2.3	16	AH
G48RQA	105.4	104.4	104.3	105.1	104.8	0.10	7.4	0.5	104.7	0.14	6.3	0.9	16	AH
GTMMGP	109.1	102.8	106.2	110.2	107.1	0.68	11.7	3.3	106.5	0.65	10.7	2.4	16	LZ
GZDQT2	110.7	104.5	110.0	108.6	108.4	1.02	9.5	2.8	108.1	1.12	10.1	3.2	16	LC
HNA4V2	102.3 H	101.5	105.3	104.5	103.4	-0.26	11.2	1.8	104.3	0.03	10.7	4.3	16	LA
J79JU8	100.6	98.7	103.2	99.1	100.4	-1.01	9.0	2.0	100.8	-0.96	9.6	2.2	16	AH
JFF7TY	104.0	102.7	101.7	99.1	101.9	-0.63	9.9	2.1	104.4	0.07	10.0	3.1	16	LA
JHY9RR	101.4	102.6	102.2	101.2 L	101.9	-0.64	5.0	0.7	102.3	-0.54	4.0	1.4	16	LJ
KFU3PR	108.8	106.4	104.8	106.2	106.6	0.54	10.5	1.7	104.4	0.05	10.4	3.1	16	AH
KHV94W	103.9	98.6	103.9	100.7	101.8	-0.67	10.2	2.6	100.6	-1.03	9.9	3.4	16	LC
LGVMQW	95.6	92.3 *	88.4 X	99.3	93.9	-2.67 *	7.8	4.7	98.2	-1.71	7.8	7.5 H	15	LC
LGYA8A	109.4	108.5	108.3 L	113.0 L	109.8	1.37	5.1	2.2	108.4	1.20	4.8	2.0	13	XX
MCLQLM	106.2	109.7	104.4	107.6	107.0	0.65	9.2	2.3	104.1	-0.04	9.9	2.8	16	LC
MM3DW9	109.8	113.1	108.6	110.4	110.5	1.54	11.6	1.9	111.7	2.15 *	11.1	4.1	16	AH
N2ZYJV	101.4	98.7	108.5	100.2	102.2	-0.56	10.3	4.3	100.1	-1.17	9.5	7.5 H	16	LA
N6ZVHX	104.9	98.5	103.3	102.9	102.4	-0.51	9.4	2.7	104.6	0.12	9.8	2.5	16	AH



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
NXZVM2	104.6	107.4	102.2	102.6	104.2	-0.05	8.0	2.4	104.2	0.00	6.4	1.6	16	TB
PXDRNZ	103.5	105.2	102.3	107.4	104.6	0.05	9.9	2.2	106.5	0.66	10.2	2.7	16	LA
QR4Q3W	108.7	109.8	109.8	108.7	109.2	1.22	10.6	0.6	110.1	1.70	10.2	2.9	16	LA
R4DNPC	99.3	101.8	110.3	108.8	105.0	0.15	10.4	5.3	104.8	0.18	11.0	3.6	12	AA
UH63ZP	108.9	113.2	110.1	107.9	110.0	1.43	10.0	2.3	109.7	1.58	9.5	2.8	15	TB
UKQ9WQ	105.9	106.1	103.1	102.4	104.4	-0.01	10.8	1.9	103.4	-0.21	10.8	2.3	16	AX
URB7PK	103.7	102.1	102.0	99.0	101.7	-0.69	10.2	2.0	104.0	-0.07	10.7	2.9	16	LC
WJ79TR	110.2	109.4 L	110.4 L	107.2 L	109.3	1.24	3.6	1.5	108.1	1.11	6.3	3.6	16	LA
Y6HLZ7	111.1	110.3	112.0	111.8	111.3	1.75	9.8	0.8	107.5	0.95	10.5	3.8	16	AH
YJFVGK	103.7	101.3	98.6	97.6	100.3	-1.04	9.6	2.8	101.7	-0.73	9.7	2.4	16	LC
YTRUF2	99.4	99.5	99.9	97.5	99.1	-1.34	7.7	1.1	98.1	-1.75	8.0	2.8	16	AX
ZE7YCB	96.8	106.5	106.3	104.6	103.6	-0.22	11.4	4.6	104.0	-0.05	11.0	4.0	16	LJ

Consensus (All Labs) Results														
Wk Mean	104.32	104.54	104.75	104.35	Month Mean	104.41			Grand Mean	104.20				
Avg SDr	9.30	9.24	10.33	9.59	Avg SDr	9.61			Avg SDr	9.54				
SD btwn Labs	4.55	4.68	4.11	4.69	SD btwn Labs	3.95			SD btwn Labs	3.49				
Labs Includ	47	47	46	46	SD btwn Wks	2.82			SD btwn Wks	3.64				
Labs Exclud	0	0	1	0	Labs Includ	47			Labs Includ	47				
Labs not rcvd	0	0	0	1										

Instrument Code List as Reported by the Labs

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

Containerboard Interlaboratory Testing Program
Analysis 207

Bursting Strength (Mullen), 36 lb Linerboard - 36Z2

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	
37JQ46	78.8	79.4	78.4	77.4	78.5	-0.04	6.4	0.9	78.1	-0.23	6.0	5.5 H	10	TB
3WU37G	72.0	76.6	73.0	78.5	75.0	-1.20	5.6	3.1	73.7	-2.33*	5.6	2.4	12	LA
3XC7NE	90.2 X	88.2 X	88.3*	90.7 X	89.4	3.59 X	6.0	1.3	88.7	4.86 X	5.7	1.5	12	TB
49MYRE	81.5	81.1	83.3	80.3	81.6	0.99	4.9	1.3	82.1	1.68	5.2	2.4	11	LZ
4KY9BY	76.6	73.8	73.9	74.7	74.8	-1.28	5.7	1.3	79.3	0.34	5.5	4.2 H	12	AA
6KV8LH	77.6	77.2	77.4	77.2	77.4	-0.41	5.4	0.2 L	77.6	-0.47	5.4	1.4	12	TB
7HME8A	80.0	81.3	78.9	77.0	79.3	0.23	4.8	1.8	78.5	-0.01	5.2	2.1	12	LC
7RB7U3	76.4	76.4	78.2	82.6	78.4	-0.06	4.9	2.9	79.0	0.21	5.4	2.3	12	LJ
8WHWW9	81.4	80.5	81.2	82.8	81.5	0.96	3.6	1.0	80.4	0.89	3.9	1.2	12	LA
93LGXB	76.2	81.7	77.7	79.3	78.7	0.04	5.1	2.3	78.8	0.10	5.4	2.0	12	LA
93LKME	79.7	77.3	77.4	80.1	78.6	0.01	4.1	1.5	79.1	0.28	5.5	2.6	12	LZ
ALRC8T	78.9	77.7	73.6	76.4	76.7	-0.65	4.7	2.3	77.6	-0.44	4.6	2.2	12	LC
ARGP7V	73.6	74.8	73.7	71.0*	73.3	-1.77	6.0	1.6	71.1	-3.58 X	6.8	2.3	12	XX
ATTKU9	78.2	79.2	79.2	75.4 L	78.0	-0.20	3.8	1.8	76.6	-0.94	2.8	1.6	12	AH
B2HCV7	76.1	74.9	75.1	No Data	75.4	-1.08	4.3	0.6	76.9	-0.78	4.8	1.5	11	AH
B7VG88	77.6	78.1	73.4	74.1	75.8	-0.94	6.0	2.4	75.3	-1.56	5.5	1.8	12	LA
C9YCQA	No Data	No Data	No Data	84.2	84.2	1.87	7.1	0.0 L	79.2	0.30	5.2	2.1	9	LC
CP37XA	74.6	75.1	76.5	74.6	75.2	-1.14	4.9	0.9	80.4	0.87	4.8	5.3 H	12	TB
CZKL3X	75.7	76.4	76.1	72.8	75.3	-1.12	4.4	1.6	75.7	-1.38	4.8	1.6	12	LA
D2XDVE	74.4	76.6	74.6	75.3	75.2	-1.13	5.2	1.0	75.6	-1.42	5.0	2.3	12	LC
FEWZW8	74.3	78.7	74.3	77.8	76.3	-0.78	3.6	2.3	77.0	-0.75	3.8	1.9	12	AH
G48RQA	81.5	80.1	81.0	82.2	81.2	0.87	3.7	0.9	80.1	0.75	3.3	1.0	12	AH
GTMMGP	74.8	80.6	81.0 H	79.1	78.9	0.09	6.1	2.8	78.4	-0.09	5.4	1.8	12	LZ
GZDQT2	83.1	83.0	83.2	82.6	83.0	1.46	5.6	0.3 L	82.9	2.09*	5.9	1.6	12	LC
HNA4V2	81.2	81.5	79.9	78.9	80.4	0.59	5.5	1.2	78.2	-0.15	5.9	2.4	12	LA
J79JU8	75.0	76.4	74.6	73.8	75.0	-1.22	5.1	1.1	76.8	-0.85	5.5	2.3	12	AH
JFF7TY	81.3	80.2	79.7	80.0	80.3	0.57	4.8	0.7	79.5	0.46	5.3	1.4	12	LA
JHY9RR	80.2	80.5	80.0 L	79.5 L	80.0	0.48	2.5	0.4	79.6	0.50	2.9	1.1	12	LJ
KFU3PR	79.0 L	79.4	77.4	81.2	79.3	0.22	4.8	1.6	78.1	-0.23	4.6	2.1	12	AH
KHV94W	77.3	73.6	74.7	78.1	75.9	-0.89	6.3	2.1	75.9	-1.27	6.0	2.1	12	LC
LGVMQW	78.9	77.4	70.4*	73.4	75.1	-1.18	5.1	3.9 H	76.7	-0.90	4.9	3.2	12	LC
LGYA8A	81.2	78.9	83.1	81.2	81.1	0.84	4.3	1.7	82.4	1.82	3.9	2.1	10	XX
MCLQLM	86.3*	83.8*	83.6	85.2	84.7	2.05*	4.5	1.2	80.2	0.79	5.3	3.8	12	LC
MM3DW9	77.8	82.9	77.9	81.1	79.9	0.44	5.8	2.5	81.3	1.31	6.2	3.0	12	AH
N2ZYJV	74.7	76.8	80.0	79.6	77.8	-0.27	5.1	2.5	77.0	-0.74	5.5	1.8	12	LA

Containerboard Interlaboratory Testing Program
Analysis 207

Bursting Strength (Mullen), 36 lb Linerboard - 36Z2
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	
N6ZVHX	83.9 ^H	79.3	76.4	82.3	80.5	0.63	6.0	3.3	80.5	0.93	6.3	1.8	12	AH
NXZVM2	78.9	79.2	80.0	75.3	78.4	-0.08	5.3	2.1	79.2	0.33	4.7	1.4	12	TB
PXDRNZ	80.3	77.1	80.1	78.3	79.0	0.12	5.8	1.5	80.2	0.81	5.6	1.9	12	LA
QR4Q3W	83.5	82.7	81.2	85.8	83.3	1.57	3.8	1.9	82.2	1.76	4.6	1.6	12	LA
R4DNPC	81.3	79.0	82.5	77.3	80.0	0.47	5.6	2.3	79.0	0.23	5.5	2.6	8	AA
UH63ZP	85.2	86.7 ^{XL}	83.7	85.3	85.2	2.21 [*]	3.7	1.2	85.6	3.35 ^X	5.3	1.8	11	TB
UKQ9WQ	72.4	76.6	73.8	70.8 [*]	73.4	-1.74	4.6	2.5	75.9	-1.27	4.5	3.2	12	AX
URB7PK	80.9	77.6 ^H	77.6	79.0	78.8	0.06	6.5	1.6	78.8	0.12	6.0	2.4	12	LC
WJ79TR	80.9 ^L	80.3	79.9 ^L	80.3 ^L	80.3	0.58	1.8	0.4	80.5	0.91	3.1	1.3	12	LA
Y6HLZ7	83.6	79.6	84.8	84.3	83.1	1.49	5.6	2.4	80.3	0.86	5.9	3.0	12	AH
YJFVGK	75.4	75.6	79.0	76.0	76.5	-0.70	5.1	1.7	77.2	-0.66	5.0	2.9	12	LC
YTRUF2	79.4	76.5	76.4	75.3	76.9	-0.57	5.5	1.7	76.8	-0.85	4.8	1.9	12	XX
ZE7YCB	75.4	78.4	76.7	79.2	77.4	-0.39	5.2	1.7	76.4	-1.02	5.1	1.6	12	LJ

Consensus (All Labs) Results									
Wk Mean	78.63	78.53	78.35	78.62	Month Mean	78.60	Grand Mean	78.55	
Avg SDr	4.79	5.10	5.37	4.98	Avg SDr	5.09	Avg SDr	5.10	
SD btwn Labs	3.43	2.51	3.69	3.75	SD btwn Labs	3.00	SD btwn Labs	2.09	
Labs Includ	46	45	47	46	SD btwn Wks	1.88	SD btwn Wks	2.45	
Labs Exclud	1	2	0	1	Labs Includ	47	Labs Includ	45	
Labs not rcvd	1	1	1	1					

Instrument Code List as Reported by the Labs

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



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
37JQ46	107.1	112.3	106.0	107.4 L	108.2	1.69	3.4	2.8	99.2	-0.24	6.5	11.9 H	16	LC
3WU37G	99.5	97.8	98.1	99.3	98.7	-0.40	4.6	0.9	96.2	-0.98	4.4	2.7	16	LC
3XC7NE	114.0 *H	117.7 *	116.3 X	108.1	114.0	2.98 X	4.9	4.2	111.4	2.70 *	4.1	6.2	16	LX
49MYRE	104.2	99.6	101.6	107.1 L	103.1	0.58	2.9	3.3	102.3	0.51	3.0	2.6	14	LC
4FJXXU	102.9	102.5	101.4	105.7	103.1	0.58	3.9	1.8	101.3	0.27	4.1	2.6	16	LC
4KY9BY	93.1	98.2	No Data	99.5	96.9	-0.79	2.7	3.4	97.0	-0.78	3.1	2.1	14	LD
4Q498L	97.7	98.8	98.7	94.4	97.4	-0.69	3.7	2.1	97.0	-0.79	3.5	2.2	16	EN
6KV8LH	97.6	91.7	99.6	No Data	96.3	-0.92	4.3	4.1	98.6	-0.39	4.2	5.0	15	LZ
6YC2EV	109.7	111.0	109.4	110.3	110.1	2.12 *	4.9	0.7	102.0	0.43	3.8	7.7	16	EM
7HME8A	101.4	106.3	102.2	98.2 H	102.0	0.34	15.2	3.3	105.0	1.15	8.4	2.9	16	LC
7RB7U3	99.2	101.1	102.5	101.7	101.1	0.14	3.5	1.4	100.8	0.14	4.8	1.5	15	LD
8R84JN	94.2	97.5	93.4	93.3	94.6	-1.30	4.8	2.0	97.0	-0.77	4.6	4.2	12	LC
8WHWW9	101.2 L	101.2 L	101.3	101.1 L	101.2	0.16	1.7	0.1 L	101.2	0.23	2.1	0.5 L	16	LZ
93LGXB	101.1	102.2	101.2	104.0	102.1	0.36	3.4	1.3	101.0	0.19	3.6	2.0	16	LD
93LKME	96.2	96.6 L	96.5	100.0	97.3	-0.70	3.4	1.8	94.5	-1.38	3.6	4.7	16	LC
9D6W3X	90.0 *	90.7	91.9	94.6 L	91.8	-1.91	3.7	2.0	92.7	-1.82	3.6	1.4	16	EX
9YKEAU	94.7	95.4	96.0	95.7	95.5	-1.11	3.5	0.6	95.5	-1.14	3.3	1.4	16	TH
ATTKU9	98.4	102.0	102.3	99.3	100.5	0.00	3.7	2.0	100.5	0.07	4.1	1.9	16	LC
B7VG88	99.1	98.0	98.9	100.5	99.2	-0.30	3.3	1.0	99.9	-0.07	3.9	1.6	14	LC
BGDPE9	98.6 H	100.5 H	95.9 H	98.4	98.3	-0.47	8.9	1.9	81.6	-4.51 X	6.2	21.9 H	14	MB
C9YCQA	No Data	No Data	No Data	104.4 H	104.4	0.85	10.3	0.0 L	93.5	-1.62	8.2	21.0 H	13	LA
CP37XA	100.2	98.5	102.8	96.6	99.5	-0.22	3.1	2.6	100.5	0.07	3.0	2.0	16	LD
CXGT8D	100.9	98.5 L	100.4	100.8 L	100.2	-0.07	1.9	1.1	100.1	-0.02	2.5	1.2	16	LD
D2XDVE	99.9	96.0	93.5	99.0	97.1	-0.75	4.9	3.0	99.8	-0.10	4.2	4.0	12	LD
D4ZB4L	103.7 H	102.1	103.2	106.8	103.9	0.76	5.0	2.0	102.3	0.50	4.2	2.9	16	EM
FEWZW8	99.8	97.3	98.2	97.7 L	98.3	-0.49	2.5	1.1	99.5	-0.18	2.3	1.2	16	EM
J79JU8	99.7	99.3	99.7	98.8	99.4	-0.25	3.1	0.4 L	99.2	-0.24	3.4	2.6	16	LD
JCCH6W	101.0	105.4	No Data	No Data	103.2	0.60	3.6	3.1	100.6	0.08	4.3	3.7	6	EX
JFF7TY	102.0	97.6	97.9	101.0	99.6	-0.19	3.2	2.2	99.3	-0.21	3.6	6.3	16	LC
JH23BX	104.9	102.7	104.0	106.6 L	104.5	0.89	3.9	1.6	105.3	1.23	3.2	1.7	16	LD
JHY9RR	101.4	103.0	100.9	102.6	102.0	0.32	5.2	1.0	101.6	0.33	4.1	1.1	16	LD
KFU3PR	109.2	108.0	109.1	108.1	108.6	1.78	4.5	0.7	108.9	2.10 *	5.8	2.1	16	LC
KHV94W	103.8	86.4 *H	99.3	100.6	97.5	-0.65	5.8	7.6 H	106.9	1.62	5.8	7.4	16	LC
KWHBNB	108.8	108.6	103.2 H	108.4	107.2	1.48	4.5	2.7	104.4	1.00	5.6	3.5	16	XX
LGVMQW	92.7	93.9	95.0	91.8	93.4	-1.57	4.7	1.4	95.1	-1.23	3.8	4.6	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
LGYA8A	98.2	107.4	101.0	98.5	101.3	0.17	4.4	4.3	101.3	0.25	4.8	4.1	13	XX
LULG6B	104.1	102.0	98.2	98.1	100.6	0.02	4.3	2.9	101.3	0.26	4.7	2.6	13	MB
MCLQLM	110.8	112.3	103.2	102.8	107.3	1.49	4.1	5.0	105.7	1.33	3.9	3.0	16	TC
MM3DW9	108.1	99.0	103.6	104.8	103.9	0.75	4.8	3.8	105.6	1.31	5.8	3.3	16	LD
N2ZYJV	101.2	104.7	108.0	100.0	103.5	0.66	4.3	3.6	102.3	0.50	5.6	9.9 H	16	LC
N9GKJL	90.9	89.5	88.1 *	87.4 *	89.0	-2.54 *	5.0	1.5	93.5	-1.64	4.3	4.4	12	MB
NXZVM2	99.2	97.7	98.3	100.3	98.9	-0.36	3.0	1.2	99.3	-0.22	3.1	0.9 L	16	TH
QR4Q3W	98.2	99.9	97.9	97.0	98.3	-0.49	3.5	1.2	100.2	0.00	3.8	2.8	16	LZ
RC7YY8	95.6	91.6	100.7	101.1	97.3	-0.71	4.0	4.5	94.2	-1.46	3.5	3.2	16	EM
UH63ZP	101.9	97.1	95.7	97.2	98.0	-0.55	5.4	2.7	98.0	-0.55	4.5	3.9	15	LC
UKQ9WQ	106.1	105.5	106.6	84.6 X	100.7	0.04	4.6	10.8 H	99.6	-0.14	5.2	5.6	16	LC
WJ79TR	101.2	100.3	100.6 L	101.4 L	100.9	0.08	2.4	0.5 L	99.9	-0.06	2.7	1.8	16	LD
Y6HLZ7	102.9	100.7	99.3	96.6 L	99.9	-0.14	3.8	2.7	99.6	-0.15	4.1	1.7	16	LC
YJFVGK	104.6	106.9	108.2	105.9	106.4	1.30	3.5	1.5	101.2	0.23	4.1	6.2	16	LD
YTRUF2	109.7	110.5	112.4 *	106.4	109.7	2.03 *	4.8	2.5	107.2	1.70	4.9	3.0	16	LZ
ZE7YCB	90.7	93.1	95.5	92.5	93.0	-1.66	4.5	2.0	91.9	-2.02 *	4.2	2.3	16	LC

Consensus (All Labs) Results

Wk Mean	101.03	100.74	100.45	100.65	Month Mean	100.49	Grand Mean	100.21
Avg SDr	4.04	4.36	4.02	6.15	Avg SDr	4.85	Avg SDr	4.41
SD btwn Labs	5.34	6.27	4.78	4.92	SD btwn Labs	4.55	SD btwn Labs	4.13
Labs Includ	50	50	47	48	SD btwn Wks	3.02	SD btwn Wks	5.05
Labs Exclud	0	0	1	1	Labs Includ	50	Labs Includ	50
Labs not rcvd	1	1	3	2				

Instrument Code List as Reported by the Labs

- (EM) - Emerson 1200
- (EX) - Emerson (model not specified)
- (LC) - L & W Crush Tester 48
- (LX) - L & W 506
- (MB) - Messmer Buchel K440
- (TH) - TMI Compression Tester, Model 17-76
- (EN) - Emerson 2200
- (LA) - L&W Autoline
- (LD) - L&W Crush Tester 248
- (LZ) - L & W Crush Tester (model not specified)
- (TC) - TMI Monitor/Compression Tester, Model 17-37
- (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	
37JQ46	80.6 H	89.0 *	86.3	84.7	85.1	1.59	4.6	3.5	78.4	-0.30	5.7	10.0 H	10	LC
3WU37G	77.5	79.8	78.3	78.6	78.6	-0.37	2.8	1.0	77.9	-0.48	3.8	1.9	12	LC
3XC7NE	89.9 *	90.0 *	90.7 X	88.4 *H	89.8	2.97 X	3.9	1.0	87.1	2.47 *	3.7	5.0	12	LX
49MYRE	82.8	80.2	84.8	82.2	82.5	0.81	2.0	1.9	81.3	0.62	2.3	1.8	11	LC
4FJXXU	79.9	78.9	82.4	82.0	80.8	0.30	2.5	1.7	76.8	-0.82	2.5	4.2	12	LC
4KY9BY	78.1	76.9	No Data	76.5	77.2	-0.79	2.4	0.8	76.4	-0.95	2.4	2.5	11	LD
4Q498L	79.0	78.5	78.9	78.0	78.6	-0.36	3.0	0.5	78.0	-0.43	2.5	1.3	12	EN
6KV8LH	82.5	74.6	82.5	No Data	79.9	0.02	2.5	4.6	80.1	0.25	2.8	3.6	11	LZ
6YC2EV	84.6	85.0	84.4	86.3	85.1	1.57	3.3	0.8	74.1	-1.67	3.6	8.2 H	12	EM
7HME8A	83.2	83.2	83.9	82.7	83.3	1.03	3.2	0.5	83.8	1.41	3.3	0.8	12	LC
7RB7U3	75.1	79.7	79.4	76.4	77.7	-0.63	3.5	2.3	78.4	-0.30	3.5	1.6	12	LD
8R84JN	68.9 *	73.7	68.1 X	75.8	71.6	-2.44 *	3.5	3.7	73.7	-1.81	3.6	2.8	12	LC
8WHWW9	80.5	80.6	80.6 L	80.5	80.6	0.23	2.0	0.0 L	80.3	0.31	2.0	0.3 L	12	LZ
93LGXB	78.9	78.4	79.8	80.4	79.4	-0.13	2.4	0.9	78.6	-0.26	2.9	1.2	12	LD
93LKME	70.1 *	70.0 *	74.2	76.8	72.8	-2.10 *	2.5	3.3	75.6	-1.20	3.0	3.5	12	LC
9D6W3X	74.5	75.3	74.4	75.4	74.9	-1.47	3.2	0.6	74.9	-1.43	3.1	0.9	12	EX
9YKEAU	75.6	74.9	75.1	74.8	75.1	-1.40	2.2	0.3 L	75.2	-1.32	2.3	0.9	12	TH
ATTKU9	75.9	82.8	81.3	80.7	80.2	0.11	3.7	3.0	79.8	0.15	3.2	2.1	12	LC
B7VG88	84.3	82.0	82.8	80.8	82.5	0.80	3.3	1.4	81.3	0.62	3.1	1.5	10	LC
BGDPE9	77.0	75.6 H	78.7 H	79.1 H	77.6	-0.66	6.2	1.6	58.9	-6.52 X	4.8	17.9 H	10	MB
C9YCQA	No Data	No Data	No Data	85.2	85.2	1.63	5.0	0.0 L	83.6	1.34	5.3	3.7	9	LA
CP37XA	80.4	79.8	79.5	81.6	80.3	0.15	3.0	0.9	81.6	0.72	2.7	1.5	12	LD
CXGT8D	80.9 L	79.4 L	77.4	78.8	79.1	-0.21	1.7	1.4	78.6	-0.24	2.3	1.5	12	LD
D2XDVE	80.0	81.1	78.9	80.4	80.1	0.09	4.2	0.9	81.0	0.52	3.7	1.3	12	LD
D4ZB4L	82.6	79.0	80.7	79.1	80.3	0.16	2.9	1.7	80.4	0.35	2.9	1.3	12	EM
FEWZW8	78.2	79.1	77.6	77.7	78.2	-0.49	1.9	0.7	78.7	-0.21	2.0	1.1	12	EM
J79JU8	79.3 L	79.9	80.3	79.7	79.8	0.00	2.2	0.4 L	79.7	0.09	2.4	1.4	12	LD
JCCH6W	83.3	82.1	No Data	No Data	82.7	0.86	2.5	0.8	80.0	0.21	2.9	2.8	5	EX
JFF7TY	84.0	80.5	80.0	80.9	81.4	0.46	2.0	1.8	80.8	0.47	2.4	3.8	12	LC
JH23BX	80.2	80.5	82.0	82.6	81.3	0.46	2.8	1.1	82.4	0.97	2.5	1.4	12	LD
JHY9RR	81.7	82.2	80.1	81.3 L	81.3	0.46	2.7	0.9	82.3	0.92	2.5	1.0	12	LD
KFU3PR	86.8	82.2 L	84.9	84.3	84.5	1.41	2.5	1.9	82.9	1.12	3.3	2.4	12	LC
KHV94W	82.8	79.0 H	77.5	81.6	80.2	0.13	4.5	2.4	85.8	2.04 *	4.7	5.1	12	LC
KWHBNB	82.1	83.8	79.8	83.1	82.2	0.72	3.6	1.7	82.7	1.05	3.2	2.1	12	XX
LGVMQW	76.4	74.3	74.6	72.9 *	74.6	-1.57	3.3	1.4	77.2	-0.69	2.8	5.7 H	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
LGYA8A	77.6	81.2	73.4	76.5	77.2	-0.78	2.6	3.2	77.1	-0.72	2.8	3.8	10	XX
LULG6B	77.9	76.2	74.5	78.7	76.8	-0.89	3.1	1.8	78.2	-0.38	2.9	2.3	12	MB
MCLQLM	84.4	87.3	79.5	79.6	82.7	0.86	2.8	3.8	82.1	0.87	3.3	2.4	12	TC
MM3DW9	88.1	80.6	79.4	82.8	82.7	0.87	3.1	3.9	77.9	-0.45	5.3	4.2	12	LD
N2ZYJV	67.0 XH	81.7	82.8	82.7	78.6	-0.37	4.7	7.7 H	79.0	-0.10	4.2	5.5 H	12	LC
N9GKJL	74.1	74.9	71.8 *	72.0 *	73.2	-1.97	3.2	1.5	73.4	-1.89	2.9	4.0	12	MB
NXZVM2	78.3	79.6	79.5	78.7	79.0	-0.23	3.2	0.6	79.3	-0.01	2.8	1.1	12	TH
QR4Q3W	79.7	79.0	81.8	80.2	80.2	0.11	3.6	1.2	79.1	-0.10	3.1	2.6	12	LZ
RC7YY8	76.5	76.1	75.2	75.0	75.7	-1.23	2.5	0.7	73.1	-1.99	2.9	3.5	12	EM
UH63ZP	77.2 H	72.8 H	82.7	80.4	78.3	-0.46	4.6	4.3	76.2	-1.02	4.2	3.3	11	LC
UKQ9WQ	84.0	84.4	83.3	74.5 H	81.5	0.52	4.6	4.7	81.6	0.71	3.8	3.3	12	LC
WJ79TR	80.2	78.3 L	78.5	79.1	79.0	-0.23	1.8	0.9	79.0	-0.10	2.3	1.5	12	LD
Y6HLZ7	81.9	85.9	82.2	81.5	82.9	0.92	2.2	2.0	81.1	0.56	2.7	2.0	12	LC
YJFVGK	87.2	83.9	82.2	83.5	84.2	1.31	2.7	2.1	79.1	-0.08	3.6	5.7 H	12	LD
YTRUF2	89.7 *	86.5	88.1 *	80.9	86.3	1.94	3.7	3.9	85.0	1.80	3.4	2.5	12	LZ
ZE7YCB	77.4	77.5	75.4	78.8	77.3	-0.75	2.6	1.4	77.5	-0.59	2.5	1.9	12	LC

Consensus (All Labs) Results

Wk Mean	80.24	79.95	79.81	79.88	Month Mean	79.80	Grand Mean	79.36
Avg SDr	3.05	3.30	3.13	3.22	Avg SDr	3.22	Avg SDr	3.25
SD btwn Labs	4.40	4.11	3.60	3.39	SD btwn Labs	3.35	SD btwn Labs	3.15
Labs Includ	49	50	46	49	SD btwn Wks	2.43	SD btwn Wks	3.37
Labs Exclud	1	0	2	0	Labs Includ	50	Labs Includ	50
Labs not rcvd	1	1	3	2				

Instrument Code List as Reported by the Labs

(EM) - Emerson 1200

(EX) - Emerson (model not specified)

(LC) - L & W Crush Tester 48

(LX) - L & W 506

(MB) - Messmer Buchel K440

(TH) - TMI Compression Tester, Model 17-76

(EN) - Emerson 2200

(LA) - L&W Autoline

(LD) - L&W Crush Tester 248

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

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

(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	
3WU37G	24.9	23.9 L	22.2	22.6	23.4	-1.08	1.6	1.2	24.2	-0.45	1.8	1.3	16	LY
49MYRE	25.0	24.4	24.8	25.6	24.9	0.08	1.8	0.5	24.8	0.11	1.9	0.5	14	LW
4FJXXU	24.0	24.0	24.9	24.5	24.3	-0.38	1.5	0.5	24.2	-0.43	1.7	0.4	16	LU
4KY9BY	22.5	22.8	23.0	22.8	22.8	-1.56	1.6	0.2	22.9	-1.72	1.8	0.6	15	LW
4Q498L	22.9	23.2	22.1	23.0	22.8	-1.54	2.2	0.5	22.9	-1.73	2.0	0.7	16	LU
6KV8LH	23.4	23.9	23.9	22.6	23.4	-1.06	1.9	0.6	24.2	-0.49	1.8	0.7	16	LZ
7HME8A	26.0 L	25.9 L	25.3 L	27.1 L	26.0	0.92	0.0	0.8	26.2	1.50	0.0	1.1	16	LA
7RB7U3	24.8	24.8	25.4	24.7	24.9	0.07	2.2	0.3	24.6	-0.05	2.0	0.6	15	LU
93LKME	23.4	25.2	25.1	20.9 *	23.7	-0.90	1.9	2.0 H	23.9	-0.77	2.0	1.7 H	16	LW
ALRC8T	24.5 L	23.6 L	24.1 L	23.9 L	24.0	-0.61	0.5	0.4	24.2	-0.47	0.4	0.7	16	LA
ATTKU9	24.7	25.4	25.0	24.9	25.0	0.11	1.3	0.3	25.0	0.31	1.2	0.2	16	LW
B2HCV7	27.5	26.2	28.0 *	No Data	27.2	1.80	1.8	0.9	26.3	1.58	2.3	1.0	15	LU
B7VG88	24.9	24.8	24.5	25.4	24.9	0.04	1.8	0.4	24.7	-0.02	1.8	0.5	16	LW
BGDPE9	27.3 L	28.2 L	25.8 L	27.6 L	27.2	1.79	0.6	1.0	26.7	1.95	0.6	0.7	16	BK
C9YCQA	No Data	No Data	No Data	25.3 L	25.3	0.38	0.5	0.0 L	24.6	-0.07	0.5	0.7	13	LA
CP37XA	24.6	24.4	24.0	22.9	24.0	-0.64	1.5	0.7	23.9	-0.74	1.5	0.7	16	BK
CZKL3X	23.0	23.1	22.0	22.4	22.6	-1.67	1.9	0.5	22.7	-1.91	2.0	0.8	16	LU
D2XDVE	23.5	25.8	25.8	24.5	24.9	0.06	2.1	1.1	24.5	-0.21	1.9	0.9	12	LZ
G48RQA	24.1	23.9 L	24.6	23.9	24.1	-0.53	1.0	0.3	24.4	-0.25	1.1	0.3	16	TT
G9G8XD	23.8	23.9	25.5	24.9	24.5	-0.26	2.1	0.8	24.6	-0.07	2.1	0.7	16	LY
GTMMGP	27.4	25.7	26.2	25.3	26.2	1.00	2.5	0.9	25.9	1.21	2.5	1.0	16	LZ
GZDQT2	27.4	27.6	28.3 *	27.6 *	27.7	2.20 *	2.0	0.4	27.9	3.12 X	2.3	0.4	16	LA
HNA4V2	25.3	27.5	26.0	26.5	26.3	1.14	2.5	1.0	26.0	1.29	2.6	0.8	16	LW
J79JU8	25.3	24.9	25.3	24.9	25.1	0.20	2.1	0.2	24.7	0.03	2.0	0.4	16	LU
JCCH6W	25.7 L	25.4 L	No Data	No Data	25.6	0.56	0.0	0.2	24.7	0.06	0.0	0.8	6	LZ
JFF7TY	23.2	25.7	23.6	24.0	24.1	-0.54	2.0	1.1	23.9	-0.75	2.1	0.7	16	LA
KFU3PR	23.9 L	24.8	24.2 L	25.5	24.6	-0.20	0.8	0.7	25.6	0.93	1.0	1.0	16	LY
KHV94W	26.0	25.7 L	24.3 L	24.3 L	25.1	0.17	1.7	0.9	25.1	0.40	1.0	0.8	16	LA
KWHBNB	28.2 * L	27.7 L	35.2 XL	47.6 XL	34.7	7.47 X	0.1	9.3 H	30.1	5.16 X	0.1	7.2 H	16	XX
LGVMQW	23.8 L	24.1 L	23.7 L	23.2 L	23.7	-0.87	0.4	0.4	23.5	-1.15	0.4	0.7	15	LA
LULG6B	25.2 L	25.7 L	23.9 L	24.6 L	24.8	-0.01	0.1	0.8	25.3	0.55	0.1	0.8	13	LA
MCLQLM	27.3 L	26.6 L	26.3 L	26.3 L	26.6	1.36	0.3	0.5	26.5	1.79	0.3	1.2	16	LA
N2ZYJV	25.8 L	25.4 L	24.0 L	24.5 L	24.9	0.08	0.7	0.8	24.8	0.10	0.8	1.2	16	LW
N6ZVHX	24.1	23.8	25.9	23.6	24.4	-0.36	2.1	1.1	24.2	-0.44	2.0	0.8	16	LW
NXZVM2	24.4	24.6	24.2	24.3	24.4	-0.35	1.2	0.2	24.4	-0.23	1.2	0.3	16	TT



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
QHW7PR	23.6 L	21.4 *L	23.5	23.0 L	22.9	-1.49	0.6	1.0	22.8	-1.80	0.6	0.7	16	LW
QJBFUM	26.6 L	26.6 L	No Data	No Data	26.6	1.32	0.0	0.0 L	25.3	0.57	0.0	1.1	14	LU
QR4Q3W	24.1	23.9	23.8	22.9	23.7	-0.87	2.2	0.5	24.1	-0.54	2.2	0.8	16	LW
UH63ZP	24.7	26.7	26.1	25.0	25.6	0.59	2.5	1.0	25.6	0.88	2.2	0.7	15	LW
UKQ9WQ	22.6	22.5	24.4	22.6	23.0	-1.38	1.9	0.9	23.2	-1.38	1.9	0.8	16	XX
URB7PK	26.2	28.7 *	27.2	26.7	27.2	1.80	1.9	1.1	26.5	1.72	2.1	1.3	16	LA
Y6HLZ7	25.4	25.3	24.2	23.7	24.7	-0.13	2.0	0.8	24.8	0.14	2.0	0.5	16	LU
YJFVGK	26.5	25.2	25.4	26.2	25.8	0.76	2.3	0.6	25.2	0.54	1.2	0.9	16	LA

Consensus (All Labs) Results									
Wk Mean	24.93	25.07	24.78	24.46	Month Mean	24.83	Grand Mean	24.67	
Avg SDr	1.80	1.80	1.66	1.54	Avg SDr	1.69	Avg SDr	1.66	
SD btwn Labs	1.48	1.56	1.41	1.55	SD btwn Labs	1.32	SD btwn Labs	1.04	
Labs Includ	42	42	39	39	SD btwn Wks	0.78	SD btwn Wks	0.84	
Labs Exclud	0	0	1	1	Labs Includ	42	Labs Includ	41	
Labs not rcvd	1	1	3	3					

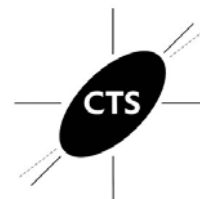
Instrument Code List as Reported by the Labs

- (BK) - Buchel Strip Compression Tester BK-155
- (LU) - L & W 52 without moisture correction(was 53)
- (LY) - L & W 152 without moisture correction
- (TT) - TMI Short Span Compression, 17-34 (MB K455)

- (LA) - L & W Autoline
- (LW) - L & W 53 with moisture correction (was 53M)
- (LZ) - L & W (model not specified)
- (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
3WU37G	20.8	19.9	20.1	20.3	20.3	-0.71	1.1	0.4	20.3	-0.63	1.3	0.7	12	LY
49MYRE	21.1	21.2	22.3	20.5	21.3	0.22	1.1	0.8	21.0	0.09	1.1	0.6	11	LW
4FJXXU	21.1	20.2	21.1	22.1	21.1	0.07	1.3	0.8	20.4	-0.51	1.2	0.8	12	LU
4KY9BY	19.1	19.0	19.0*	20.0	19.3	-1.63	1.4	0.5	19.4	-1.57	1.3	0.4	12	LW
4Q498L	18.6*	18.6	19.1	19.3	18.9	-1.98	1.3	0.3	19.0	-1.93	1.2	0.3	12	LU
6KV8LH	20.9	20.8	20.5	22.0	21.0	0.00	1.1	0.6	21.0	0.04	1.1	0.7	12	LZ
7HME8A	21.2 L	22.1 L	21.4 L	21.6 L	21.6	0.49	0.0	0.4	21.4	0.49	0.0	0.4	12	LA
7RB7U3	21.1	21.1	20.9	20.5	20.9	-0.13	1.2	0.3	21.1	0.19	1.2	0.3	12	LU
93LKME	19.1	20.5	20.4	25.3 X	21.3	0.26	1.8	2.7 H	21.6	0.71	1.6	1.5 H	12	LW
ALRC8T	20.6 L	20.9 L	20.8 L	20.0 L	20.5	-0.45	0.3	0.4	20.7	-0.23	0.3	0.4	12	LA
ATTKU9	21.1	21.2	21.1	20.8	21.1	0.02	1.2	0.2	21.2	0.32	1.1	0.4	12	LW
B2HCV7	21.8	22.3	22.1	No Data	22.1	0.95	1.4	0.3	21.8	0.87	1.3	0.5	11	LU
B7VG88	20.9	20.4	21.5	20.7	20.9	-0.16	1.1	0.4	20.9	-0.02	1.1	0.4	12	LW
BGDPE9	22.3 L	23.2 L	23.4 *L	23.6 *L	23.1	1.90	0.4	0.5	22.5	1.61	0.3	1.3 H	12	BK
C9YCQA	No Data	No Data	No Data	21.9 L	21.9	0.81	0.2	0.0 L	21.4	0.48	0.3	0.5	9	LA
CP37XA	20.7	20.9	20.4	20.6	20.6	-0.37	0.9	0.2	20.9	-0.07	0.9	0.3	12	BK
CZKL3X	20.5	18.7	19.4	18.6*	19.3	-1.61	1.1	0.9	19.5	-1.48	1.2	0.5	12	LU
D2XDVE	20.5	21.8	21.2	21.0	21.1	0.07	1.4	0.5	21.4	0.49	1.4	0.6	12	LZ
G48RQA	20.9	20.6	21.1	20.8	20.8	-0.19	0.9	0.2	20.7	-0.24	0.9	0.2	12	TT
G9G8XD	21.4	21.9	21.6	21.4	21.6	0.48	1.2	0.2	21.2	0.32	1.2	0.4	12	LY
GTMMGP	21.7	21.4	21.1	21.9	21.5	0.44	1.3	0.3	21.6	0.65	1.4	0.7	12	LZ
GZDQT2	23.3*	23.1	23.6*	23.5*	23.4	2.17*	1.4	0.2	22.8	1.89	1.4	0.8	12	LA
HNA4V2	21.3	21.7	21.9	20.8	21.4	0.35	1.6	0.5	21.4	0.47	1.4	0.5	12	LW
J79JU8	21.7	21.4	21.3	20.3	21.2	0.14	1.3	0.6	21.1	0.22	1.3	0.6	12	LU
JCCH6W	19.0 L	18.8 L	No Data	No Data	18.9	-1.98	0.0	0.1	18.4	-2.61*	0.0	0.6	5	LZ
JFF7TY	20.1	20.0	20.4	20.4	20.2	-0.75	0.9	0.2	20.5	-0.43	1.0	0.3	12	LA
KFU3PR	20.9	20.9	20.6 L	21.0 L	20.8	-0.18	0.5	0.1	21.4	0.47	0.5	0.6	12	LY
KHV94W	22.1 L	21.7 L	21.3 L	20.9 L	21.5	0.44	0.3	0.5	21.6	0.70	0.5	0.5	12	LA
KWHBNB	22.6 L	22.5 L	25.5 XL	34.2 XL	26.2	4.78 X	0.1	5.5 H	24.5	3.60 X	0.1	4.6 H	12	XX
LGVMQW	20.2 L	20.7 L	20.1 L	21.2 L	20.6	-0.43	0.3	0.5	19.4	-1.56	0.3	2.0 H	12	LA
LULG6B	21.1 L	20.6 L	20.6 L	20.6 L	20.7	-0.30	0.0	0.3	21.2	0.24	0.0	0.5	12	LA
MCLQLM	21.7 L	22.0 L	21.2 L	22.2 L	21.8	0.68	0.2	0.4	22.1	1.23	0.2	0.5	12	LA
N2ZYJV	22.3	21.1	21.6	21.3	21.6	0.50	0.6	0.5	21.1	0.18	0.7	1.1	12	LW
N6ZVHX	20.9	20.8	21.2	21.2	21.0	-0.03	1.3	0.2	20.9	0.01	1.4	0.2	12	LW
NXZVM2	20.3	20.0	20.4	19.8	20.1	-0.86	0.7	0.3	20.3	-0.62	0.9	0.3	12	TT



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
QHW7PR	18.8*L	18.2*L	19.6	20.6	19.3	-1.63	0.5	1.1	19.1	-1.81	0.5	1.0	12	LW
QJBFUM	21.5L	21.0L	No Data	No Data	21.2	0.19	0.0	0.4	20.8	-0.13	0.0	0.5	10	LU
QR4Q3W	20.2	20.6	19.6	20.2	20.1	-0.83	1.3	0.4	20.5	-0.45	1.3	0.6	12	LW
UH63ZP	21.8	23.0	22.3	22.0	22.3	1.15	1.3	0.5	21.7	0.83	1.3	0.7	11	LW
UKQ9WQ	19.1	19.6	20.7	19.9	19.8	-1.12	1.1	0.7	19.5	-1.41	1.2	1.0	12	XX
URB7PK	22.3	22.4	22.0	22.1	22.2	1.07	1.2	0.2	22.7	1.80	1.4	1.7H	12	LA
Y6HLZ7	21.3	21.7	21.7	21.2	21.5	0.40	1.3	0.3	21.3	0.36	1.2	0.3	12	LU
YJFVGK	22.8	27.7X	21.9	22.7	23.8	2.53*	1.6	2.6H	22.0	1.05	0.9	2.1H	12	LA

Consensus (All Labs) Results									
Wk Mean	20.96	20.93	21.04	21.03	Month Mean	21.04	Grand Mean	20.93	
Avg SDr	1.05	1.05	1.11	1.07	Avg SDr	1.08	Avg SDr	1.07	
SD btwn Labs	1.10	1.22	1.02	1.04	SD btwn Labs	1.08	SD btwn Labs	0.98	
Labs Includ	42	41	39	38	SD btwn Wks	0.75	SD btwn Wks	0.81	
Labs Exclud	0	1	1	2	Labs Includ	42	Labs Includ	42	
Labs not rcvd	1	1	3	3					

Instrument Code List as Reported by the Labs

(BK) - Buchel Strip Compression Tester BK-155

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

(LY) - L & W 152 (was 52M)

(TT) - TMI Short Span Compression, 17-34 (MB K455)

(LA) - L & W Autoline

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

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

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

Containerboard Interlaboratory Testing Program
Analysis 228

Roughness - Stylus Method, 69 lb Linerboard - 69C
TAPPI Provisional Test Method T575



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
4Q498L	151.2	0.81	12.8	145.0	0.51	11.6	4	EV
7HME8A	131.1	-0.32	8.7	129.6	-0.32	12.5	4	LA
93LKME	135.7	-0.06	12.1	138.0	0.13	11.9	3	EV
ALRC8T	121.7	-0.84	11.9	113.8	-1.17	9.0	4	EV
BGDPE9	151.3	0.81	33.6	140.1	0.24	22.6	3	EV
CZKL3X	150.6	0.77	11.6	145.9	0.55	13.4	4	EV
D2XDVE	138.4	0.09	38.7	132.2	-0.18	23.8	3	LA
GTMMGP	155.1	1.02	16.5	218.1	4.43X	127.5	4	LA
J79JU8	136.3	-0.03	11.7	137.3	0.09	12.5	4	EV
KFU3PR	91.6	-2.53*	9.7	98.0	-2.02*	7.8	4	EV
KHV94W	150.2	0.75	16.0	148.9	0.71	21.8	4	LA
KWHBNB	162.7	1.45	17.9	166.0	1.63	17.5	3	EV
LGVMQW	153.8	0.95	18.0	155.3	1.06	19.8	3	EV
LULG6B	138.1	0.07	13.3	146.2	0.57	19.1	4	LA
N2ZYJV	134.2	-0.14	15.1	134.7	-0.05	15.5	4	EV
N6ZVHX	122.7	-0.79	15.9	110.1	-1.37	11.9	4	EV
QR4Q3W	145.7	0.50	12.5	164.1	1.53	61.3	4	EV
URB7PK	108.5	-1.58	9.6	114.0	-1.16	11.3	4	LA
VV8CJG	120.1	-0.93	9.5	121.3	-0.77	10.7	3	EV

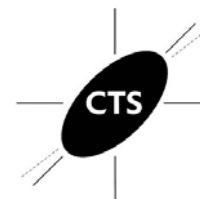
Consensus (All Labs) Results

Month Mean	136.78	Grand Mean	135.59
Avg SDr	17.31	Avg SDr	20.96
SD btwn Labs	17.88	SD btwn Labs	18.62
Labs Incd	19	Labs Incd	18

Instrument Code List as Reported by the Labs

(EV) - Emveco Microgag Model 210-R

(LA) - L & W Autoline



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
4FJXXU	174.4	0.28	13.3	177.8	0.39	11.2	4	XX
4KY9BY	171.4	0.17	9.0	175.5	0.29	8.3	4	TM
7RB7U3	146.4	-0.71	16.0	151.6	-0.78	14.0	4	HZ
93LGXB	166.2	-0.01	4.5	164.9	-0.19	5.0	4	SC
B7VG88	206.4	1.41	6.2	203.3	1.54	8.5	4	HY
CGTD8M	166.3	0.00	2.6	152.9	-0.72	6.3	4	TM
GTMMGP	111.0	-1.96	18.8	138.4	-1.37	18.2	4	TM
J79JU8	152.0	-0.51	4.0	152.0	-0.76	6.5	4	TM
LGVMQW	193.2	0.94	6.5	184.4	0.69	26.0	3	HY
MCLQLM	153.2	-0.47	4.0	158.5	-0.47	6.9	2	SC
N2ZYJV	218.0	1.82	11.0	217.5	2.17*	9.7	4	SC
UKQ9WQ	129.1	-1.32	8.1	143.8	-1.13	20.5	4	SC
WJ79TR	176.7	0.36	4.2	175.7	0.30	7.6	4	SC
Y6HLZ7	166.0	-0.01	3.4	170.1	0.05	5.9	4	HY
YJFVGK	49.5	-4.13 X	0.8	46.5	-5.49 X	1.1	4	XX

Consensus (All Labs) Results

Month Mean	166.45	Grand Mean	169.01
Avg SDr	9.35	Avg SDr	12.62
SD btwn Labs	28.30	SD btwn Labs	22.33
Labs Incd	14	Labs Incd	14

Instrument Code List as Reported by the Labs

(HY) - Huygen Digitized Scott Internal Bond Tester

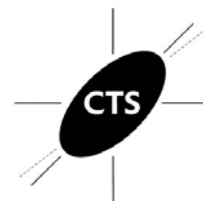
(HZ) - Huygen Internal Bond Tester with AccuPress

(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), 36 lb Linerboard - 36Z
 TAPPI Official Test Method T815



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
37JQ46	30.4	0.62	4.3	26.8	-0.34	2.7	4	ZZ
4KY9BY	21.3	-2.05 *	2.0	25.1	-1.23	3.8	4	ZZ
4Q498L	24.9	-1.00	1.1	25.2	-1.14	1.3	4	ZZ
93LKME	25.6	-0.80	1.1	25.4	-1.05	1.3	3	ZZ
B7VG88	25.4	-0.86	1.7	25.2	-1.16	1.6	4	ZZ
CZKL3X	34.8	1.92	3.3	29.5	1.12	2.8	4	ZZ
GTMMGP	26.4	-0.56	2.9	26.2	-0.66	2.8	4	ZZ
J79JU8	30.6	0.68	2.3	29.6	1.15	1.6	4	ZZ
LGVMQW	29.2	0.26	3.4	28.3	0.49	2.6	3	ZZ
MCLQLM	30.4	0.62	1.1	29.8	1.25	1.2	4	ZZ
N2ZYJV	25.6	-0.80	2.3	26.3	-0.56	2.1	3	ZZ
N6ZVHX	27.9	-0.11	1.0	28.5	0.58	1.5	4	ZZ
UH63ZP	32.8	1.33	4.1	30.7	1.73	3.5	4	ZZ
Y6HLZ7	28.0	-0.09	1.0	25.7	-0.89	1.2	4	ZZ
YJFVGK	31.2	0.85	1.5	28.6	0.62	1.7	4	ZZ
YU3WYF	28.3	0.00	3.1	27.6	0.09	3.0	4	ZZ

Consensus (All Labs) Results			
Month Mean	28.31	Grand Mean	27.39
Avg SDr	2.52	Avg SDr	2.33
SD btwn Labs	3.39	SD btwn Labs	1.89
Labs Incd	16	Labs Incd	16

Instrument Code List as Reported by the Labs

(ZZ) - Instruments No Longer Tracked

Containerboard Interlaboratory Testing Program
Analysis 237

Air Resistance, 36 lb Linerboard - 36Z
TAPPI Official Test Method T460



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
4KY9BY	51.5	0.23	2.5	51.0	0.08	3.1	4	HG
7HME8A	52.9	0.93	1.6	52.9	0.86	3.3	4	TL
8WHWW9	53.8	1.42	2.0	53.1	0.94	2.2	4	XX
B7VG88	51.8	0.41	2.5	52.4	0.68	1.8	4	LP
BGDPE9	52.8	0.91	1.8	53.0	0.93	2.0	2	XX
CZKL3X	52.2	0.59	1.1	51.2	0.16	1.6	4	LP
GTMMGP	47.6	-1.77	2.3	49.7	-0.47	3.4	4	XX
KHV94W	50.6	-0.21	1.0	51.0	0.09	1.5	4	LA
KWHBNB	47.6	-1.80	1.2	47.2	-1.51	1.6	4	LW
LGVMQW	52.6	0.78	1.6	55.1	1.81	1.4	3	LA
LGYA8A	51.6	0.29	3.4	50.6	-0.09	2.8	4	GG
MZNP8X	47.6	-1.77	1.1	47.6	-1.34	1.1	1	LP
N2ZYJV	51.2	0.08	3.4	51.0	0.08	3.0	3	HG
TVCT4H	52.3	0.65	0.9	51.7	0.39	1.9	4	XX
UH63ZP	50.3	-0.38	1.6	50.3	-0.23	1.6	4	LP
WJ79TR	52.0	0.47	1.2	51.2	0.17	1.6	4	LP
Y6HLZ7	49.4	-0.84	2.9	50.7	-0.06	3.1	4	HG
YJFVGK	2.7	-24.89 X	0.1	28.0	-9.52 X	1.4	4	LA
YU3WYF	43.6	-3.82 X	2.9	44.9	-2.49*	2.2	4	GA

Consensus (All Labs) Results			
Month Mean	51.04	Grand Mean	50.82
Avg SDr	2.05	Avg SDr	2.30
SD btwn Labs	1.94	SD btwn Labs	2.39
Labs Incd	17	Labs Incd	18

Instrument Code List as Reported by the Labs

(GA) - Gurley Precision #4340 Automatic Densometer
 (HG) - Technidyne - Hagerty Model #1 and Profile System
 (LP) - L & W Air Permeance Tester SE 166
 (TL) - Teledyne Gurley Densometer #4110, Oil Flotation

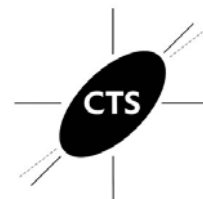
(GG) - Gurley Precision #4320 Densometer
 (LA) - L & W Autoline
 (LW) - L & W Gurley Densometer, Oil Flotation
 (XX) - Instrument make/model not specified by lab

Containerboard Interlaboratory Testing Program
 Analysis 240
 Flat Crush Strength (CMT), 26 lb Corrugating Medium - CM73
 TAPPI Official Test Method T809



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	
3XC7NE	66.3	67.6*	63.8	66.7	66.1	1.76	4.3	1.6	62.6	0.12	3.2	2.4	16	LD
49MYRE	66.3	64.3	65.6	61.7	64.5	1.04	2.7	2.0	65.4	1.61	4.0	2.6	14	LC
4FJXXU	59.4L	63.7	58.6	58.1	60.0	-0.98	3.0	2.5	61.1	-0.66	3.0	2.1	16	LC
6KV8LH	77.5X	62.8	61.2	66.4	67.0	2.16*	4.3	7.3H	67.0	2.40*	4.1	4.2H	15	LZ
7DERWU	64.3	65.7	65.2	64.9	65.0	1.29	3.5	0.6	65.3	1.52	2.9	1.1	12	TM
7RB7U3	67.3*	66.5	64.4	66.0	66.1	1.75	3.5	1.2	65.2	1.45	3.5	1.9	15	LC
8N7VFD	59.0	60.5	62.4	60.3	60.5	-0.72	2.8	1.4	60.4	-1.02	2.8	1.1	16	TD
93LGXB	60.0H	58.3H	62.8	61.9	60.8	-0.62	6.0	2.0	60.6	-0.94	3.9	3.0H	16	LD
ATTKU9	61.7	61.7	61.8	61.6	61.7	-0.18	2.5	0.1L	61.5	-0.47	2.2	1.0	16	LC
B7VG88	61.8	64.6	63.8	63.9	63.5	0.61	3.4	1.2	64.9	1.31	3.9	2.0	12	LC
BGDPE9	55.4*	57.6	56.7	59.1	57.2	-2.20*	3.9	1.6	60.0	-1.25	4.1	3.5H	16	MB
CZKL3X	61.6	62.3	59.8	61.2	61.2	-0.41	3.5	1.1	61.8	-0.27	3.2	1.1	16	LZ
D2XDVE	59.2	59.9	60.9	60.2	60.1	-0.93	2.7	0.7	58.7	-1.88	3.1	2.4	12	LD
D9AVNC	62.2	63.1	62.8	62.5	62.7	0.23	2.3	0.4	62.6	0.11	2.5	0.4	16	LD
DFQ82D	62.7	62.1	62.5	63.0	62.6	0.19	2.5	0.4	62.4	0.03	2.4	0.4	16	LC
EYK646	61.8	63.0	62.6	62.8	62.5	0.17	2.5	0.5	62.4	0.02	2.7	0.7	16	LD
FEWZW8	63.7	63.9	65.5	64.3	64.4	0.99	2.9	0.8	63.6	0.65	2.6	0.9	16	EM
G48RQA	60.8	60.7	59.8	57.7	59.8	-1.07	4.7	1.4	60.3	-1.06	4.2	1.3	16	TG
GZDQT2	63.3	62.0L	61.6L	62.3L	62.3	0.08	1.8	0.7	61.9	-0.24	2.0	0.8	16	XX
HNA4V2	67.1	67.7*	67.5*	67.5*	67.5	2.37*	2.3	0.3L	66.1	1.94	2.8	1.5	16	LC
HUGRBN	64.5	61.2	63.1	61.3	62.5	0.17	3.4	1.6	64.3	1.03	3.8	3.7H	16	LC
J79JU8	60.6	62.8	61.8	62.6	62.0	-0.09	2.6	1.0	61.8	-0.29	2.7	0.9	16	LD
JCCH6W	60.4	61.2	No Data	No Data	60.8	-0.60	3.5	0.6	60.2	-1.10	3.2	1.8	6	LZ
JFF7TY	62.1	60.7	57.7	61.2	60.4	-0.77	3.0	1.9	60.4	-1.04	2.9	1.9	16	LC
JH23BX	65.0	58.9	60.8	62.2	61.7	-0.19	2.7	2.6	61.2	-0.60	2.6	1.6	16	LD
JHY9RR	62.6	62.9	63.0	62.9	62.8	0.31	3.1	0.2L	63.0	0.31	3.0	0.5	16	LD
JRNYCY	62.3	61.5	61.6	62.0	61.8	-0.14	2.7	0.4	61.7	-0.32	2.5	1.1	16	EM
KWHBNB	58.3	55.2*H	55.2*H	58.2	56.7	-2.43*	7.5	1.7	55.8	-3.44X	6.7	4.6H	16	XX
LULG6B	58.9	55.2*	56.7	41.2XL	53.0	-4.08X	2.7	8.0H	55.4	-3.63X	2.7	6.5H	13	MB
MZNP8X	62.7	63.0	62.1	62.9	62.7	0.24	3.3	0.4	62.7	0.17	3.3	0.4	4	LC
N6ZVHX	59.8	62.0	59.3L	59.6L	60.2	-0.88	2.2	1.2	60.0	-1.24	2.0	0.8	16	TH
N8LYTF	59.7	61.5	62.6	61.6	61.4	-0.35	1.7	1.2	61.6	-0.37	1.7	0.8	16	LC
N9GKJL	61.5	62.9	63.3	62.5L	62.5	0.17	2.6	0.8	65.7	1.76	2.5	3.0H	12	MB
NXZVM2	62.2	62.0	60.1	61.1	61.4	-0.35	3.2	0.9	61.7	-0.36	3.0	0.9	16	TH
PN8K9Z	65.9	63.1	61.1	63.1	63.3	0.52	3.1	2.0	63.3	0.49	3.1	1.5	16	LC

Containerboard Interlaboratory Testing Program
 Analysis 240
Flat Crush Strength (CMT), 26 lb Corrugating Medium - CM73
 TAPPI Official Test Method T809



WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	Inst
Q36DWE	63.3	63.5	64.0	No Data	63.6	0.65	3.1	0.3	62.9	0.26	3.2	0.8	15	LZ
RHUGE4	60.8	60.9	60.9	62.1	61.2	-0.43	2.9	0.6	62.9	0.29	3.5	1.3	16	LD
TVCT4H	63.4	60.3	61.4	60.3	61.3	-0.37	2.7	1.4	61.8	-0.29	2.8	1.1	16	LD
UH63ZP	64.4	64.7	63.8	66.8	64.9	1.24	2.9	1.3	64.4	1.07	2.9	1.8	15	LC
UKQ9WQ	59.3	60.5	62.2	59.0	60.3	-0.84	2.9	1.4	60.0	-1.23	3.0	1.6	16	LC
Y6HLZ7	62.4	63.6	62.1	62.0	62.5	0.17	3.1	0.8	61.6	-0.39	3.6	1.3	16	LC
YUZ68Y	56.9	63.3	63.7	60.2	61.0	-0.50	3.6	3.2	61.2	-0.59	3.4	2.9	16	XX
ZE7YCB	61.1	61.2	57.1	61.6	60.2	-0.85	3.4	2.1	60.7	-0.88	3.1	1.8	16	LC
ZNRZV7	62.0	59.6	63.3	61.8	61.7	-0.22	2.6	1.5	62.3	-0.03	3.1	1.8	16	LC

Consensus (All Labs) Results									
Wk Mean	61.95	62.04	61.77	62.12	Month Mean	62.14		Grand Mean	62.36
Avg SDr	3.25	3.24	3.55	3.21	Avg SDr	3.34		Avg SDr	3.11
SD btwn Labs	2.62	2.63	2.57	2.34	SD btwn Labs	2.24		SD btwn Labs	1.92
Labs Includ	43	44	43	41	SD btwn Wks	1.76		SD btwn Wks	1.85
Labs Exclud	1	0	0	1	Labs Includ	43		Labs Includ	42
Labs not rcvd	0	0	1	2					

Instrument Code List as Reported by the Labs

- | | |
|--|---|
| (EM) - Emerson 1200 Series | (LC) - L & W Crush Tester 48 |
| (LD) - L&W Crush Tester 248 | (LZ) - L & W Crush Tester (model not specified) |
| (MB) - Messmer Buchel K440 | (TD) - TMI Digital Crush Tester, Model 17-09 |
| (TG) - TMI Compression Tester, Model 17-10 | (TH) - TMI Compression Tester, Model 17-76 |
| (TM) - TMI/Hinde & Dauch | (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
49MYRE	76.7	76.2	75.0	76.1	76.0	0.69	3.0	0.7	77.2	1.01	2.6	3.5	14	LC
6KV8LH	79.0	79.7	76.5	67.7	75.7	0.61	3.7	5.5 H	75.7	0.52	3.1	3.3	15	LZ
8WHWW9	73.2 L	72.6	73.1	70.9 L	72.4	-0.19	1.8	1.0	72.8	-0.41	1.5	0.8	16	XX
ATTKU9	72.1 L	72.1	71.2 L	71.2	71.7	-0.38	1.5	0.5	72.2	-0.60	1.7	0.8	16	LC
N9GKJL	68.2	65.3*	63.2 XH	64.8	65.4	-1.93	4.1	2.1	69.2	-1.53	3.1	4.2	12	MB
PN8K9Z	72.6	76.2	69.8 H	72.3	72.7	-0.12	4.1	2.6	72.2	-0.59	3.1	2.5	16	LZ
UH63ZP	73.1	74.4	73.9	74.6	74.0	0.19	3.0	0.7	74.0	-0.01	3.1	1.3	15	XX
Y6HLZ7	78.6	78.6	77.2	79.2	78.4	1.27	2.5	0.9	77.9	1.22	2.6	0.9	16	LC
YUZ68Y	66.9 H	70.6 H	74.5	61.3 H	68.3	-1.20	5.8	5.6 H	70.9	-1.01	5.3	5.4 H	16	TU
ZNRZV7	78.6	76.8	77.5	77.3	77.6	1.06	1.9	0.8	78.4	1.40	2.5	1.4	15	LC

Consensus (All Labs) Results									
Wk Mean	73.90	74.23	74.30	71.55	Month Mean	73.22		Grand Mean	74.04
Avg SDr	3.70	3.04	3.24	3.09	Avg SDr	3.37		Avg SDr	3.01
SD btwn Labs	4.29	4.27	2.64	5.66	SD btwn Labs	4.08		SD btwn Labs	3.13
Labs Includ	10	10	9	10	SD btwn Wks	2.77		SD btwn Wks	2.87
Labs Exclud	0	0	1	0	Labs Includ	10		Labs Includ	10
Labs not rcvd	0	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)

(MB) - Messmer Buchel K440

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

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

Containerboard Interlaboratory Testing Program
Analysis 255

Ring Crush (RCT), 26 lb Corrugating Medium - CM73
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	
3XC7NE	46.6	44.6	46.5 H	45.0	45.7	0.75	3.6	1.0	46.3	1.06	3.5	1.3	16	LZ
7DERWU	43.8	41.0	42.7	45.1	43.2	-0.21	2.5	1.8	44.8	0.52	2.8	2.5	12	LZ
7RB7U3	40.7	41.4	41.2	40.7	41.0	-1.03	2.3	0.4	41.5	-0.66	2.3	0.7	15	LD
9YKEAU	44.1	45.0	43.7	43.6	44.1	0.15	2.2	0.6	41.2	-0.77	2.2	2.0	16	TH
D2XDVE	40.6	42.8	41.9	43.9	42.3	-0.54	2.6	1.4	42.5	-0.31	2.4	1.5	12	LD
EYK646	46.4	44.8	45.3	45.6	45.5	0.70	1.9	0.7	45.2	0.68	2.1	0.8	16	LD
JCCH6W	44.3	43.8	No Data	No Data	44.0	0.13	3.1	0.3	43.0	-0.11	2.9	1.2	6	EM
JHY9RR	44.3	44.8	43.4	42.7	43.8	0.03	2.5	0.9	43.6	0.08	2.3	1.0	16	LD
JRNYCY	42.0	39.5	40.0	39.5	40.2	-1.32	1.7	1.2	40.7	-0.97	2.1	1.1	16	LC
KWHBNB	48.6	46.8	46.5	47.7	47.4	1.41	2.6	1.0	46.5	1.12	3.1	1.9	16	XX
LULEE8	42.4	37.9 *H	37.1 *H	36.4 H	38.4	-2.01 *	4.2	2.7 H	42.8	-0.21	3.4	3.2 H	16	LZ
MZNP8X	45.2	47.1	45.1	47.5	46.2	0.96	3.2	1.3	46.2	1.04	3.2	1.3	4	LD
N8LYTF	47.8 L	47.3 L	47.2 L	47.2 L	47.4	1.39	1.0	0.3	47.8	1.61	1.2	0.4	16	LC
N9GKJL	33.2 X	34.1 X	33.8 X	33.8 *	33.7	-3.82 X	2.5	0.4	36.6	-2.44 *	3.1	4.2 H	12	MB
RHUGE4	46.6	48.3	48.9	49.7	48.4	1.77	2.2	1.3	47.7	1.56	1.9	1.0	16	LD
T7XWD3	43.0	43.2	42.4 L	43.1 L	42.9	-0.29	1.3	0.3	42.4	-0.33	1.2	1.5	16	WK
TVCT4H	40.6	42.1	40.8	43.7	41.8	-0.73	3.2	1.4	42.3	-0.37	3.6	1.1	16	LD
UH63ZP	40.4	44.5 L	45.6	40.7	42.8	-0.35	2.4	2.6	41.1	-0.79	2.4	2.6	15	LC
Y6HLZ7	45.7	43.9	44.6	42.2	44.1	0.15	2.8	1.5	43.9	0.19	3.2	1.1	16	LC
ZE7YCB	40.8	39.8	41.6	42.5	41.1	-0.97	2.7	1.2	40.8	-0.91	2.7	1.5	16	LC

Consensus (All Labs) Results													
Wk Mean	43.88	43.60	43.58	43.18	Month Mean	43.70				Grand Mean	43.34		
Avg SDr	2.52	2.61	2.73	2.67	Avg SDr	2.64				Avg SDr	2.66		
SD btwn Labs	2.64	2.83	2.92	3.90	SD btwn Labs	2.62				SD btwn Labs	2.77		
Labs Includ	19	19	18	19	SD btwn Wks	1.33				SD btwn Wks	1.83		
Labs Exclud	1	1	1	0	Labs Includ	19				Labs Includ	20		
Labs not rcvd	0	0	1	1									

Instrument Code List as Reported by the Labs

- (EM) - Emerson 1200 Series
- (LD) - L&W Crush Tester 248
- (MB) - Messmer Buchel K440
- (WK) - Zwick Z005 Crush Tester

- (LC) - L & W Crush Tester 48
- (LZ) - L & W Crush Tester (model not specified)
- (TH) - TMI Compression Tester, Model 17-76
- (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
3WU37G	14.6	12.6 X	13.5	14.2	13.7	-1.63	1.1	0.9 H	14.3	-1.07	1.1	0.7	16	LB
7DERWU	15.6	15.3	16.0	16.6 *	15.9	1.54	1.3	0.6	15.8	2.25 *	1.2	0.5	12	LZ
BGDPE9	16.4 *L	15.7 L	15.9 L	16.4 L	16.1	1.91	0.2	0.3	15.4	1.26	0.2	0.7	16	BK
CZKL3X	14.3	13.5 X	13.3	13.0 *	13.5	-1.94	1.1	0.6	13.9	-2.13 *	1.1	0.5	16	LU
D2XDVE	15.5	15.9	14.8	15.1	15.3	0.75	1.3	0.5	15.1	0.75	1.3	0.5	12	LZ
D9AVNC	14.6	14.9	14.8	14.4	14.7	-0.22	0.9	0.2	14.7	-0.23	1.1	0.2	16	LB
DFQ82D	14.8	14.6	14.3	14.5	14.6	-0.40	1.2	0.2	14.7	-0.34	1.1	0.2	16	LB
HNA4V2	14.9	15.4	14.4	14.5	14.8	-0.06	1.5	0.4	14.8	-0.01	1.3	0.5	16	LW
JRNYCY	15.5	15.3	15.1	15.3	15.3	0.74	1.2	0.2	14.7	-0.18	1.2	1.0 H	16	LB
KWHBNB	16.0 L	15.3 L	49.8 XL	27.1 XL	27.1	18.20 X	0.2	16.1 H	19.7	11.00 X	0.1	9.2 H	16	XX
LULEE8	14.7	15.7	14.7	14.8	15.0	0.24	1.3	0.5	15.1	0.64	1.3	0.5	16	LA
LULG6B	14.4 L	14.8 L	14.0 L	13.7 L	14.2	-0.87	0.0	0.5	14.4	-0.88	0.0	0.4	13	XX
N6ZVHX	14.9	15.3	15.0	15.2	15.1	0.45	1.3	0.2	15.0	0.47	1.2	0.3	16	LW
N8LYTF	14.7	14.6	15.1	14.6	14.7	-0.11	0.8	0.2	14.8	0.00	0.7	0.3	16	XX
NXZVM2	14.3	14.2 *	14.4	14.5	14.4	-0.70	0.9	0.2	14.6	-0.42	0.9	0.9 H	16	TT
Q36DWE	15.1	15.5	14.5	No Data	15.0	0.32	1.3	0.5	14.9	0.22	1.3	0.5	15	LW
RHUGE4	14.3	14.6	14.1	14.8	14.5	-0.55	1.1	0.3	14.4	-0.94	1.2	0.4	16	LA
Y6HLZ7	14.8	15.4	15.5	15.0	15.2	0.53	1.1	0.3	15.1	0.60	1.1	0.3	16	LU

Consensus (All Labs) Results

Wk Mean	14.96	15.16	14.67	14.80	Month Mean	14.82	Grand Mean	14.81
Avg SDr	1.07	1.03	1.10	1.12	Avg SDr	1.10	Avg SDr	1.08
SD btwn Labs	0.60	0.48	0.75	0.89	SD btwn Labs	0.67	SD btwn Labs	0.44
Labs Includ	18	16	17	16	SD btwn Wks	0.43	SD btwn Wks	0.54
Labs Exclud	0	2	1	1	Labs Includ	17	Labs Includ	17
Labs not rcvd	0	0	0	1				

Instrument Code List as Reported by the Labs

(BK) - Buchel Strip Compression Tester BK-155

(LA) - L & W Autoline

(LB) - L & W Model 152

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

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

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

(TT) - TMI Short Span Compression, 17-34 (MB K455)

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