	<b>Requested By:</b>	NA
	<b>Customer:</b>	Avocado
	<b>Project No.:</b>	418-04
	<b>No. of Samples Submitted:</b>	1
	<b>Unit Nos.:</b>	N/A
	<b>Unit Size(s):</b>	Queen
	<b>LL Test Technician(s):</b>	DB / CL
	<b>LL Manager:</b>	Kyle Lisenbee
	<b>Test Start Date:</b>	04/25/18
<b>Test Completion Date:</b>	09/14/18	

<b>Tests to be Performed:</b>		<b>PRESSURE DISTRIBUTION TEST</b>
<b>ASTM F1566 SECTION 9 - CORNELL</b> <b>ASTM F1566 SECTION 7 - ROLLATOR</b> • <b>INCREMENTAL FIRMNESS RETENTION</b> • <b>INCREMENTAL HEIGHT RETENTION</b>		
<b>BOUNCE TEST</b> <b>SWAY TEST</b>		
<b>Pre-Test Conditioning (24 hrs):</b>		
Ambient Temp:	76.5 °F	<b>Product Test Condition:</b>
Ambient Humidity:	55 %	Ambient Temp:
		Ambient Humidity:
		76.5 °F
		55 %

Test Sample(s)	Unit Number	Sample Description
	N/A	Gwen Mattress

Condition of Unit(s) Received
The Avocado "Gwen" mattress was unpackaged and allowed to recover/acclimate for 48 hours prior to being subjected to the requested testing. No deformities or imperfections were observed prior to testing.

Test Results
<p><b>(1) ASTM F1566 SECTION 9 - CORNELL / COMPLETED</b></p> <ul style="list-style-type: none"> <li>The total accumulated dimple recorded was 0.60" (refer to page 2 for data).</li> <li>The support firmness exhibited an increase of 8.70% (refer to page 2 for data).</li> </ul>
<p><b>(2) ASTM F1566 SECTION 7 - ROLLATOR / COMPLETED</b></p> <ul style="list-style-type: none"> <li>No notable observations or damage were observed during the Rollator test.</li> <li>The total firmness loss recorded was -4.47% (refer to page 3 for data).</li> <li>The total height loss recorded was approximately -0.158" or -1.144% (refer to page 3 for data).</li> </ul>
<p><b>(5) BOUNCE TEST / COMPLETED</b></p> <ul style="list-style-type: none"> <li>Refer to page 4 for data.</li> </ul>
<p><b>(6) SWAY TEST / COMPLETED</b></p> <ul style="list-style-type: none"> <li>Refer to page 4 for data.</li> </ul>
<p><b>(7) PRESSURE DISTRIBUTION TEST / COMPLETED</b></p> <ul style="list-style-type: none"> <li>Refer to page 5 for data.</li> </ul>

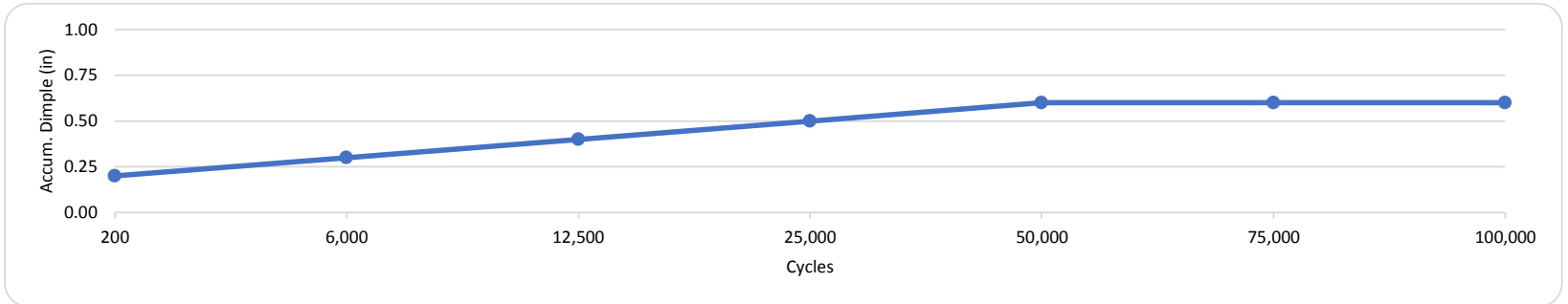


### ACCUMULATED DIMPLE

Accumulated dimple is the result of applied force to the surface of the mattress set. It is measured by the depth of compacting, or dimpling, after repeated strokes of the plunger and ram head.

- Desirable: 1.75" Maximum Cumulated Dimple

CYCLES	200	6,000	12,500	25,000	50,000	75,000	100,000
Accumulated Dimple (in):	0.20	0.30	0.40	0.50	0.60	0.60	0.60

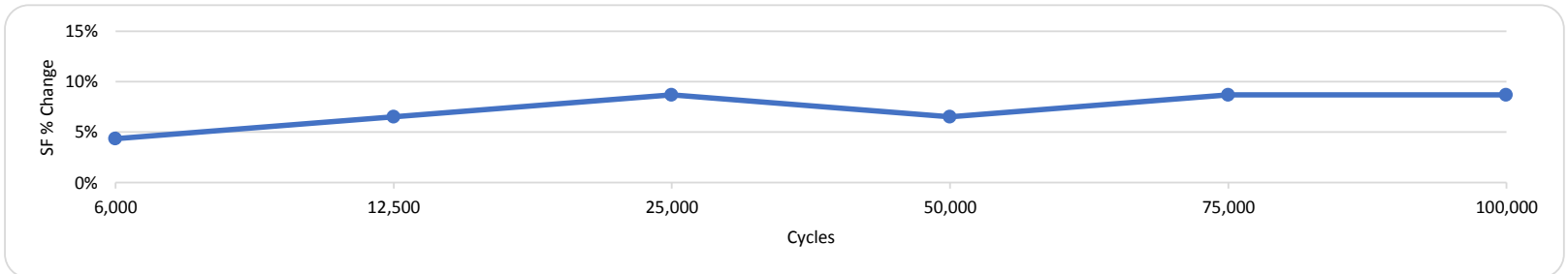


### SUPPORT FIRMNESS

Support firmness relates to the ability of a mattress to resist indentation when weight is applied. The values derived from this procedure are expressed in pounds and provide a means of comparing a characteristic that relates to firmness.

- Desirable: Upper Range = +40% (Firmness Increase) | Lower Range = -15% (Softening)

CYCLES	6,000	12,500	25,000	50,000	75,000	100,000
Support Firmness Change:	4.35%	6.52%	8.70%	6.52%	8.70%	8.70%



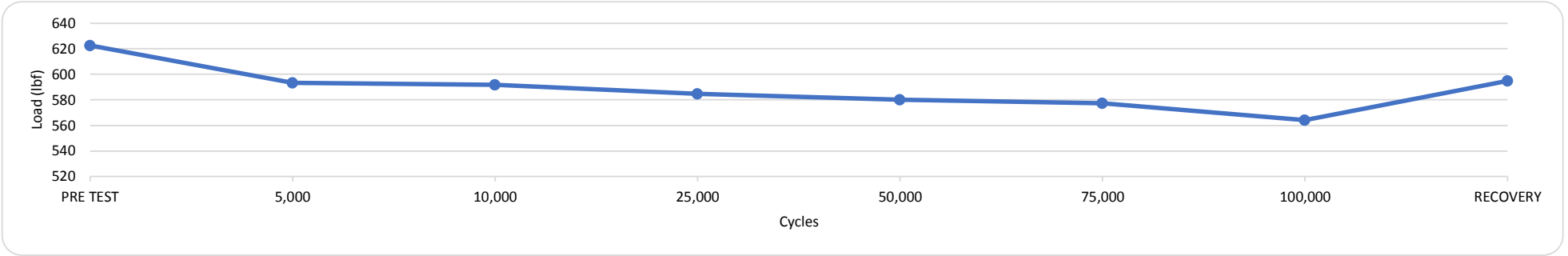
ASTM F1566 SECTION 7 - ROLLATOR  
 INCREMENTAL FIRMNESS RETENTION ANALYSIS  
 INCREMENTAL HEIGHT RETENTION ANALYSIS

INCREMENTAL FIRMNESS PERFORMANCE (LEGGETT LABS METHOD)

CYCLES	PRE TEST	5,000	10,000	25,000	50,000	75,000	100,000	RECOVERY
ILD Data:	622.66	593.39	591.89	584.69	580.25	577.41	564.18	594.83
% Change:	-	-4.70%	-4.94%	-6.10%	-6.81%	-7.27%	-9.39%	-4.47%

NOTES:

- Leggett Labs Method = Sum of 1/2" increments to 4"
- Desirable: +10% to -15%



FIRMNESS COMPARISON (ASTM METHOD)

PRE TEST	POST TEST	% Change
42.360	40.230	-5.03%

NOTES:

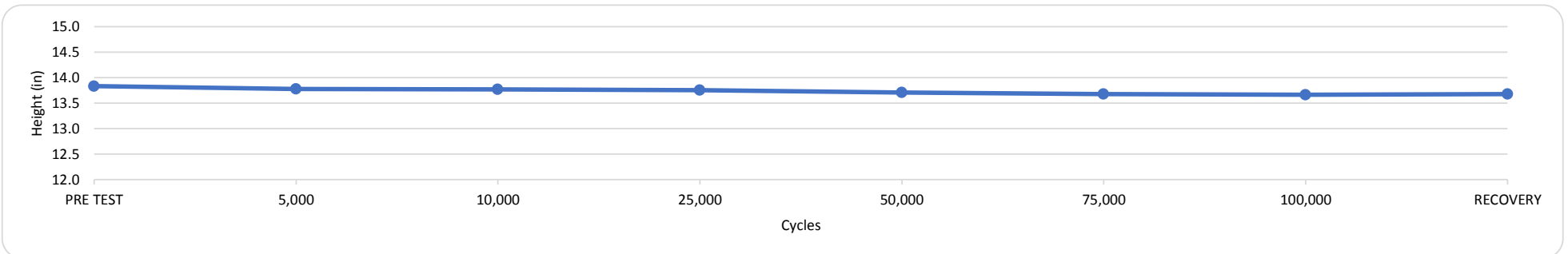
- ASTM Method: 175 lbs. divided by deflection required to achieve 175 lbs.

INCREMENTAL HEIGHT CHANGE

CYCLES	PRE TEST	5,000	10,000	25,000	50,000	75,000	100,000	RECOVERY
Height (in):	13.834	13.775	13.771	13.751	13.708	13.681	13.664	13.675
Height Loss (in):	-	-0.059	-0.063	-0.083	-0.125	-0.153	-0.169	-0.158
% Change:	-	-0.426%	-0.452%	-0.599%	-0.904%	-1.104%	-1.224%	-1.144%

NOTES:

- Desirable: < -1" and/or -10% Body Impression



### BOUNCE ANALYSIS

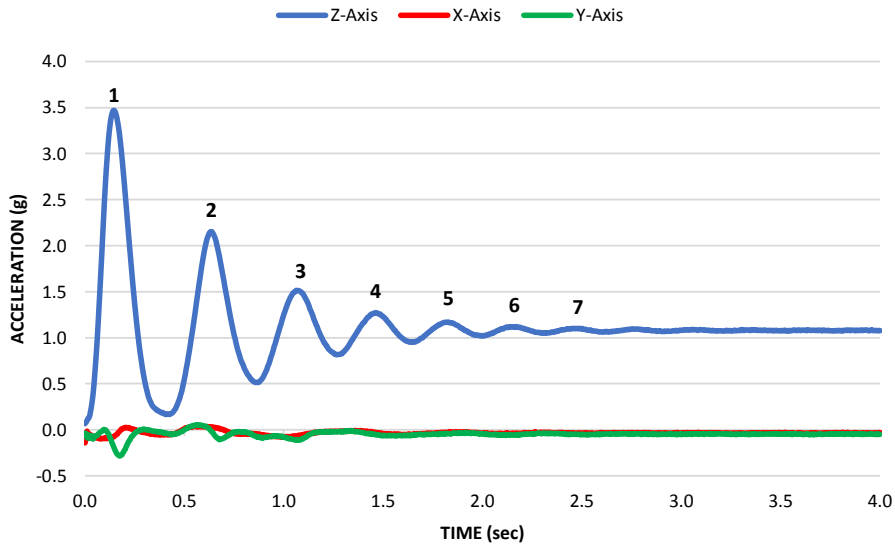
This test measures the bounce or active loading properties of a mattress or mattress set.

- X-Axis: Mattress width
- Y-Axis: Mattress length
- Z-Axis: Up/Down

AVERAGE ACCELERATION (g)			AVERAGE ROTATION (degrees)	
X-Axis	Y-Axis	Z-Axis	X Angle	Y Angle
0.253	0.362	3.429	14.561	21.119

BOUNCE EQUILIBRIUM		FREQUENCY (Hz)
Time (sec)	Cycles	2.979
2.350	7	

### BOUNCE ANALYSIS CHART



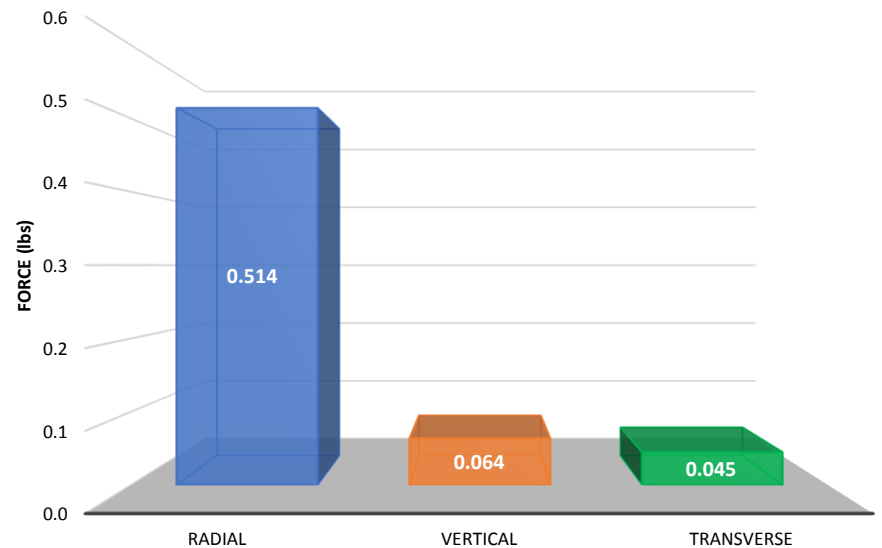
### SWAY FORCE ANALYSIS

This test measures the forces applied on a body, in a mattress or mattress set, under typical loading conditions.

- Radial: Across width of mattress
- Transverse: Across length of mattress
- Vertical: Up/Down

SEISMOGRAPH DATA			
VECTORS	MASS (lbs)	ACCELERATION (in/s <sup>2</sup> )	FORCE (lbs)
Radial	105	0.096	0.514
Vertical	105	0.012	0.064
Transverse	105	0.008	0.045
<b>TOTAL:</b>			<b>0.623</b>

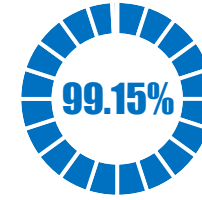
### SWAY FORCE ANALYSIS CHART



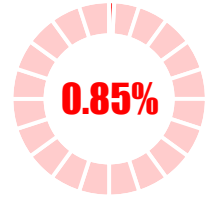
PRESSURE DISTRIBUTION TEST

PRESSURE SENSOR DISTRIBUTION TABLE   105LB MANIKIN (5'-5")							
PRESSURE INTERVALS (mmHg)	HEAD	TRUNK	HIPS	LEGS	HEELS	TOTAL	PERCENTAGE
0 - 10	16	274	108	101	9	508	42.98%
11 - 20	21	298	257	12	5	593	50.17%
21 - 30	15	16	40	0	0	71	6.01%
31 - 50	6	0	4	0	0	10	0.85%
51 - 100	0	0	0	0	0	0	0.00%

DESIRABLE PRESSURE

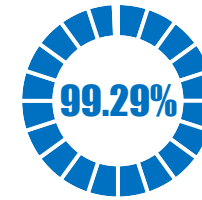


UNDESIRABLE PRESSURE

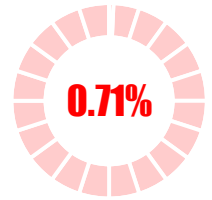


PRESSURE SENSOR DISTRIBUTION TABLE   165LB MANIKIN (6'-1")							
PRESSURE INTERVALS (mmHg)	HEAD	TRUNK	HIPS	LEGS	HEELS	TOTAL	PERCENTAGE
0 - 10	27	255	293	270	22	867	47.56%
11 - 20	10	375	374	76	18	853	46.79%
21 - 30	0	51	28	8	3	90	4.94%
31 - 50	0	4	4	4	1	13	0.71%
51 - 100	0	0	0	0	0	0	0.00%

DESIRABLE PRESSURE

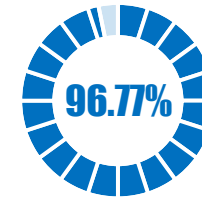


UNDESIRABLE PRESSURE

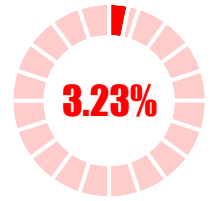


PRESSURE SENSOR DISTRIBUTION TABLE   200LB MANIKIN (6'-1")							
PRESSURE INTERVALS (mmHg)	HEAD	TRUNK	HIPS	LEGS	HEELS	TOTAL	PERCENTAGE
0 - 10	27	160	247	298	27	759	37.72%
11 - 20	32	395	342	116	12	897	44.58%
21 - 30	10	171	93	13	4	291	14.46%
31 - 50	11	24	8	11	4	58	2.88%
51 - 100	1	1	0	3	2	7	0.35%

DESIRABLE PRESSURE

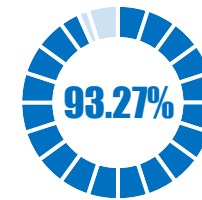


UNDESIRABLE PRESSURE



PRESSURE SENSOR DISTRIBUTION TABLE   250LB MANIKIN (6'-1")							
PRESSURE INTERVALS (mmHg)	HEAD	TRUNK	HIPS	LEGS	HEELS	TOTAL	PERCENTAGE
0 - 10	30	193	194	378	24	819	32.24%
11 - 20	41	479	408	169	12	1109	43.66%
21 - 30	18	208	137	70	8	441	17.36%
31 - 50	18	40	45	51	4	158	6.22%
51 - 100	8	2	0	1	2	13	0.51%

DESIRABLE PRESSURE



UNDESIRABLE PRESSURE

