Collaborative Testing Services, Inc.

Containerboard Interlaboratory Testing Program

Participant Summary Report #556 (A) - January 2016

Introduction to the Containerboard Program

Explanation of Tables and Definitions of Terms

Analysis	Sample Lot	Analysis Name
201	BX10	Box Compression Strength, Corrugated Boxes
202	ECT8	Edgewise Compressive Strength, Wax (T811), Corrugated board
203	ECT8	Edgewise Compressive Strength by Clamp (T839), Corrugated board
205	42D1	Mullen Burst of Linerboard, 42 lb Linerboard
206	69C2	Mullen Burst of Linerboard, 69 lb Linerboard
215	42D1	Ring Crush of Linerboard, Rigid Platen Type, 42 lb Linerboard
216	69C2	Ring Crush of Linerboard, Rigid Platen Type, 69 lb Linerboard
223	42D1	STFI of Linerboard, 42 lb Linerboard
224	69C2	STFI of Linerboard, 69 lb Linerboard
228	69C	Roughness - Stylus Method, 69 lb Linerboard
229	42D2	Roughness - Sheffield Method, 42 lb Linerboard
231	36Z	Internal Bond Strength, Linerboard, 36 lb Linerboard
234	36Z	Coefficient of Static Friction - Inclined Plane, 36 lb Linerboard
237	36Z	Air Resistance - Gurley Method, Linerboard, 36 lb Linerboard
240	CM81	Flat Crush Strength (CMT) of Medium, 26 lb Corrugating Medium
250	CM81	Fluted Crush of Medium, 26 lb Corrugating Medium
255	CM81	Ring Crush of Medium, 26 lb Corrugating Medium
261	CM81	STFI of Medium, 26 lb Corrugating Medium

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	36Z2	December 2012 - November 2014
	36Z3	December 2014 - Current
42# Linerboard	42B4	June 2014 - April 2015
	42D1	May 2015 - Current
69# Linerboard	69A2	February 2013 - November 2013
	69C,C1	December 2013 - Current
26# Corrugating Medium	CM73	Janruary 2013 - September 2015
	CM81	October 2015 - Current

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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<h1 style="text-align:center;color:green">EXPLANATION OF TABLES</h1>

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.

<h2 style="text-align:center;color:green">Definitions of Terms Used</h2>

Weekly Results

Laboratory Data

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

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

Consensus Data

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

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

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

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

Monthly Results

Laboratory Data

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

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

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

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

Consensus Data

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

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

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

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

Wks   - The number of weeks included in the cumulative period.

Inst   - The two letter instrument code. Codes are summarized at the bottom of the last analysis page.

Consensus Data

Grand Mean   - The average of the Means for all the participants, excluding those laboratories flagged with an 'X,' reporting data for the number of weeks included in the cumulative period.

Avg 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 btwn Wks   - For the cumulative period, the average of the laboratory between week standard deviations for all the participants.

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:

<u>Flag</u>   <u>Explanation</u>

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

Flags assigned to Weekly Means, Monthly Mean and Cumulative Mean:
- X   Excluded from the weekly means, monthly means and/or the cumulative mean. Immediate review of data and/or testing procedure is recommended.
- *   Included in the weekly means, monthly means and/or the cumulative mean; however, lab should review testing procedure and monitor future results.

Flags assigned to Weekly Means:
- H   Indicates high within-laboratory standard deviation. The laboratory 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 variabilty between weekly means (high week-to-week variation).
- L   Indicates low variabilty between weekly means (low week-to-week variation).

Containerboard Interlaboratory Testing Program
Analysis 201
Top to Bottom Box Compression Strength, Corrugated Boxes - BX10
TAPPI Official Test Method T804

WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
2D84FW	784.3	1.77	44.8	784.3	1.77	44.8	1	LM
2FBYYY	650.8	-0.84	44.4	650.8	-0.84	44.4	1	LL
3TJ4PR	650.7	-0.84	42.2	650.7	-0.84	42.2	1	ER
47KZLY	676.0	-0.35	22.6	676.0	-0.35	22.6	1	ER
4J924R	661.2	-0.64	26.9	661.2	-0.64	26.9	1	ES
7MG2EN	674.1	-0.39	37.6	674.1	-0.39	37.6	1	LH
AAZFHJ	680.2	-0.27	61.0	680.2	-0.27	61.0	1	EX
CCK7HE	641.0	-1.03	34.0	641.0	-1.03	34.0	1	ER
ELWC6T	729.6	0.70	20.5	729.6	0.70	20.5	1	LG
FLELW9	708.7	0.29	52.2	708.7	0.29	52.2	1	LL
GHBADE	651.1	-0.84	31.6	651.1	-0.84	31.6	1	LS
GPTFC7	644.5	-0.97	18.6	644.5	-0.97	18.6	1	LL
GZBX6D	872.1	3.49 X	45.0	872.1	3.49 X	45.0	1	LG
HMHZFK	708.0	0.28	51.5	708.0	0.28	51.5	1	ES
JMC7AJ	690.5	-0.07	47.3	690.5	-0.07	47.3	1	ER
MGEMLH	670.9	-0.45	39.7	670.9	-0.45	39.7	1	LM
RDHPZ8	777.0	1.63	17.2	777.0	1.63	17.2	1	ER
WAKXWQ	791.9	1.92	31.7	791.9	1.92	31.7	1	ET
XK22GU	981.0	5.62 X	71.1	981.0	5.62 X	71.1	1	TB
XRK8D2	635.8	-1.14	22.2	635.8	-1.14	22.2	1	LG
Z2KGXW	757.0	1.24	51.6	757.0	1.24	51.6	1	LH

Consensus (All Labs) Results

Month Mean	693.86		Grand Mean	693.86
Avg SDr	38.86		Avg SDr	38.86
SD btwn Labs	51.10		SD btwn Labs	51.10
Labs Incld	19		Labs Incld	19

Consensus By Method

Test Method	Group Mean	SD btwn Group	Difference from Grand Mean	Labs Included
Hot melt adhesive sealing	721.30	96.44	27.44	5
Clip sealing	696.59	51.89	2.74	15
Tape sealing	981.00	0.00	287.14	1

Containerboard Interlaboratory Testing Program
Analysis 201
Top to Bottom Box Compression Strength, Corrugated Boxes - BX10
TAPPI Official Test Method T804

CTS

Instrument Code List as Reported by the Labs

(ER) - Emerson 6200 Series

(ES) - Emerson 8510

(ET) - Emerson 7200

(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

(LS) - Lansmont Squeezer

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

Report #556

Containerboard Interlaboratory Testing Program
Analysis 202
Edgewise Compressive Strength, by T811, Corrugated board - ECT8
TAPPI T811

| WebCode | Monthly Results | | | Cumulative Results | | | | |
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
329PVQ	57.5	0.13	2.5	53.9	-1.24	2.5	4	LC
CCK7HE	58.6	0.47	2.0	59.4	1.04	1.9	4	EN
CFJHEE	58.4	0.41	0.7	58.0	0.47	1.1	4	WK
ELWC6T	62.5	1.70	2.5	59.4	1.04	3.4	3	LE
GHBADE	57.4	0.12	3.3	57.7	0.32	2.2	4	LC
GPTFC7	55.0	-0.64	2.1	53.7	-1.34	2.3	4	EM
JZ23BG	55.5	-0.50	0.8	58.4	0.63	1.7	3	TB
NE9HL3	58.0	0.30	2.3	57.8	0.36	2.5	4	XX
Z2KGXW	50.7	-1.98	1.8	53.8	-1.29	2.5	4	TC

Consensus (All Labs) Results

Month Mean	57.06		Grand Mean	56.91
Avg SDr	2.15		Avg SDr	2.32
SD btwn Labs	3.22		SD btwn Labs	2.41
Labs Incld	9		Labs Incld	9

Instrument Code List as Reported by the Labs

(EM) - Emerson 1200 Series

(EN) - Emerson 2200

(LC) - L&W Crush Tester 48

(LE) - L&W Crush Tester 840

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

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

(WK) - Zwick Z005 Crush Tester

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

Containerboard Interlaboratory Testing Program
Analysis 203
Edgewise Compressive Strength by T839, Corrugated board - ECT8
TAPPI T839

| WebCode | Monthly Results | | | Cumulative Results | | | | |
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
2D84FW	60.5	-0.02	1.0	61.6	0.27	1.6	4	TC
2FBYYY	63.0	0.62	3.2	60.3	-0.15	2.7	2	LC
329PVQ	61.9	0.32	1.9	61.7	0.30	1.7	4	LC
3TJ4PR	57.8	-0.72	1.9	59.2	-0.52	1.9	4	TB
47KZLY	61.2	0.16	2.1	61.6	0.28	2.2	4	LD
48FHMZ	53.2	-1.91	2.1	73.3	4.15 X	3.8	4	LC
4AMXWR	56.0	-1.18	1.6	54.4	-2.14 *	1.8	4	TD
4RHQHP	57.9	-0.69	1.7	56.1	-1.55	3.5	4	LC
4TD9JR	54.3	-1.62	3.2	55.4	-1.79	2.6	4	LD
7MG2EN	66.3	1.46	6.6	66.5	1.90	4.5	4	EM
8NQQRK	63.9	0.85	2.0	64.8	1.34	1.9	4	CT
AAZFHJ	58.7	-0.49	2.2	62.3	0.49	2.2	4	TL
BKFMUE	59.5	-0.29	1.9	58.3	-0.82	1.8	4	TB
BYXFJK	56.1	-1.17	1.0	54.8	-1.99	1.7	4	TG
CCK7HE	60.9	0.07	1.5	61.5	0.22	1.9	4	EN
DUFY4D	62.1	0.39	3.0	62.1	0.42	2.1	4	LD
ELWC6T	64.7	1.05	2.7	63.5	0.91	2.8	3	LZ
EUA298	61.7	0.29	2.1	61.7	0.32	2.1	1	EM
FLELW9	60.6	-0.01	1.1	59.0	-0.60	1.6	4	BU
GDZWVF	61.3	0.17	3.9	61.3	0.17	3.9	1	LC
GHBADE	59.7	-0.24	3.7	60.4	-0.13	2.9	4	LC
GPTFC7	63.5	0.73	1.9	61.7	0.29	2.3	4	EM
GX38EA	61.6	0.25	1.1	61.2	0.12	1.5	4	LC
GZBX6D	59.2	-0.37	2.0	59.5	-0.44	2.5	4	EM
HMHZFK	62.1	0.39	2.0	62.5	0.55	2.5	4	LD
JMC7AJ	56.4	-1.08	3.0	58.4	-0.80	3.0	4	EN
JZ23BG	53.3	-1.89	1.7	58.6	-0.72	1.7	3	TG
MGEMLH	62.9	0.58	3.4	62.2	0.48	2.5	4	EM
NJF9N9	70.3	2.49 *	2.0	65.1	1.44	2.3	4	LC
P8HRCC	59.2	-0.36	4.2	61.6	0.27	2.8	4	LD
RDHPZ8	58.2	-0.63	1.1	57.4	-1.14	1.5	4	EM
U6X7UC	58.6	-0.51	3.3	60.4	-0.11	2.5	4	LD
VQZGD7	59.6	-0.26	1.5	59.5	-0.45	1.8	4	TM
WAKXWQ	69.4	2.25 *	2.8	67.4	2.20 *	2.8	3	TD
XK22GU	65.8	1.32	0.8	63.2	0.80	0.9	4	LC
Z2KGXW	60.7	0.03	0.7	62.6	0.59	1.2	4	TC

Containerboard Interlaboratory Testing Program
Analysis 203
Edgewise Compressive Strength by T839, Corrugated board - ECT8
TAPPI T839

CTS

Consensus (All Labs) Results

Month Mean	60.62		Grand Mean	60.79
Avg SDr	2.54		Avg SDr	2.37
SD btwn Labs	3.89		SD btwn Labs	3.01
Labs Incld	36		Labs Incld	35

Instrument Code List as Reported by the Labs

(BU) - Buchel Digital Crush Tester

(CT) - Con-Ten

(EM) - Emerson 1200 Series

(EN) - Emerson 2200

(LC) - L&W Crush Tester 48

(LD) - L&W Crush Tester 248

(LZ) - L&W Crush Tester (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

(TG) - TMI Digital Crush Tester, 17-76

(TL) - Tech-Lab Systems Compression

(TM) - TMI/Hinde & Dausch
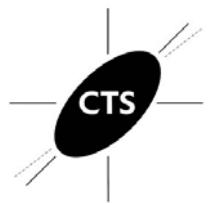
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Containerboard Interlaboratory Testing Program
Analysis 205
Bursting Strength (Mullen), 42 lb Linerboard - 42D1
TAPPI Official Test Method T807

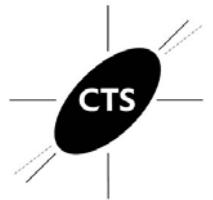| WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst
		Weekly Means				Monthly Results				Cumulative Results				
2RTHJV	106.2	106.2	106.9	110.4	107.4	-0.85	11.7	2.0	106.7	-0.95	11.3	2.3	16	LC
3TJ4PR	104.9	105.2	112.0	103.3 *	106.3	-1.28	10.7	3.9	107.3	-0.71	11.5	3.1	16	LA
47KZLY	117.0	118.0 *	124.0 X	120.0 *	119.8	4.04 X	10.1	3.1	114.4	1.89	10.6	5.0	16	AH
48FHMZ	113.4	113.0	100.5 *	113.9	110.2	0.24	10.6	6.5 H	109.1	-0.04	10.5	3.8	16	LC
4J924R	103.5	No Data	No Data	No Data	103.5	-2.41 *	11.3	0.0 L	103.5	-2.12 *	11.3	0.0 L	1	AH
4TD9JR	114.8	115.1	110.0	110.9	112.7	1.24	10.1	2.6	112.2	1.09	9.6	3.1	16	AA
64ACNK	111.3	113.4	108.6	113.5	111.7	0.84	10.8	2.3	112.5	1.19	10.6	2.6	16	TP
6XNJAZ	111.2	109.5	106.9	111.1	109.7	0.03	9.5	2.0	109.1	-0.04	9.5	2.7	16	LB
6ZQHKT	114.9	107.0	113.2	107.6	110.7	0.43	13.5	4.0	110.6	0.51	11.5	3.4	16	LZ
7JLA7Q	112.4	105.0	113.3	108.5	109.8	0.09	11.5	3.8	110.5	0.47	11.3	2.9	16	LA
8NQQRK	109.0	112.0	113.8	116.2	112.8	1.26	12.4	3.0	113.0	1.38	14.4	3.6	16	XX
A2AUCL	105.7	112.9	112.3	112.5 L	110.9	0.51	8.8	3.4	111.4	0.80	11.0	3.5	16	LC
AEVAFL	109.6	109.6	109.5	109.5	109.6	-0.01	7.2	0.0 L	109.4	0.05	6.8	0.2 L	16	LJ
AG3PMR	114.6	111.0	110.6	112.0	112.1	0.98	9.5	1.8	108.2	-0.38	10.4	7.0 H	16	AH
AZF9JV	105.5	108.5	102.6	111.7	107.1	-0.99	8.2	3.9	106.8	-0.91	8.0	4.6	16	TB
BULQHN	105.5	111.2	106.9	109.6	108.3	-0.50	13.5	2.6	108.2	-0.40	12.3	3.4	16	LC
BZAEDU	107.6	109.7	107.7	108.3	108.3	-0.50	13.0	0.9	108.5	-0.29	11.5	3.7	16	LA
CQ3Y8L	105.6	112.1	109.9	117.1	111.2	0.63	13.2	4.8	107.8	-0.52	10.9	5.4	12	LA
ELWC6T	112.6	113.9	111.6	113.2	112.8	1.30	12.5	1.0	114.3	1.85	12.3	1.7	12	LZ
FBTHNA	109.9	104.7	106.5	108.8	107.4	-0.84	10.1	2.3	105.6	-1.36	10.3	5.4	16	LC
FQ7QPD	107.2	109.4	106.5	110.6	108.4	-0.46	7.5	1.9	107.0	-0.85	8.0	3.9	16	AX
GHBADE	103.7	103.5	104.7	110.8	105.7	-1.55	11.2	3.5	106.0	-1.19	9.8	3.1	16	AH
GLBHHN	108.7	110.6	108.9	107.5 L	108.9	-0.26	10.7	1.3	107.8	-0.54	7.8	1.2	16	LA
GPTFC7	119.3 *	122.1 XL	115.5	126.8 X	120.9	4.50 X	8.9	4.7	109.0	-0.10	10.5	9.8 H	16	LA
HMHZFK	113.3	106.9	108.8	107.9	109.2	-0.14	12.6	2.8	108.5	-0.28	12.9	2.7	16	LA
HW8LLH	112.1	110.0	113.8	113.9	112.5	1.15	11.1	1.9	110.1	0.30	11.0	2.6	16	LA
KD982A	109.0	113.9	109.8	114.5	111.8	0.88	10.5	2.8	110.8	0.57	11.0	3.7	16	LJ
KGKHRJ	112.2	114.1	101.3	110.6	109.5	-0.01	11.6	5.6	108.7	-0.19	10.8	3.5	16	LC
KQA4XG	106.4	108.2	107.4	109.4	107.9	-0.68	10.1	1.3	105.5	-1.40	9.6	3.3	15	AH
KYNTXB	114.1	110.7	110.8	115.8	112.9	1.30	9.6	2.5	110.7	0.52	11.8	5.1	16	LC
M8TJEH	110.7	110.3	111.4	114.0	111.6	0.80	9.5	1.7	113.9	1.70	10.1	2.8	12	LC
MGEMLH	111.4	107.1	107.0	108.8	108.6	-0.39	10.8	2.1	107.3	-0.71	10.8	2.2	16	AH
MT84BJ	127.5 X	124.2 X	112.4	117.3	120.3	4.27 X	12.7	6.8 H	118.1	3.24 X	10.7	4.9	16	LA
NJF9N9	109.9	110.4	110.8	109.6	110.2	0.23	12.5	0.5 L	109.4	0.04	11.7	3.1	16	LA
NMH7Y2	106.0	106.6	107.5	110.5	107.7	-0.76	8.1	2.0	108.6	-0.23	8.0	2.2	16	AH
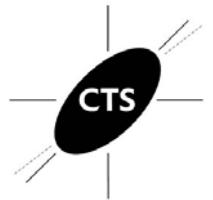
Containerboard Interlaboratory Testing Program
Analysis 205
Bursting Strength (Mullen), 42 lb Linerboard - 42D1
TAPPI Official Test Method T807

CTS

WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst
		Weekly Means				Monthly Results				Cumulative Results				
NU3A6H	105.2	109.3	No Data	111.9	108.8	-0.31	11.1	3.4	109.2	-0.02	12.6	4.4	11	LZ
P4HFGC	108.5	106.3	102.2	115.2	108.0	-0.61	10.7	5.4	105.6	-1.33	11.1	3.7	16	LC
P9DAED	104.7	107.8	108.2	102.9 *	105.9	-1.45	10.0	2.5	105.1	-1.54	10.0	2.6	12	LA
QDLQN2	113.4	115.1 L	109.9	111.4 L	112.5	1.14	5.5	2.3	110.2	0.35	9.6	3.1	16	XX
RYLBZD	117.1	111.5	103.2	112.0	111.0	0.55	11.3	5.8	111.1	0.69	11.8	5.0	16	LA
T4QQM7	109.6	115.1	115.0	116.0	113.9	1.72	11.3	2.9	114.3	1.86	11.9	2.7	16	LA
U6X7UC	101.2 *	105.7	105.9	107.3	105.0	-1.81	10.0	2.7	105.1	-1.52	8.2	1.9	16	LA
U6ZVZV	108.6 L	106.4 L	111.2	105.8	108.0	-0.62	5.1	2.4	106.1	-1.17	6.3	3.6	16	RE
U7CVV4	109.3 L	110.3	110.4	109.5	109.9	0.12	6.1	0.5 L	109.4	0.05	5.1	2.1	12	LA
VGAV89	113.5	116.6	108.4	114.9	113.4	1.50	10.0	3.5	112.8	1.29	10.3	4.1	12	LC
VJDQQB	105.9	110.1	No Data	112.8	109.6	0.00	10.7	3.5	108.9	-0.13	11.3	2.5	14	TB
WG4228	108.5	109.2	111.8	110.5	110.0	0.16	12.4	1.5	111.2	0.71	12.1	2.2	16	TB
WZFNPZ	111.6	109.2	110.9	112.3	111.0	0.56	10.1	1.3	111.2	0.70	11.0	2.8	16	LC
XRK8D2	104.4	104.0	99.2 *	107.4 L	103.8	-2.31 *	9.3	3.4	107.0	-0.82	10.6	4.8	12	AH
XVJJ92	113.4	115.0	108.7	111.8	112.3	1.06	9.8	2.7	108.9	-0.13	10.6	4.2	15	LC
Z2KGXW	119.8 *	114.8	117.8 *	117.0	117.3	3.07	X 12.8	2.1	114.2	1.82	12.1	3.4	16	AA

Consensus (All Labs) Results

	Week 1	Week 2	Week 3	Week 4		Monthly		Cumulative	
Wk Mean	109.87	110.12	108.98	111.39	Month Mean	109.57	Grand Mean	109.26	
Avg SDr	11.09	10.64	10.53	10.11	Avg SDr	10.54	Avg SDr	10.62	
SD btwn Labs	4.25	3.54	3.98	3.54	SD btwn Labs	2.52	SD btwn Labs	2.72	
Labs Incld	50	48	47	49	SD btwn Wks	3.05	SD btwn Wks	3.76	
Labs Excld	1	2	1	1	Labs Incld	47	Labs Incld	50	
Labs not rcvd	0	1	3	1					

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)

(RE) - Regmed/Mullen Tester

(TB) - TMI Monitor/Burst 1000

(TP) - Technidyne PROFILE/Plus

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

Containerboard Interlaboratory Testing Program
Analysis 206
Bursting Strength (Mullen), 69 lb Linerboard - 69C2
TAPPI Official Test Method T807

	Weekly Means				Monthly Results				Cumulative Results					
WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst
2RTHJV	154.6	151.1	155.8	158.9	155.1	-0.05	13.3	3.2	151.7	-0.75	13.0	4.1	12	LC
3TJ4PR	157.2 L	160.5	158.6	155.6	158.0	0.57	9.8	2.1	155.3	0.05	10.8	4.0	12	LA
47KZLY	153.0	171.5 X	164.5	175.5 X	166.1	2.33 *	10.1	9.9 H	162.0	1.54	10.7	6.0	12	AH
48FHMZ	151.7	159.2	151.2	151.8	153.5	-0.40	12.1	3.8	152.3	-0.63	11.0	4.8	12	LC
4J924R	279.5 XH	155.0	NO DATA	NO DATA	217.3	13.37 X	289.9	88.0 H	217.3	13.87 X	289.9	88.0 H	2	AH
4TD9JR	161.3	159.8	148.0	154.1	155.8	0.10	10.6	6.1	155.9	0.19	11.8	3.9	12	AA
64ACNK	146.8	148.3 L	145.9	148.6	147.4	-1.72	6.6	1.3	149.6	-1.23	9.0	4.5	12	TP
6XNJAZ	162.1	154.6	165.4	164.9	161.8	1.38	10.2	5.0	161.7	1.47	9.7	3.0	12	LB
6ZQHKT	158.3	159.4	153.1	159.1	157.5	0.45	12.0	2.9	156.7	0.36	11.7	2.9	12	LZ
7JLA7Q	157.1	154.3	153.8	153.6	154.7	-0.15	9.9	1.6	154.8	-0.06	9.9	3.8	12	LA
8NQQRK	165.6	NO DATA	152.3	160.9	159.6	0.92	14.1	6.7	163.2	1.81	13.0	5.5	11	XX
A2AUCL	156.8	160.9	156.7	162.7	159.3	0.85	10.5	3.0	163.6	1.90	17.4	7.0	12	LC
AEVAFL	155.1	155.6	155.6	155.4	155.5	0.02	7.8	0.2 L	155.5	0.10	8.8	0.2 L	12	LJ
AG3PMR	151.8	152.0	151.0	151.0	151.5	-0.84	13.4	0.5 L	149.4	-1.27	11.3	10.1 H	12	AH
AZF9JV	162.5	156.8	162.6	162.5	161.1	1.24	9.9	2.9	161.5	1.43	10.4	4.0	12	TB
BULQHN	160.0	154.3	152.1	159.9	156.6	0.26	11.5	4.0	155.5	0.10	11.5	4.0	12	LC
BZAEDU	150.9	150.9	149.1	153.9	151.2	-0.90	11.5	2.0	154.8	-0.07	12.6	4.6	12	LA
CQ3Y8L	149.6	143.5 *	148.4	154.4	149.0	-1.37	12.8	4.5	148.3	-1.52	12.8	4.2	5	LA
ELWC6T	160.3	156.6	162.9	164.1	161.0	1.21	11.3	3.3	161.7	1.47	11.6	4.7	11	LZ
FBTHNA	157.7	147.0	151.5	148.9	151.3	-0.88	9.3	4.6	149.8	-1.17	11.2	4.2	8	LC
FQ7QPD	138.3 X	147.8	143.5 *	147.4	144.3	-2.40 *	10.9	4.4	146.2	-1.99	10.1	4.8	12	AX
GHBADE	158.3	156.5	148.8	157.2	155.2	-0.03	9.8	4.3	152.2	-0.64	11.3	6.2	12	AH
GLBHHN	155.3	153.4	159.0	155.0	155.7	0.07	10.3	2.3	157.5	0.54	10.1	2.7	12	LA
GPTFC7	144.5 *	142.6 *	131.9 X	139.7 *	139.7	-3.38 X	11.4	5.5	141.7	-2.99 X	10.7	3.7	12	RE
HMHZFK	150.6	154.8	156.9	164.5	156.7	0.29	9.4	5.8	155.7	0.15	10.5	4.5	12	LA
HW8LLH	153.3	156.7	158.3	156.2	156.1	0.17	10.1	2.1	155.1	0.00	11.1	3.0	12	LA
KD982A	156.1	157.9	151.5	153.3	154.7	-0.14	11.4	2.9	155.6	0.10	11.5	3.3	12	LJ
KGKHRJ	155.6	148.1	150.5	153.1	151.8	-0.76	11.0	3.3	151.8	-0.73	10.3	3.9	12	LC
KQA4XG	151.7	146.4	153.5	151.1	150.7	-1.01	11.0	3.0	151.5	-0.79	10.8	3.8	12	AH
KYNTXB	154.1	156.7	159.4	156.3	156.6	0.27	9.1	2.1	152.8	-0.50	10.4	5.3	8	LC
M8TJEH	159.1	157.1	152.0	158.3	156.6	0.27	8.9	3.2	157.0	0.43	10.0	4.1	12	LC
MGEMLH	159.1	154.5	150.7	156.8	155.3	-0.02	11.0	3.6	155.1	-0.01	9.6	2.7	12	AH
MT84BJ	169.4 *H	164.7	161.7	167.9 *	165.9	2.29 *	13.6	3.4	166.5	2.55 *	12.2	3.4	12	LA
NJF9N9	155.9	153.9	156.4	159.2	156.3	0.21	9.5	2.2	154.5	-0.14	9.4	3.2	12	LA
NMH7Y2	149.3	153.8	155.4	153.8	153.1	-0.49	7.5	2.6	153.0	-0.47	9.0	2.5	12	AH

Containerboard Interlaboratory Testing Program
Analysis 206
Bursting Strength (Mullen), 69 lb Linerboard - 69C2
TAPPI Official Test Method T807

WebCode	Weekly Means Week 1	Week 2	Week 3	Week 4	Monthly Results Mean	CPV	SDr	SD Wks	Cumulative Results Mean	CPV	SDr	SD Wks	Wks	Inst
NU3A6H	148.6	147.4	No Data	148.4	148.2	-1.55	13.7	0.6 L	153.3	-0.39	11.1	4.4	11	LZ
P4HFGC	150.7	158.7	149.8	145.2	151.1	-0.92	14.5	5.6	147.7	-1.65	13.9	7.9 H	12	LC
P9DAED	151.8	158.2	153.1	157.1	155.1	-0.06	9.4	3.1	154.4	-0.16	11.0	4.3	12	LA
QDLQN2	168.5 *	150.8	153.8	154.6	156.9	0.34	8.0	7.9 H	155.2	0.02	6.3	4.7	12	XX
RYLBZD	157.8	161.1	164.2	152.5	158.9	0.77	12.7	5.0	157.4	0.53	13.1	10.6 H	12	LA
T4QQM7	153.6	156.4	154.7	148.6	153.3	-0.44	11.0	3.4	155.3	0.05	11.6	4.4	12	LA
U6X7UC	155.1	154.2	151.7	149.4	152.6	-0.60	7.5	2.5	152.4	-0.61	8.2	2.4	12	LA
U6ZVZV	154.4	155.8	155.2	155.2	155.2	-0.04	10.0	0.6 L	153.4	-0.37	10.6	3.8	12	RE
U7CVV4	162.8	158.5	160.9	156.5	159.7	0.94	9.3	2.8	161.6	1.46	8.7	3.3	12	LA
VGAV89	155.8	150.2	147.5	150.8	151.1	-0.93	12.1	3.4	151.1	-0.88	11.2	3.2	8	LC
VJDQQB	154.0	158.1	No Data	156.5	156.2	0.19	11.8	2.1	154.2	-0.20	12.5	2.8	10	TB
WG4228	150.8	156.0	154.7	155.7	154.3	-0.23	11.9	2.4	156.6	0.34	12.2	3.9	12	TB
WZFNPZ	157.5	161.2	157.1	153.5	157.3	0.42	14.0	3.2	155.7	0.14	11.8	3.6	12	XX
XRK8D2	143.9 *	143.0 *	148.2	144.7	145.0	-2.25 *	10.8	2.3	146.5	-1.91	10.8	2.6	7	AH
XVJJ92	160.2	158.3	163.8	163.9	161.6	1.34	13.7	2.7	157.9	0.64	12.5	5.3	12	LA
Z2KGXW	160.3	162.0 H	161.8	161.5	161.4	1.30	13.5	0.8	158.5	0.75	12.3	3.3	12	AA

Consensus (All Labs) Results

	Week 1	Week 2	Week 3	Week 4				
Wk Mean	155.72	154.58	154.73	155.19	Month Mean	155.35	Grand Mean	155.09
Avg SDr	10.70	11.00	10.72	11.72	Avg SDr	11.06	Avg SDr	11.19
SD btwn Labs	5.42	5.17	5.37	5.74	SD btwn Labs	4.63	SD btwn Labs	4.48
Labs Incld	49	49	47	49	SD btwn Wks	3.77	SD btwn Wks	4.62
Labs Excld	2	1	1	1	Labs Incld	49	Labs Incld	49
Labs not rcvd	0	1	3	1				

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)
(RE) - Regmed/Mullen Tester	(TB) - TMI Monitor/Burst 1000
(TP) - Technidyne PROFILE/Plus	(XX) - Instrument make/model not specified by lab

Containerboard Interlaboratory Testing Program
Analysis 215
Ring Crush, 42 lb Linerboard - 42D1
TAPPI Official Test Method T822

WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst
		Weekly Means				Monthly Results				Cumulative Results				
2TZXQ3	89.4	88.4	91.8	89.4	89.7	0.29	3.3	1.5	88.0	0.15	3.3	1.9	16	LD
3TJ4PR	86.5	83.4	85.1	87.2	85.6	-0.76	2.9	1.7	85.6	-0.52	2.9	1.7	4	LD
47KZLY	84.0	87.4	84.3	85.3	85.3	-0.84	3.4	1.5	85.2	-0.63	3.6	1.2	16	LD
48FHMZ	92.6	88.3	88.0	89.4	89.6	0.25	4.0	2.1	87.5	0.03	3.8	2.7	16	LD
4AMXWR	93.8	92.9 L	91.5 L	95.8	93.5	1.24	2.0	1.8	92.1	1.29	1.4	1.5	16	TD
4TD9JR	84.0	85.4 L	87.9	84.4	85.4	-0.80	2.8	1.8	85.0	-0.69	3.3	1.4	16	LD
64ACNK	88.8	88.7	86.8	86.0	87.6	-0.25	4.0	1.4	87.8	0.11	3.8	1.6	16	TH
6VJQHM	82.6	82.3	91.5	78.6 *H	83.8	-1.22	5.6	5.5 H	83.8	-1.03	5.6	5.5 H	4	LC
6XNJAZ	91.3	91.6	90.9	89.2	90.7	0.54	5.2	1.1	88.2	0.21	4.0	2.1	16	LC
7MG2EN	87.7	91.6	90.0	90.9	90.0	0.37	4.2	1.7	92.0	1.28	4.2	2.7	16	EM
8PL9UL	86.0	88.1	89.4	88.5	88.0	-0.15	4.2	1.5	88.0	0.15	4.2	1.5	4	EM
8XCUYJ	93.8	86.8	102.2 X	94.9	94.4	1.47	4.2	6.3 H	87.9	0.14	6.2	10.0 H	15	MB
AEVAFL	86.4	86.8	86.2	86.4	86.5	-0.53	3.0	0.2 L	87.1	-0.09	3.8	1.3	16	LD
AG3PMR	91.3	91.9	89.3	90.3	90.7	0.53	3.6	1.1	89.6	0.59	3.9	2.6	16	LC
AZF9JV	93.8	93.6	94.3	95.2	94.2	1.42	4.9	0.7	92.7	1.47	4.9	2.0	16	LX
BULQHN	88.9	86.9	87.4	88.6	88.0	-0.16	3.9	0.9	87.3	-0.05	3.9	1.4	16	LD
BYXFJK	89.7	90.2	88.2	89.2	89.3	0.18	3.2	0.9	88.0	0.17	3.2	2.3	16	TH
BZAEDU	86.0	86.0	87.0	88.5	86.9	-0.43	3.3	1.2	87.4	-0.02	3.3	3.0	16	LC
CQ3Y8L	92.2	94.2	93.1	93.1	93.1	1.15	5.0	0.8	90.2	0.76	4.9	7.8 H	12	LC
ELWC6T	86.1	87.9	87.6	86.7 L	87.1	-0.38	2.7	0.8	87.5	0.01	3.0	1.4	12	LC
FBTHNA	95.1	94.4	93.0	93.8	94.1	1.38	4.4	0.9	92.1	1.30	4.0	4.1	16	LD
FQ7QPD	96.7	99.8 *	94.1 H	92.7	95.8	1.83	5.3	3.1	94.0	1.82	4.9	3.4	16	LZ
GHBADE	88.0	84.2	88.8	86.0	86.8	-0.46	3.6	2.1	86.5	-0.26	4.0	2.0	16	LC
GLBHHN	84.9	83.0	85.1	86.2 L	84.8	-0.95	3.6	1.3	84.0	-0.96	3.1	1.1	16	LD
GLU6G7	86.9	85.6	86.0	86.3	86.2	-0.59	2.8	0.5	86.2	-0.34	2.8	0.5 L	4	WK
GPTFC7	82.7	83.4 L	85.0	85.2	84.1	-1.14	3.3	1.2	83.9	-0.99	3.8	1.7	16	EM
GZBX6D	84.3	86.0	83.6	86.6	85.1	-0.88	3.4	1.4	80.9	-1.83	4.4	5.5 H	16	EM
HW8LLH	93.0	91.9	92.7	96.0	93.4	1.21	5.0	1.8	93.0	1.54	4.3	2.5	16	LD
JMC7AJ	79.8	83.8	86.8	85.0	83.9	-1.19	4.1	2.9	82.0	-1.51	3.4	2.0	16	EN
KD982A	91.1	83.9	85.1	85.1	86.3	-0.57	2.6	3.3	83.3	-1.16	3.2	3.3	16	LC
KGKHRJ	91.8	94.1	91.9	97.6	93.9	1.33	3.6	2.7	92.2	1.34	3.9	2.0	16	LC
KYNTXB	99.7 *	91.5	93.6	91.6	94.1	1.39	3.5	3.8	94.0	1.83	3.7	3.4	16	TC
MGEMLH	87.5	89.4	91.1	91.4	89.9	0.32	3.5	1.8	87.7	0.06	3.3	2.1	16	EM
MT84BJ	90.2	90.5	89.9	83.9	88.6	0.01	4.2	3.2	88.9	0.41	4.2	2.9	16	LZ
NJF9N9	85.8	85.1	82.7 H	79.2	83.2	-1.36	4.8	3.0	85.6	-0.51	4.9	3.7	16	LC
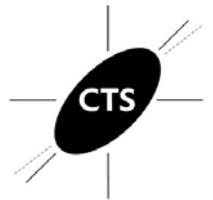
Containerboard Interlaboratory Testing Program
Analysis 215
Ring Crush, 42 lb Linerboard - 42D1
TAPPI Official Test Method T822

WebCode	Weekly Means Week 1	Week 2	Week 3	Week 4	Monthly Results Mean	CPV	SDr	SD Wks	Cumulative Results Mean	CPV	SDr	SD Wks	Wks	Inst
NU3A6H	79.1 *	82.8	83.5	82.3	81.9	-1.68	4.7	1.9	80.3	-2.00	4.3	2.0	12	LC
P4HFGC	93.0	97.1	93.7	94.1	94.5	1.49	4.0	1.8	90.7	0.92	3.9	2.7	16	LC
P9DAED	84.3	82.0	87.2	81.3	83.7	-1.23	4.1	2.6	84.5	-0.82	3.9	2.0	12	LD
QDLQN2	82.1	94.3	95.3	89.9	90.4	0.46	4.0	6.0 H	89.1	0.47	4.1	4.7	16	LD
RDHPZ8	83.8	83.6	83.2	82.6	83.3	-1.33	2.8	0.6	81.4	-1.67	2.7	1.8	16	EX
RYLBZD	89.0	86.6 H	98.4 *	96.9	92.7	1.04	5.6	5.8 H	90.4	0.83	4.8	5.9 H	16	LC
TP7CJ8	85.5	84.5	82.4	84.1	84.1	-1.12	4.2	1.3	83.8	-1.01	3.8	1.6	16	LD
U6X7UC	89.5	90.7	90.4	89.6	90.0	0.37	2.5	0.6	89.4	0.56	3.4	1.7	16	LD
U6ZVZV	96.3 L	100.1 *	99.0 *	96.7	98.0	2.37 *	3.6	1.8	95.3	2.20 *	4.0	3.6	16	LZ
U7CVV4	85.5 L	85.9 L	87.3	86.0 L	86.2	-0.61	1.7	0.8	86.7	-0.22	2.1	1.0	12	LZ
UA9JCB	84.4	84.4	85.7	83.6	84.5	-1.03	2.9	0.9	84.4	-0.84	2.9	1.0	16	LD
VGAV89	87.3	88.0	85.9	88.1	87.3	-0.32	3.6	1.0	85.5	-0.54	3.7	2.4	12	LC
VJDQQB	85.0	87.5	NO DATA	82.2	84.9	-0.92	2.9	2.6	83.1	-1.20	3.3	4.6	14	LZ
WG4228	85.1	87.6	89.4	88.6	87.7	-0.23	4.4	1.9	85.4	-0.58	4.3	2.5	16	LC
XVJJ92	91.1	93.1	87.4	90.6	90.5	0.49	4.7	2.4	86.7	-0.21	7.4	4.8	13	LA

Consensus (All Labs) Results

Wk Mean	88.27	88.53	88.93	88.41	Month Mean	88.58		Grand Mean	87.43	
Avg SDr	3.74	3.96	4.01	3.81	Avg SDr	3.89		Avg SDr	3.98	
SD btwn Labs	4.47	4.46	3.96	4.67	SD btwn Labs	3.97		SD btwn Labs	3.59	
Labs Incld	50	50	48	50	SD btwn Wks	2.44		SD btwn Wks	3.28	
Labs Excld	0	0	1	0	Labs Incld	50		Labs Incld	50	
Labs not rcvd	0	0	1	0						

Instrument Code List as Reported by the Labs

(EM) - Emerson 1200	(EN) - Emerson 2200
(EX) - Emerson (model not specified)	(LA) - L&W Autoline
(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	(TC) - TMI Monitor/Compression Tester, Model 17-37
(TD) - TMI Digital Crush Tester, Model 17-09	(TH) - TMI Compression Tester, Model 17-76
(WK) - Zwick Z005 Crush Tester	

Containerboard Interlaboratory Testing Program
Analysis 216
Ring Crush, 69 lb Linerboard - 69C2
TAPPI Official Test Method T822

CTS

WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst
		Weekly Means				Monthly Results				Cumulative Results				
2TZXQ3	124.2	129.7	129.1	125.5	127.1	-0.41	3.7	2.7	126.7	-0.54	4.3	1.8	12	LD
3TJ4PR	123.8	122.6	123.5	123.6	123.4	-0.95	5.1	0.5 L	123.4	-1.02	5.1	0.5 L	4	LD
47KZLY	128.9	125.2	125.2	128.8	127.0	-0.43	4.1	2.1	128.3	-0.32	4.4	4.6	12	LD
48FHMZ	131.0 H	127.5	129.5	128.1	129.0	-0.14	5.8	1.6	131.7	0.17	4.8	2.9	12	LC
4AMXWR	145.2 *L	143.3 L	147.9 L	147.0	145.8	2.28 *	1.8	2.0	145.5	2.15 *	2.1	1.8	12	TD
4TD9JR	121.7	122.5	123.1	121.2	122.1	-1.13	3.5	0.9	121.0	-1.36	3.2	1.3	12	LD
64ACNK	132.5 L	131.9	135.0	133.7	133.3	0.47	3.3	1.3	133.7	0.46	3.3	2.1	12	TH
6VJQHM	116.5 H	119.9	129.4 H	127.0 H	123.2	-0.98	10.7	6.0	123.2	-1.04	10.7	6.0	4	LC
6XNJAZ	136.1	136.9	140.9	143.1	139.2	1.33	4.5	3.3	139.3	1.26	4.3	3.7	12	LC
7MG2EN	141.6	141.9	140.0	141.1	141.1	1.60	3.7	0.8	138.8	1.19	3.7	5.0	12	EM
8PL9UL	124.9	130.3	128.8	128.6	128.2	-0.26	4.8	2.3	128.2	-0.33	4.8	2.3	4	EM
8XCUYJ	136.4	133.2 H	136.3	148.5	138.6	1.24	6.9	6.8 H	139.9	1.35	6.7	6.0	11	MB
AEVAFL	133.0	133.1	133.1	133.0	133.1	0.44	3.0	0.0 L	133.2	0.39	2.8	0.2 L	12	LD
AG3PMR	133.6	123.8	133.2	126.2	129.2	-0.11	5.1	4.9	124.1	-0.91	6.7	8.3 H	12	LC
AZF9JV	153.0 X	152.2 X	150.3 *	152.1 *	151.9	3.15 X	4.9	1.1	151.3	2.97 X	4.2	1.7	12	LX
BULQHN	130.1	129.8	131.0	135.7	131.6	0.24	3.8	2.8	133.7	0.45	3.4	2.7	12	LZ
BYXFJK	127.9	130.0	128.2 L	128.1	128.5	-0.21	3.3	1.0	131.4	0.13	3.3	2.3	12	TH
BZAEDU	123.9	122.9	125.9	124.2	124.2	-0.83	3.5	1.2	123.0	-1.08	2.9	2.8	12	LC
CQ3Y8L	138.4	149.1 *	143.8	148.5	144.9	2.15 *	5.1	4.9	145.1	2.09 *	5.4	4.3	5	LC
ELWC6T	125.5	124.9	129.7 L	129.6	127.4	-0.37	3.0	2.6	131.6	0.16	3.2	4.5	11	LC
FBTHNA	143.6	140.8	134.0	133.9	138.1	1.17	3.1	4.9	136.0	0.78	4.2	4.4	8	LD
FQ7QPD	141.0	136.5	138.0	137.4	138.2	1.18	4.3	2.0	139.1	1.23	6.1	5.7	12	LZ
GHBADE	138.5	128.4	137.2	127.4	132.9	0.41	2.7	5.8	129.2	-0.18	3.3	5.0	12	LC
GLBHHN	124.5	124.4	123.6	124.1 L	124.2	-0.84	2.9	0.4 L	124.9	-0.80	3.2	0.8 L	12	LD
GLU6G7	119.6	120.5	119.2	120.2	119.9	-1.46	2.9	0.6	119.9	-1.52	2.9	0.6 L	4	WK
GPTFC7	121.0	120.4	123.2	119.7	121.1	-1.28	3.6	1.5	131.3	0.11	5.6	13.0 H	12	EM
GZBX6D	127.4	128.1	126.1	126.6	127.0	-0.42	6.1	0.9	123.5	-1.00	6.4	6.8	12	EM
HW8LLH	135.5	135.1	134.0	135.2	135.0	0.71	4.0	0.7	134.4	0.55	3.8	3.9	12	LD
JMC7AJ	119.8	130.5	128.6	128.6	126.8	-0.45	3.4	4.8	125.6	-0.70	3.1	4.2	12	EN
KD982A	129.5	124.9	127.3	122.7	126.1	-0.56	4.3	2.9	124.2	-0.90	5.0	2.8	12	LC
KGKHRJ	143.1	143.7	148.9 *	148.0	145.9	2.29 *	4.9	2.9	145.0	2.07 *	4.3	3.4	12	LC
KYNTXB	139.9	134.6	132.5	132.6	134.9	0.70	5.1	3.5	138.2	1.11	5.0	4.3	8	TC
MGEMLH	124.3	124.0	125.8	126.4	125.1	-0.70	4.1	1.2	126.4	-0.58	3.4	2.5	12	EM
MT84BJ	128.3	125.3	124.1	128.9	126.7	-0.48	3.9	2.3	127.1	-0.48	3.5	3.2	12	LZ
NJF9N9	127.3	125.1	135.1	127.7	128.8	-0.17	5.0	4.4	129.4	-0.15	4.4	4.9	12	LC

Report #556

Containerboard Interlaboratory Testing Program
Analysis 216
Ring Crush, 69 lb Linerboard - 69C2
TAPPI Official Test Method T822

CTS

WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst
NU3A6H	123.2	123.5	125.1	122.2	123.5	-0.94	4.2	1.2	123.1	-1.06	4.8	2.6	12	LC
P4HFGC	155.7 X	154.7 X	152.8 *	151.5 *	153.7	3.41 X	4.6	1.9	147.5	2.43 *	8.3	7.2	12	LC
P9DAED	126.8	126.0	127.8	123.3	126.0	-0.58	3.7	1.9	126.8	-0.52	4.0	1.4	12	LD
QDLQN2	122.1	137.8	135.8	132.0	131.9	0.28	4.0	7.0 H	130.1	-0.06	4.0	4.9	12	LD
RDHPZ8	125.6	126.9	126.8 L	129.9	127.3	-0.39	2.6	1.8	126.3	-0.60	2.6	2.8	12	EX
RYLBZD	129.0	138.3	145.7 H	141.9	138.7	1.26	6.6	7.2 H	137.4	0.99	6.0	8.4 H	12	LC
TP7CJ8	121.3	121.3	118.3	118.9	120.0	-1.44	3.9	1.6	119.4	-1.59	3.9	1.6	12	LD
U6X7UC	129.9	127.3	128.6 L	128.3	128.5	-0.21	3.1	1.1	129.2	-0.18	3.0	1.0	12	LD
U6ZVZV	115.4	115.5 L	116.8	116.1 L	116.0	-2.02 *	2.0	0.6	124.3	-0.88	3.0	6.5	12	LZ
U7CVV4	130.5	131.7	130.7 L	131.5	131.1	0.16	2.9	0.6 L	131.8	0.19	2.3	1.1	12	LZ
UA9JCB	123.6	124.1	123.8	125.3	124.2	-0.83	3.1	0.8	125.1	-0.78	3.1	1.5	12	LD
VGAV89	128.1	124.9	125.9	124.3	125.8	-0.60	3.8	1.7	126.2	-0.62	3.9	1.6	8	LC
VJDQQB	135.6	134.1	NO DATA	125.5	131.7	0.25	4.3	5.5	128.7	-0.26	4.5	9.6 H	10	LZ
WG4228	128.7	127.4	136.7	130.0	130.7	0.10	5.1	4.2	133.5	0.43	5.0	4.1	12	LC
XVJJ92	136.3	143.8	132.8	133.0	136.5	0.93	5.0	5.2	129.1	-0.20	7.3	8.9 H	12	LA

Consensus (All Labs) Results

Wk Mean	129.47	129.65	131.61	130.93	Month Mean	129.99			Grand Mean	130.49	
Avg SDr	4.43	4.50	4.64	4.07	Avg SDr	4.40			Avg SDr	4.67	
SD btwn Labs	7.36	7.43	8.31	8.87	SD btwn Labs	6.95			SD btwn Labs	7.00	
Labs Incld	48	48	49	50	SD btwn Wks	3.29			SD btwn Wks	4.73	
Labs Excld	2	2	0	0	Labs Incld	48			Labs Incld	49	
Labs not rcvd	0	0	1	0							

Instrument Code List as Reported by the Labs

(EM) - Emerson 1200

(EN) - Emerson 2200

(EX) - Emerson (model not specified)

(LA) - L&W Autoline

(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

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

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

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

(WK) - Zwick Z005 Crush Tester

Report #556

Containerboard Interlaboratory Testing Program
Analysis 223
STFI, 42 lb Linerboard - 42D1
TAPPI Provisional Test Method T826

WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst
		Weekly Means				Monthly Results				Cumulative Results				
2RTHJV	20.6	23.6	23.5	23.9	22.9	0.57	1.7	1.5	23.2	1.10	1.9	0.9	16	LA
2TZXQ3	23.7	23.4	24.2	24.9	24.0	1.56	1.9	0.6	23.6	1.49	1.8	0.6	16	LY
3TJ4PR	No Data	21.2	22.6	21.0	21.6	-0.52	1.8	0.9	21.9	-0.30	1.9	0.5	15	LY
3XBB9Z	21.3	20.3	21.6	20.3	20.9	-1.15	1.5	0.7	21.1	-1.16	1.5	0.6	12	LW
47KZLY	22.4	22.4	21.1	21.4	21.8	-0.32	1.7	0.7	21.5	-0.74	1.8	0.6	16	LU
48FHMZ	24.6	13.8 X	23.1	22.8	21.1	-0.97	2.1	4.9 H	22.5	0.36	1.9	2.6 H	16	LA
4TD9JR	21.2	20.5	20.7	21.2	20.9	-1.12	1.8	0.4	20.7	-1.53	1.8	0.4	16	LW
64ACNK	21.9	21.8	22.2	22.0	22.0	-0.21	1.1	0.2 L	22.1	-0.13	1.0	0.2	16	TT
6XNJAZ	23.4	22.8	22.7	23.5	23.1	0.77	1.5	0.4	22.8	0.69	1.6	0.5	16	LU
6ZQHKT	24.7	24.3	23.8	23.5	24.1	1.61	2.1	0.5	23.4	1.25	1.9	0.9	16	LZ
7JLA7Q	24.0	22.1	21.9	24.5	23.1	0.80	2.2	1.3	23.0	0.82	1.6	0.8	16	LU
8XCUYJ	22.3 L	21.7 L	22.3 L	22.8 L	22.3	0.06	0.1	0.5	21.7	-0.47	0.1	0.9	15	LA
A2AUCL	21.0 L	20.1 L	19.7 L	21.5 L	20.6	-1.40	0.4	0.8	20.6	-1.70	0.4	0.6	16	LA
AG3PMR	23.6	22.9	23.9	23.5	23.5	1.07	1.0	0.4	23.0	0.86	1.0	0.6	16	LY
BULQHN	23.4	22.5	22.1	22.7	22.7	0.41	2.1	0.6	22.7	0.50	2.2	0.8	16	LA
BZAEDU	21.3	21.2	21.1	21.6	21.3	-0.77	1.9	0.2	21.5	-0.71	1.6	0.6	16	LA
DBJTBD	17.9 X	18.9 *	20.4	19.0 *	19.1	-2.68 *	1.7	1.0	22.3	0.10	1.9	2.8 H	11	TT
DTKG2C	42.6 X	43.9 X	42.4 X	40.4 X	42.3	17.28 X	2.8	1.5	42.3	21.07 X	2.8	1.5	4	LY
ELWC6T	23.1	21.5	22.8	21.5	22.2	0.00	1.7	0.8	22.1	-0.12	1.7	0.7	12	LW
FBTHNA	23.2	23.0	22.7	22.2	22.8	0.50	1.9	0.4	22.7	0.54	1.8	1.2	16	LZ
GHBADE	22.3	22.1	21.7	21.3	21.9	-0.30	1.7	0.4	21.6	-0.62	1.8	0.5	16	LU
GLU6G7	22.4	21.4	21.6	21.9	21.8	-0.32	1.5	0.4	21.8	-0.38	1.5	0.4	4	LY
GPTFC7	21.3	22.2	23.0	22.1	22.2	-0.04	1.6	0.7	22.8	0.60	1.4	0.7	16	LZ
HW8LLH	22.7	22.6	23.4	23.0	22.9	0.62	1.7	0.3	23.4	1.23	1.9	0.7	16	LZ
JMC7AJ	21.3	21.3	21.2	21.3	21.3	-0.78	1.9	0.1 L	20.7	-1.53	1.9	0.7	12	LY
KGKHRJ	22.4 L	23.0 L	20.2 L	21.8 L	21.9	-0.30	0.0	1.2	22.7	0.50	0.0	0.9	16	LA
KQA4XG	23.5	23.4	22.1	23.6	23.1	0.81	1.6	0.7	23.1	0.99	1.9	1.3	14	LU
KYNTXB	23.5 L	21.4 L	24.2 L	23.6 L	23.2	0.85	0.5	1.3	22.9	0.72	1.4	1.4	16	LA
M8TJEH	24.8	25.0 *	25.3 *	25.3 *	25.1	2.50 *	2.0	0.3	25.2	3.18 X	2.1	0.9	12	LA
MT84BJ	21.5	20.1	21.1	19.6	20.6	-1.40	1.8	0.9	21.0	-1.20	1.8	0.7	16	LW
NJF9N9	23.4	23.0	21.2	23.1	22.7	0.40	2.3	1.0	23.1	0.97	1.6	0.8	16	LU
NMH7Y2	22.6	22.5	22.3	22.3	22.4	0.17	1.0	0.2 L	22.5	0.36	0.9	0.2	16	TT
NU3A6H	21.6	22.9	23.0	23.8	22.8	0.56	1.9	0.9	22.5	0.33	2.2	0.8	12	LW
P4HFGC	24.1	22.3	22.9 L	23.9	23.3	0.94	1.7	0.9	22.3	0.17	0.9	1.0	16	LA
P9DAED	22.1	21.3	22.7	21.2	21.8	-0.33	1.7	0.7	21.5	-0.68	1.8	0.5	12	LW

Containerboard Interlaboratory Testing Program
Analysis 223
STFI, 42 lb Linerboard - 42D1
TAPPI Provisional Test Method T826

CTS

WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst
	Weekly Means				**Monthly Results**				**Cumulative Results**					
QVMZ6D	21.6	21.8 L	20.6 L	20.8 L	21.2	-0.86	0.7	0.6	20.7	-1.56	0.5	1.0	15	LW
RYLBZD	21.5 L	21.0 L	20.0 L	20.6 L	20.8	-1.24	0.5	0.6	20.1	-2.15 *	0.5	3.9 H	16	LW
T4QQM7	23.4	24.2	24.8	23.7	24.0	1.56	2.2	0.6	24.1	2.04 *	2.2	0.5	16	LW
TP7CJ8	21.0	21.1	20.5	20.9	20.9	-1.12	1.7	0.3	20.9	-1.38	1.9	0.5	16	LY
U6X7UC	22.1	20.6	21.2	21.0	21.2	-0.82	1.2	0.6	21.9	-0.34	1.4	0.6	16	BK
VGAV89	21.0 L	21.2 L	22.7 L	22.3 L	21.8	-0.36	0.4	0.8	22.1	-0.14	0.4	0.7	12	LA
VJDQQB	21.6	22.4	No Data	21.7	21.9	-0.23	1.7	0.4	21.5	-0.72	1.7	0.4	14	LZ
VV7A83	45.3 XL	46.2 XL	49.1 XL	47.2 XL	47.0	21.26 X	0.0	1.6	28.5	6.62 X	0.0	11.0 H	16	LU
WG4228	24.0	23.3	24.2	23.4	23.7	1.31	2.0	0.4	23.4	1.29	2.0	0.5	16	LW
WZFNPZ	23.1	23.3	22.7	23.4	23.1	0.77	1.5	0.3	22.9	0.73	1.4	0.6	16	XX
XRK8D2	21.6	23.9	22.7	21.6	22.4	0.21	2.1	1.1	23.1	0.92	2.3	1.0	12	LU
XVJJ92	20.2 L	21.5 L	21.8 L	21.6 L	21.3	-0.77	0.3	0.7	21.2	-1.02	0.4	1.6	14	LA

Consensus (All Labs) Results

	Week 1	Week 2	Week 3	Week 4						
Wk Mean	22.46	22.11	22.25	22.28	Month Mean	22.20		Grand Mean	22.19	
Avg SDr	1.76	1.56	1.72	1.51	Avg SDr	1.63		Avg SDr	1.60	
SD btwn Labs	1.19	1.26	1.32	1.38	SD btwn Labs	1.16		SD btwn Labs	0.96	
Labs Incld	43	44	44	45	SD btwn Wks	1.03		SD btwn Wks	1.11	
Labs Excld	3	3	2	2	Labs Incld	45		Labs Incld	44	
Labs not rcvd	1	0	1	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)

(LY) - L & W 152 without moisture correction

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

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

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

Containerboard Interlaboratory Testing Program
Analysis 224
STFI, 69 lb Linerboard - 69C2
TAPPI Provisional Test Method T826

WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst
2RTHJV	33.6	36.1	35.1	34.8	34.9	0.79	1.7	1.0	35.1	1.04	1.9	1.4	12	LA
2TZXQ3	33.6	34.5	34.0	34.6	34.2	0.44	1.7	0.5	34.0	0.45	1.7	0.5	12	LY
3TJ4PR	31.6	31.9	32.0	31.8	31.8	-0.73	1.6	0.2	31.7	-0.80	1.6	0.4	12	LY
3XBB9Z	30.8	31.0	31.3	30.3	30.9	-1.21	1.3	0.5	30.8	-1.24	1.3	0.6	12	LW
47KZLY	32.4	32.4	32.2	31.7	32.2	-0.54	1.7	0.3	31.3	-0.99	1.8	0.8	12	LU
48FHMZ	32.7	35.8	32.0	32.2	33.2	-0.05	1.9	1.8 H	34.2	0.53	1.8	1.3	12	LA
4TD9JR	32.3	31.7	31.5	32.3	32.0	-0.66	1.8	0.4	31.8	-0.72	1.6	0.8	12	LW
64ACNK	33.0	33.5	32.8	33.4	33.2	-0.05	1.1	0.3	33.1	-0.03	1.0	0.3	12	TT
6XNJAZ	35.5	34.9	34.5	34.7	34.9	0.80	1.7	0.4	34.8	0.86	1.9	0.4	12	LU
6ZQHKT	35.0	36.3	36.4	37.4	36.3	1.49	2.1	1.0	35.6	1.28	2.1	0.8	12	LZ
7JLA7Q	33.8	34.8	33.7	35.0	34.3	0.52	1.2	0.6	34.5	0.68	1.7	1.0	12	LU
8XCUYJ	33.1 L	34.3 L	34.8 L	34.8 L	34.3	0.49	0.1	0.8	34.8	0.86	0.1	1.0	12	LA
A2AUCL	30.7 L	30.0 L	30.2 L	31.1 L	30.5	-1.40	0.5	0.5	30.1	-1.63	0.5	0.8	12	LA
AG3PMR	39.0 *	39.4 *	37.9 *	38.5 *	38.7	2.70 X	1.4	0.6	36.9	2.00	1.3	1.5	12	LY
BULQHN	31.8	32.8	32.1	31.6	32.0	-0.62	1.7	0.5	32.0	-0.62	1.6	0.8	12	LA
BZAEDU	31.5	31.6	31.4	31.3	31.5	-0.91	1.7	0.1 L	31.4	-0.94	1.5	0.9	12	LA
DBJTBD	28.4 *	28.7 *	29.3	29.3	28.9	-2.18	* 1.6	0.5	31.4	-0.92	2.1	2.7 H	8	TT
DTKG2C	59.1 X	55.7 X	58.6 X	58.7 X	58.0	12.33 X	2.6	1.6	58.0	13.13 X	2.6	1.6	4	LY
ELWC6T	33.2	31.8	32.1	32.3	32.4	-0.46	1.5	0.6	31.7	-0.80	1.5	0.7	11	LW
FBTHNA	36.0	35.2	33.9	34.3	34.8	0.77	2.0	0.9	34.5	0.68	1.8	1.0	8	LZ
GHBADE	31.1	31.1	32.0	31.4	31.4	-0.94	1.6	0.4	31.1	-1.07	1.6	0.6	12	LU
GLU6G7	32.8	33.1	33.2	32.5	32.9	-0.18	1.5	0.3	32.9	-0.13	1.5	0.3	4	LY
GPTFC7	32.6	32.8	29.5	34.6	32.4	-0.45	2.0	2.1 H	33.9	0.39	1.8	2.2 H	12	LZ
HW8LLH	34.2	33.1	32.6	33.7	33.4	0.05	1.8	0.7	33.8	0.35	1.8	1.0	12	LZ
JMC7AJ	31.1	30.7	30.8	31.0	30.9	-1.19	2.0	0.2	30.1	-1.61	1.8	0.7	12	LY
KGKHRJ	36.8 L	35.1 L	35.4 L	35.7 L	35.7	1.22	0.0	0.7	35.4	1.17	0.0	0.7	12	LA
KQA4XG	35.4	37.7	34.1	34.0	35.3	1.00	1.7	1.7	35.0	0.97	1.7	1.3	12	LU
KYNTXB	33.5 L	36.2	33.0 L	33.7 L	34.1	0.41	0.6	1.4	34.1	0.48	0.8	1.0	8	LA
M8TJEH	36.6	36.4	36.5	36.1	36.4	1.55	1.6	0.2	37.4	2.21 *	1.9	0.9	12	LA
MT84BJ	32.3	32.2	32.3	31.0	31.9	-0.67	1.6	0.7	32.2	-0.52	1.6	0.9	12	LW
NJF9N9	36.1	34.8	36.5	35.4	35.7	1.21	1.5	0.8	35.6	1.29	1.5	0.7	12	LU
NMH7Y2	32.9	33.8	33.6 L	33.5	33.4	0.08	0.9	0.4	33.3	0.07	0.9	0.3	12	TT
NU3A6H	34.4	33.2	35.4	34.3	34.3	0.51	1.7	0.9	33.7	0.31	1.8	1.3	12	LW
P4HFGC	37.3	36.5	32.4 L	37.2	35.8	1.27	1.5	2.3 H	33.9	0.38	1.0	2.0 H	12	LA
P9DAED	30.9	30.7	31.3	30.6	30.9	-1.20	1.4	0.3	31.1	-1.10	1.4	0.4	12	LW

Containerboard Interlaboratory Testing Program
Analysis 224
STFI, 69 lb Linerboard - 69C2
TAPPI Provisional Test Method T826

WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst
QVMZ6D	32.9	32.0	33.2	34.0	33.0	-0.14	2.5	0.8	32.1	-0.57	2.0	1.8	12	LW
RYLBZD	32.6	32.5	30.5	31.2	31.7	-0.80	2.4	1.1	30.5	-1.41	1.9	3.2 H	12	LW
T4QQM7	36.1	35.2	35.0	36.3	35.7	1.19	2.6	0.6	35.3	1.15	2.5	0.8	12	LW
TP7CJ8	30.4	31.0	31.0	30.4	30.7	-1.29	1.5	0.3	30.7	-1.30	1.6	0.4	12	LY
U6X7UC	31.3	30.2	31.2	30.6	30.8	-1.23	1.4	0.6	31.4	-0.91	1.4	0.8	12	BK
VGAV89	31.8 L	31.5 L	33.2 L	32.3 L	32.2	-0.55	0.5	0.7	32.1	-0.55	0.5	0.6	8	LA
VJDQQB	30.7	32.8	No Data	31.2	31.6	-0.85	1.8	1.1	31.1	-1.06	1.5	0.8	10	LZ
VV7A83	55.0 XL	63.0 XL	61.4 XL	61.0 XL	60.1	13.37 X	0.0	3.5 H	41.5	4.43 X	0.0	13.8 H	12	LU
WG4228	33.8	34.1	34.0	34.3	34.1	0.38	1.4	0.2	33.5	0.15	1.7	0.8	12	LW
WZFNPZ	34.6	34.7	35.3	34.5	34.8	0.74	1.4	0.3	35.4	1.17	1.3	1.0	12	LU
XRK8D2	36.3	36.0 L	34.7	34.7	35.4	1.06	1.6	0.8	35.2	1.06	1.7	1.0	7	LU
XVJJ92	32.5 L	31.6 L	33.1 L	32.9 L	32.5	-0.38	0.4	0.6	32.0	-0.62	0.5	1.7	12	LA

Consensus (All Labs) Results

	Week 1	Week 2	Week 3	Week 4		Monthly			Cumulative
Wk Mean	33.31	33.45	33.12	33.29	Month Mean	33.28		Grand Mean	33.16
Avg SDr	1.52	1.56	1.68	1.63	Avg SDr	1.60		Avg SDr	1.58
SD btwn Labs	2.17	2.28	1.98	2.13	SD btwn Labs	2.01		SD btwn Labs	1.89
Labs Incld	45	45	44	45	SD btwn Wks	0.87		SD btwn Wks	1.17
Labs Excld	2	2	2	2	Labs Incld	45		Labs Incld	45
Labs not rcvd	0	0	1	0					

Instrument Code List as Reported by the Labs

(BK) - Buchel Strip Compression Tester BK-155
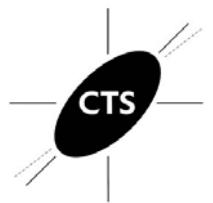
(LA) - L & W Autoline

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

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

(LY) - L & W 152 with moisture correction

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

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

Containerboard Interlaboratory Testing Program
Analysis 228
Roughness - Stylus Method, 69 lb Linerboard - 69C
TAPPI Provisional Test Method T575

WebCode	Monthly Results Mean	CPV	SDr	Cumulative Results Mean	CPV	SDr	Months	Inst
2RTHJV	116.4	-0.93	18.0	113.1	-1.20	12.5	4	LA
3TJ4PR	152.1	1.12	11.3	153.7	1.08	13.9	4	EV
47KZLY	137.0	0.25	8.4	141.1	0.37	11.6	4	EV
6ZQHKT	233.9	5.81 X	126.6	150.1	0.88	64.2	4	LA
7JLA7Q	153.6	1.20	16.8	143.8	0.52	13.3	4	EV
A2AUCL	114.3	-1.05	10.7	120.9	-0.76	10.4	4	EV
AG3PMR	96.3	-2.08 *	12.1	94.4	-2.24 *	10.1	4	EV
FBTHNA	145.0	0.71	8.5	152.2	1.00	14.5	4	LA
JMC7AJ	143.5	0.62	15.7	151.4	0.95	12.7	4	EV
KGKHRJ	120.2	-0.71	10.9	119.0	-0.87	11.9	4	LA
MT84BJ	130.4	-0.13	14.7	136.9	0.14	12.5	4	EV
NH9QQC	130.4	-0.13	17.9	133.9	-0.03	13.6	3	EV
NJF9N9	107.3	-1.45	12.5	105.2	-1.64	11.2	3	EV
NU3A6H	114.2	-1.06	10.4	123.4	-0.62	10.2	3	EV
P4HFGC	146.2	0.78	8.0	140.7	0.35	21.4	4	LA
P9DAED	147.7	0.86	11.3	146.4	0.67	14.5	3	EV
RYLBZD	140.0	0.42	10.0	139.8	0.30	14.0	4	EV
VGAV89	154.8	1.27	19.9	154.1	1.10	17.2	3	LA
XVJJ92	138.0	0.31	7.1	279.1	8.11 X	25.4	4	EV

Consensus (All Labs) Results

Month Mean	132.63		Grand Mean	134.44
Avg SDr	13.01		Avg SDr	20.03
SD btwn Labs	17.43		SD btwn Labs	17.85
Labs Incld	18		Labs Incld	18

Instrument Code List as Reported by the Labs

(EV) - Emveco Microgage Model 210-R   (LA) - L & W Autoline

Containerboard Interlaboratory Testing Program
Analysis 229
Roughness - Sheffield Method, 42 lb Linerboard - 42D2
TAPPI Provisional Test Method T538

CTS

WebCode	Monthly Results				Cumulative Results				
	Mean	CPV	SDr		Mean	CPV	SDr	Months	Inst
BULQHN	386.5	1.47	10.1		386.5	1.47	10.1	1	XX
FQ7QPD	359.4	-0.74	6.5		359.4	-0.74	6.5	1	XX
GHBADE	363.0	-0.45	5.1		363.0	-0.45	5.1	1	XX
KYNTXB	365.0	-0.28	7.5		365.0	-0.28	7.5	1	XX

Consensus (All Labs) Results

Month Mean	368.48		Grand Mean	368.48
Avg SDr	7.53		Avg SDr	7.53
SD btwn Labs	12.24		SD btwn Labs	12.24
Labs Incld	4		Labs Incld	4

Instrument Code List as Reported by the Labs

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

Containerboard Interlaboratory Testing Program
Analysis 231
Internal Bond, 36 lb Linerboard - 36Z
TAPPI Provisional Test Method T569

	Monthly Results			Cumulative Results				
WebCode	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
47KZLY	148.8	-0.98	4.1	148.4	-0.83	5.1	4	TM
4TD9JR	171.2	-0.04	9.1	168.4	0.27	6.5	4	TM
6ZQHKT	163.4	-0.37	8.7	159.1	-0.24	15.0	2	TM
7JLA7Q	140.4	-1.33	7.0	135.7	-1.52	7.8	4	TM
BULQHN	81.8	-3.77 X	2.3	72.9	-4.98 X	2.2	4	LZ
BZAEDU	200.0	1.16	4.2	195.0	1.74	7.4	4	HY
ELWD8E	157.6	-0.61	6.5	159.8	-0.20	5.3	4	TM
GHBADE	182.0	0.41	4.7	176.5	0.72	3.9	4	HY
GLBHHN	175.0	0.11	6.9	161.1	-0.13	7.3	4	SC
KYNTXB	147.6	-1.03	5.3	144.8	-1.02	5.2	4	SC
NJF9N9	154.2	-0.75	12.9	149.1	-0.79	9.3	4	TM
P9DAED	196.6	1.02	17.1	196.2	1.81	12.1	3	HY
RYLBZD	226.0	2.24 *	19.8	232.0	3.78 X	14.0	4	SC
VGAV89	187.0	0.62	50.4	172.1	0.48	30.5	3	HY
XVJJ92	161.6	-0.44	2.7	157.8	-0.31	4.7	4	TM

Consensus (All Labs) Results

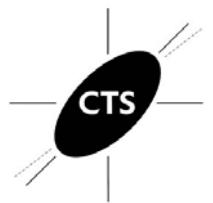|				
Month Mean	172.25		Grand Mean	163.37
Avg SDr	16.45		Avg SDr	11.51
SD btwn Labs	23.98		SD btwn Labs	18.16
Labs Incld	14		Labs Incld	13

Instrument Code List as Reported by the Labs

(HY) - Huygen Digitized Scott Internal Bond Tester

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

(SC) - Scott Internal Bond Tester (Manual)

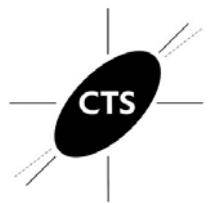(TM) - TMI Monitor/Internal Bond Tester

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
47KZLY	30.4	1.54	1.8		29.1	0.72	1.6	4
4TD9JR	23.5	-1.37	2.4		23.8	-1.35	2.6	4
6ZQHKT	26.4	-0.14	4.2		25.4	-0.71	2.7	4
7JLA7Q	27.8	0.45	1.0		29.0	0.69	1.1	4
BULQHN	34.8	3.39 X	1.3		31.4	1.61	1.1	4
CQ3Y8L	27.8	0.45	2.9		28.8	0.62	3.3	3
GHBADE	23.4	-1.41	1.5		23.6	-1.41	1.4	4
GPTFC7	22.2	-1.91	1.5		22.6	-1.79	1.6	4
JGNHED	27.2	0.19	3.0		29.1	0.72	4.0	4
JMC7AJ	25.8	-0.38	2.0		23.7	-1.39	1.6	4
KYNTXB	30.2	1.46	1.3		29.9	1.03	1.1	4
NJF9N9	26.6	-0.06	1.9		28.9	0.66	1.4	4
NU3A6H	26.6	-0.06	2.4		25.7	-0.61	2.1	3
P9DAED	23.8	-1.24	1.1		24.9	-0.92	1.0	3
RYLBZD	29.4	1.12	3.2		27.2	-0.01	2.6	4
VGAV89	27.3	0.25	1.8		27.5	0.13	1.8	3
WG4228	28.8	0.87	4.5		26.8	-0.16	3.7	4
WZFNPZ	28.6	0.78	1.1		28.9	0.64	1.0	4
XRK8D2	27.8	0.45	1.9		27.7	0.19	2.3	2
XVJJ92	24.4	-0.99	2.6		30.7	1.36	2.3	4

Consensus (All Labs) Results

Month Mean	26.74		Grand Mean	27.22
Avg SDr	2.42		Avg SDr	2.20
SD btwn Labs	2.38		SD btwn Labs	2.56
Labs Incld	19		Labs Incld	20

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

CTS

	Monthly Results				Cumulative Results				
WebCode	Mean	CPV	SDr		Mean	CPV	SDr	Months	Inst
3TJ4PR	51.8	0.23	1.5		52.1	0.20	2.1	4	LP
4TD9JR	50.5	-0.42	3.7		51.5	-0.17	3.4	4	HG
6ZQHKT	44.1	-3.81 X	4.4		48.7	-1.88	3.9	4	XX
7JLA7Q	47.0	-2.28 *	4.0		45.9	-3.52 X	2.7	4	XX
BULQHN	52.9	0.86	0.9		52.9	0.68	1.5	4	LA
GHBADE	51.4	0.06	2.0		52.3	0.28	2.4	4	TP
GLBHHN	51.6	0.15	2.4		51.4	-0.24	1.7	4	LP
JGNHED	52.3	0.53	3.0		55.3	2.09 *	2.5	4	GA
KGKHRJ	54.7	1.81	2.7		54.4	1.56	2.7	4	TL
NJF9N9	50.5	-0.46	2.1		51.9	0.07	2.2	4	LA
P4HFGC	51.0	-0.15	1.1		50.9	-0.52	1.9	4	LA
P9DAED	53.5	1.13	1.8		53.0	0.72	1.6	4	LP
QDLQN2	48.7	-1.39	2.2		50.2	-0.98	2.9	4	GG
RYLBZD	50.2	-0.59	1.6		51.2	-0.40	2.7	4	HG
T6LAN9	53.0	0.90	2.4		52.2	0.25	1.7	4	XX
U7CVV4	52.2	0.46	1.1		52.8	0.59	1.0	3	XX
VGAV89	48.7	-1.37	1.7		48.7	-1.89	1.8	3	LA
WG4228	52.7	0.74	1.9		51.4	-0.23	1.7	4	LP
WZFNPZ	42.3	-4.75 X	1.4		41.4	-6.26 X	1.8	4	XX
XVJJ92	51.0	-0.19	1.3		51.6	-0.13	1.7	4	LP

Consensus (All Labs) Results

Month Mean	51.32		Grand Mean	51.81
Avg SDr	2.25		Avg SDr	2.30
SD btwn Labs	1.89		SD btwn Labs	1.66
Labs Incld	18		Labs Incld	18

Instrument Code List as Reported by the Labs

(GA) - Gurley Precision #4340 Automatic Densometer

(GG) - Gurley Precision #4320 Densometer

(HG) - Technidyne - Hagerty Model #1 and Profile System

(LA) - L & W Autoline

(LP) - L & W Air Permeance Tester SE 166

(TL) - Teledyne Gurley Densometer #4110, Oil Flotation

(TP) - Technidyne Profile/ plus Roughness & Porosity

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

Containerboard Interlaboratory Testing Program
Analysis 240
Flat Crush Strength (CMT), 26 lb Corrugating Medium - CM81
TAPPI Official Test Method T809

WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst
		Weekly Means				Monthly Results				Cumulative Results				
2TZXQ3	60.5	58.0	57.7	58.2	58.6	-0.29	1.9	1.3	59.0	0.13	2.3	1.0	16	LD
3TJ4PR	57.7	56.8	58.1	58.3	57.7	-0.63	2.4	0.7	58.4	-0.16	2.6	0.9	16	LZ
47KZLY	60.3	59.1	59.0 L	58.7	59.3	-0.03	2.8	0.7	57.1	-0.74	2.6	1.7	16	LD
4AMXWR	62.2	61.3 L	63.8	63.0 L	62.6	1.22	1.4	1.0	62.8	1.90	1.4	0.9	12	TD
64ACNK	61.7	57.6	58.0	57.9	58.8	-0.20	1.8	1.9	59.8	0.50	2.7	1.8	16	TH
6XNJAZ	64.3	63.9 L	66.1 *L	65.3 *	64.9	2.10 *	1.8	1.0	61.4	1.25	1.7	2.3	16	LD
7JLA7Q	61.7	56.0	54.9 H	54.5 H	56.8	-0.97	4.0	3.3 H	56.8	-0.89	4.0	3.3	4	XX
8XCUYJ	58.1	57.2	54.0	59.3	57.1	-0.84	2.4	2.3	54.9	-1.74	2.4	7.5 H	15	MB
9PY6YQ	64.3	62.7	64.8	62.9	63.7	1.64	2.6	1.1	61.6	1.33	2.7	3.2	12	LC
AEVAFL	59.9	59.7 H	59.9	59.8	59.8	0.18	3.1	0.1 L	59.9	0.55	2.5	0.7	16	LD
AZF9JV	58.2	57.4	58.5	57.5	57.9	-0.56	2.4	0.6	57.5	-0.58	2.3	0.9	16	LD
B8ATZG	61.3	61.7	61.0	60.6	61.2	0.69	2.8	0.5	61.2	1.15	2.3	0.7	15	LZ
BULQHN	55.1	60.6	56.3	55.9	57.0	-0.91	3.0	2.5	55.5	-1.50	2.3	1.9	16	LD
BZAEDU	54.8	55.5	53.1	53.4	54.2	-1.95	2.7	1.1	57.1	-0.75	2.4	2.5	16	LC
DUFY4D	57.8	58.2	57.2	58.4	57.9	-0.56	2.5	0.5	57.4	-0.59	2.5	0.9	16	LD
ELWC6T	59.7	60.7	60.6	57.3	59.6	0.08	1.6	1.6	61.1	1.08	1.9	2.0	12	LC
FBTHNA	58.4	56.2	58.3	58.9	57.9	-0.54	2.0	1.2	57.6	-0.51	2.5	1.4	14	LD
GHBADE	60.0	60.5	58.4	61.2	60.0	0.25	3.1	1.2	59.3	0.28	3.0	1.6	16	LC
GLU6G7	58.3	59.3	58.4 L	58.2	58.6	-0.30	2.1	0.5	58.6	-0.07	2.1	0.5	4	LC
GPTFC7	54.1 *	54.0 *	54.0	51.8 *	53.5	-2.23 *	2.8	1.1	54.7	-1.86	2.9	1.7	16	EM
HW8LLH	58.5	57.7	57.6	57.5	57.8	-0.58	3.1	0.5	57.1	-0.76	3.0	0.9	12	LD
KD982A	61.2	60.1	59.8	61.7	60.7	0.50	2.2	0.9	57.8	-0.41	2.5	2.5	16	LC
KR6LYH	57.0	57.1	58.8	58.5	57.8	-0.58	1.9	0.9	57.1	-0.73	2.1	1.0	12	EM
M8TJEH	56.1	55.9	56.1	54.9	55.7	-1.37	3.2	0.6	55.8	-1.33	3.0	1.3	12	LD
MGEMLH	61.6	62.0	60.4	60.2	61.1	0.64	2.7	0.9	61.2	1.14	2.7	1.1	16	EM
NJF9N9	60.2	60.0	62.4	57.7 H	60.1	0.27	4.0	1.9	61.1	1.11	3.5	3.2	16	LC
NMH7Y2	60.1	61.1 H	63.3	61.9 H	61.6	0.84	4.0	1.3	60.8	0.98	4.0	1.3	16	TG
P9DAED	59.1	60.4	61.0	61.5	60.5	0.42	2.6	1.0	60.1	0.65	3.0	1.5	16	LD
PBJRCA	62.0	62.3	61.7	61.9	62.0	0.99	2.6	0.2 L	61.2	1.16	2.6	1.0	16	LD
PY93YD	58.6	59.2	58.9	58.0	58.7	-0.26	2.5	0.5	58.5	-0.12	2.4	0.8	16	LC
R9QHHY	59.4	60.0	59.4	59.4	59.5	0.07	2.2	0.3	58.5	-0.08	2.1	1.4	16	TU
T4QQM7	53.8 *H	52.2 X	55.4 H	53.6	53.7	-2.12 *	4.5	1.3	55.5	-1.46	3.8	1.9	15	LC
T6LAN9	59.4	60.0	60.1	60.3	59.9	0.22	2.4	0.4	59.8	0.50	2.2	0.7	16	LD
TECVU7	59.1	59.4	58.4	58.4	58.8	-0.19	2.0	0.5	58.5	-0.08	2.2	0.9	16	LD
U6ZVZV	64.0	62.6	66.7 *	68.1 X	65.4	2.27 *	2.7	2.5	67.9	4.26 X	3.0	2.2	16	XX
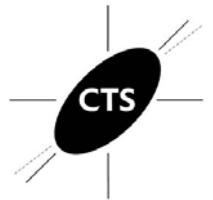
Containerboard Interlaboratory Testing Program
Analysis 240
Flat Crush Strength (CMT), 26 lb Corrugating Medium - CM81
TAPPI Official Test Method T809

CTS

	Weekly Means				Monthly Results				Cumulative Results					
WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst
VJDQQB	65.3 *	61.2	NO DATA	58.1	61.5	0.83	2.4	3.6 H	58.5	-0.09	2.8	3.5	11	LZ
VVVBB8	59.1	58.5	58.3	57.8	58.4	-0.35	2.2	0.5	58.6	-0.07	2.4	0.8	16	LD
WG4228	59.3	60.6	63.1	64.5	61.9	0.96	2.7	2.3	60.0	0.61	2.3	2.3	16	LC
WG8KQV	60.1	61.7	60.7	60.5	60.8	0.53	1.6	0.7	60.9	0.99	1.8	0.8	16	LC
XRK8D2	62.6	57.0	57.3	57.7	58.7	-0.27	1.8	2.6	54.4	-1.97	1.8	11.9 H	16	LZ
YBQYVU	62.7	62.5	61.2	61.8	62.1	1.02	2.5	0.7	61.2	1.14	2.4	0.9	16	TM

Consensus (All Labs) Results

Wk Mean	59.69	59.39	59.31	58.92	Month Mean		59.35	Grand Mean		58.71	
Avg SDr	2.68	2.52	2.59	2.77	Avg SDr		2.65	Avg SDr		2.61	
SD btwn Labs	2.70	2.33	3.14	2.90	SD btwn Labs		2.64	SD btwn Labs		2.17	
Labs Incld	41	40	40	40	SD btwn Wks		1.45	SD btwn Wks		2.79	
Labs Excld	0	1	0	1	Labs Incld		41	Labs Incld		40	
Labs not rcvd	0	0	1	0							

Instrument Code List as Reported by the Labs

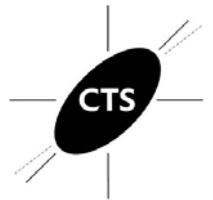|	
(EM) - Emerson 1200 Series	(LC) - L & W Crush Tester 48
(LD) - L&W Crush Tester 248	(LZ) - L & W Crush Tester (model not specified)
(MB) - Messmer Buchel K440	(TD) - TMI Digital Crush Tester, Model 17-09
(TG) - TMI Compression Tester, Model 17-10	(TH) - TMI Compression Tester, Model 17-76
(TM) - TMI/Hinde & Dauch	(TU) - TMI Universal Crush Tester (TMI K440)
(XX) - Instrument make/model not specified by lab	

Containerboard Interlaboratory Testing Program
Analysis 250
Fluted Edge Crush Strength (CFC), 26 lb Corrugating Medium - CM81
TAPPI Official Method T824

CTS

WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst
4AMXWR	71.2	72.2 L	70.7	72.9	71.7	1.13	1.2	1.0	70.5	0.84	1.2	1.3	12	TD
6XNJAZ	61.3	61.4	62.3	61.8	61.7	-1.86	1.8	0.5	63.0	-1.53	2.0	2.0	16	LD
BULQHN	69.3 H	67.3	68.5	68.1	68.3	0.10	2.5	0.8	68.7	0.30	1.8	1.3	16	LD
ELWC6T	63.3	65.0	65.3	62.2	63.9	-1.19	1.9	1.5	65.4	-0.76	2.2	2.0	12	LC
GHBADE	70.1	71.4	71.2	72.1	71.2	0.96	2.4	0.8	70.9	0.98	2.0	1.6	16	LC
PBJRCA	69.2	70.4	70.1	68.9	69.6	0.50	2.0	0.7	69.6	0.58	2.0	0.7	4	LD
T6LAN9	70.4	68.9	70.8	69.9	70.0	0.62	1.8	0.8	70.0	0.70	1.8	0.8	4	XX
TECVU7	65.6	65.9	66.0	66.9	66.1	-0.55	1.7	0.6	62.7	-1.62	2.2	3.3 H	16	LD
U7CVV4	70.8 L	71.6	72.7	71.8 L	71.7	1.12	1.2	0.8	71.6	1.20	1.5	0.6	12	XX
VJDQQB	68.5	64.4 H	NO DATA	71.1	68.0	0.02	3.6	3.4 H	67.8	-0.01	3.8	2.5	11	LZ
WG4228	62.3	68.0	63.9	66.2	65.1	-0.85	1.8	2.5	65.7	-0.68	2.0	2.7	16	XX

Consensus (All Labs) Results

	Week 1	Week 2	Week 3	Week 4						
Wk Mean	67.45	67.85	68.15	68.34	Month Mean	67.94		Grand Mean	67.81	
Avg SDr	2.17	2.46	1.80	1.65	Avg SDr	2.10		Avg SDr	2.14	
SD btwn Labs	3.65	3.44	3.52	3.81	SD btwn Labs	3.36		SD btwn Labs	3.16	
Labs Incld	11	11	10	11	SD btwn Wks	1.49		SD btwn Wks	1.89	
Labs Excld	0	0	0	0	Labs Incld	11		Labs Incld	11	
Labs not rcvd	0	0	1	0						

Instrument Code List as Reported by the Labs

(LC) - L & W Crush Tester 48   (LD) - L&W Crush Tester 248

(LZ) - L & W Crush Tester (model not specified)   (TD) - TMI Digital Crush Tester, Model 17-09

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

Report #556

Containerboard Interlaboratory Testing Program
Analysis 255
Ring Crush (RCT), 26 lb Corrugating Medium - CM81
TAPPI Official Test Method T822

CTS

WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst
			Weekly Means			Monthly Results				Cumulative Results				
794TDK	37.8	38.0	40.6 H	40.3 H	39.2	0.32	3.2	1.5	36.6	-0.69	2.8	2.9 H	16	LZ
9PY6YQ	28.1 X	28.8 X	27.0 X	27.6 X	27.9	-5.71 X	2.7	0.8	27.9	-6.20 X	2.7	0.8	4	XX
AEVAFL	37.4	37.2	37.1	37.2	37.3	-0.70	2.9	0.1 L	37.6	-0.08	2.1	0.5	16	LD
AZF9JV	42.0	40.0 L	42.0	42.9	41.7	1.68	2.0	1.2	40.0	1.42	2.0	1.5	16	LZ
BULQHN	37.8	40.3	39.0	39.3	39.1	0.29	2.0	1.0	38.9	0.73	1.7	1.1	16	LD
BYXFJK	39.9	40.0	40.5	40.3	40.1	0.84	2.5	0.3	38.5	0.49	2.3	2.0	16	TH
CFJHEE	35.6	35.9	36.1 L	35.5 L	35.8	-1.49	1.0	0.3	36.0	-1.07	0.9	0.7	12	WK
DUFY4D	41.0	40.5	41.5	41.2	41.0	1.32	2.2	0.4	38.5	0.49	1.8	1.6	16	LD
FBTHNA	42.1	41.3	40.8	41.1	41.3	1.47	2.1	0.6	39.9	1.37	1.9	1.4	14	LD
GHBADE	39.7	36.6	40.4	38.3	38.8	0.10	1.9	1.7	37.7	0.01	1.9	2.2	16	LC
GLU6G7	39.9	40.3	39.3	39.5	39.8	0.64	2.1	0.4	39.8	1.29	2.1	0.4	4	WK
GPTFC7	36.1	34.2	38.1	40.6	37.3	-0.70	2.3	2.7 H	36.7	-0.68	1.8	1.5	16	LC
KD982A	36.2	35.6	37.1	35.8	36.2	-1.29	1.4	0.7	35.5	-1.39	1.6	1.3	16	LC
KR6LYH	38.3	39.9	38.6	38.9	38.9	0.20	1.4	0.7	38.2	0.32	1.6	0.9	12	LC
PBJRCA	39.6	40.1	40.0	40.1	39.9	0.73	2.1	0.2 L	39.5	1.09	1.9	0.5	16	LD
T6LAN9	36.1	37.5	39.5	37.9	37.8	-0.44	2.3	1.4	36.6	-0.74	2.0	1.1	16	LD
WG4228	36.2	37.3	37.6	37.7	37.2	-0.73	2.5	0.7	34.5	-2.02 *	2.2	2.1	16	LC
WG8KQV	38.1	36.6	37.1	36.7 L	37.1	-0.77	1.8	0.7	38.0	0.17	1.4	1.2	16	LC
YBQYVU	32.6 *	33.5	38.7	38.4	35.8	-1.47	2.3	3.2 H	36.6	-0.71	3.1	2.5 H	16	LD

Consensus (All Labs) Results

	Week 1	Week 2	Week 3	Week 4					
Wk Mean	38.14	38.06	39.10	38.98	Month Mean	38.57	Grand Mean	37.73	
Avg SDr	2.04	2.18	2.26	2.20	Avg SDr	2.17	Avg SDr	2.02	
SD btwn Labs	2.47	2.35	1.68	1.97	SD btwn Labs	1.87	SD btwn Labs	1.59	
Labs Incld	18	18	18	18	SD btwn Wks	1.29	SD btwn Wks	1.57	
Labs Excld	1	1	1	1	Labs Incld	18	Labs Incld	18	
Labs not rcvd	0	0	0	0					

Instrument Code List as Reported by the Labs

(LC) - L & W Crush Tester 48
(LD) - L&W Crush Tester 248
(LZ) - L & W Crush Tester (model not specified)
(TH) - TMI Compression Tester, Model 17-76
(WK) - Zwick Z005 Crush Tester
(XX) - Instrument make/model not specified by lab

Containerboard Interlaboratory Testing Program
Analysis 261
STFI, 26 lb Corrugating Medium - CM81
TAPPI Provisional Test Method T826

CTS
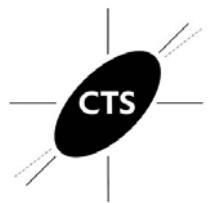
WebCode	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst
	Weekly Means				**Monthly Results**				**Cumulative Results**					
3TJ4PR	12.6	12.7	12.4	12.3	12.5	-0.47	0.8	0.2	12.3	-0.79	0.8	0.3	16	LB
47KZLY	12.5	12.4	12.5	12.5	12.5	-0.53	0.9	0.1 L	12.5	-0.44	0.9	0.1 L	4	XX
48FHMZ	13.8	22.2 X	13.1	13.0	15.5	3.36 X	0.8	4.5 H	13.6	1.58	0.9	2.8 H	12	LA
64ACNK	13.8	13.8	13.4	13.5	13.6	0.94	0.7	0.2	12.5	-0.28	0.7	0.7	16	TT
794TDK	13.0	14.6	14.6	14.1	14.1	1.50	0.8	0.7 H	12.7	0.03	0.8	1.1	16	LA
8XCUYJ	12.6 L	12.0 L	13.1 L	12.0 L	12.4	-0.58	0.0	0.5	13.6	1.67	0.0	4.4 H	15	LA
B8ATZG	12.3	12.3	12.4	12.4	12.3	-0.71	0.7	0.1	12.1	-1.04	0.7	0.4	15	LW
BULQHN	12.7	12.7 L	12.7	12.3 L	12.6	-0.36	0.6	0.2	12.5	-0.43	0.6	0.6	16	LA
DBJTBD	23.7 X	21.3 X	21.2 X	21.3 X	21.9	11.31 X	1.1	1.2 H	16.0	6.00 X	0.9	4.4 H	12	TT
DUFY4D	13.8	13.4	13.0	13.6	13.5	0.75	0.7	0.3	12.3	-0.75	0.7	0.8	16	LA
FBTHNA	14.3	13.7	13.8	13.6	13.8	1.21	0.8	0.3	13.0	0.49	0.7	0.7	15	LZ
GHBADE	12.0	12.3	12.7	12.5	12.4	-0.64	0.7	0.3	12.2	-0.96	0.8	0.3	16	LU
GLU6G7	12.6	12.9	12.8	12.8	12.8	-0.13	0.7	0.2	12.8	0.15	0.7	0.2 L	4	LB
GPTFC7	12.3	12.0	12.0	12.0	12.1	-1.01	0.8	0.2	12.3	-0.64	0.6	0.5	16	LZ
KR6LYH	12.6	12.2	12.1	12.1	12.3	-0.78	0.6	0.2	11.8	-1.61	0.7	0.4	12	LB
PKADH8	23.9 XL	24.0 XL	24.6 XL	24.2 XL	24.2	14.19 X	0.0	0.3	21.0	15.05 X	0.0	4.6 H	16	TS
PY93YD	12.7	12.5	12.7	12.7	12.6	-0.29	0.7	0.1	12.8	0.13	0.8	0.2 L	16	LB
T4QQM7	13.9	14.2	14.3	14.1	14.1	1.55	0.9	0.2	13.0	0.49	0.8	1.0	15	LW
TECVU7	12.9	12.4 L	12.5	12.6	12.6	-0.35	0.7	0.2	13.7	1.85	0.7	1.0	16	LA
VVVBB8	12.7	12.6	12.8	12.7	12.7	-0.21	0.9	0.1	12.8	0.20	0.8	0.1 L	16	LB
WG8KQV	13.1	13.6	13.8	13.1	13.4	0.67	0.6	0.3	13.5	1.42	0.7	0.7	16	XX
XRK8D2	11.1 *	11.4	11.6	10.6 *	11.2	-2.15 *	0.6	0.4	11.9	-1.39	0.5	2.2 H	16	LU
YBQYVU	14.3	13.8	14.4	14.1	14.2	1.60	1.1	0.3	12.9	0.33	0.9	1.0	16	LA

Consensus (All Labs) Results

	Week 1	Week 2	Week 3	Week 4		Monthly		Cumulative	
Wk Mean	12.92	12.87	12.98	12.79	Month Mean	12.88	Grand Mean	12.69	
Avg SDr	0.72	0.74	0.77	0.75	Avg SDr	0.75	Avg SDr	0.73	
SD btwn Labs	0.80	0.85	0.81	0.85	SD btwn Labs	0.80	SD btwn Labs	0.55	
Labs Incld	21	20	21	21	SD btwn Wks	0.30	SD btwn Wks	1.38	
Labs Excld	2	3	2	2	Labs Incld	20	Labs Incld	21	
Labs not rcvd	0	0	0	0					

Containerboard Interlaboratory Testing Program
Analysis 261
STFI, 26 lb Corrugating Medium - CM81
TAPPI Provisional Test Method T826

Instrument Code List as Reported by the Labs

(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)

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

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

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