

**Here is a sample of an Individual Report
sent to participants in the CTS Paper &
Paperboard Interlaboratory Testing
Program. You can view the Summary Report
of all participants' data on the CTS Web site.**

Lab Manager
Company Name
123 Main Street
Your town, Your state 12345

**This is your Performance Analysis Report for the Paper Interlaboratory Program
Cycle # 209G, April 2004**

For guidance on interpreting this report, please refer to the [Report Guide](#), located in the Paper & Paperboard section of our website www.collaborativetesting.com. If you need assistance with interpreting the statistics and terms used in the report, please reference the Key to Individual Reports that can be found on the reverse of this page or on the CTS Website. As always, you may contact the Paper Program Analyst for assistance with any aspect of the program.

On each "Performance Analysis Report" there is a WebCode printed in the first column. Use your WebCodes to locate your results in the Summary Report that is now available on our Website. In order to maintain confidentiality, your WebCode will be unique for each analysis and will change with each report.

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Key to Individual Reports in the Paper Program

- Lab Code** - A permanent laboratory identification number used to maintain information on a confidential basis.
- WebCode** - A temporary assigned laboratory identification number used to ensure lab confidentiality while permitting a lab to locate its data in the Summary Report published on the CTS website www.collaborativetesting.com. The WebCode will be unique for each analysis and cycle.
- Lab Mean** - The average of the test determinations obtained by the participant.
- Grand Mean** - The average of the LAB MEANS for all included participants. Laboratories flagged with an X or an M (see DATA FLAG column) are excluded from the GRAND MEAN.
- Between-Lab Standard Deviation** - An indication of the precision of measurement between the laboratories.
- The greater the spread of the LAB MEANS about the GRAND MEAN, the larger the BETWEEN-LAB STANDARD DEVIATION (and vice versa).
- Comparative Performance Value** - An indication of how well a laboratory's results agree with the other participants. The CPV is a ratio indicating the number of standard deviations from the GRAND MEAN. The closer a laboratory's COMPARATIVE PERFORMANCE VALUE is to zero, the more consistent its results are with the other participants' data (and vice versa).
- Data Flag** - DATA FLAGS are assigned based on the simultaneous analysis of both samples tested. Refer to the following chart for an explanation of each symbol:

<u>Data Flag</u>	<u>Statistically Included/Excluded</u>	<u>ACTION REQUIRED</u>
*	INCLUDED	CAUTION -review testing procedure and monitor future results. Results fall outside the drawn 95% ellipse but within a 99% ellipse that is calculated but not drawn. Labs flagged with an * do not typically receive a specific note regarding the flag. If this error is repeated in future rounds, however, a lab may need to stop and review its testing procedures. The initial data flag is not cause for alarm.
X	EXCLUDED	STOP - immediate review of data and/or testing procedure is required. Results fall outside the 99% ellipse. See the specific note following the data for more information on why the data is excluded.
M	EXCLUDED	PROCEED - lab was unable to report data for at least one sample. However, a lab receiving two or more M flags for a test may need to stop and review its testing procedures.

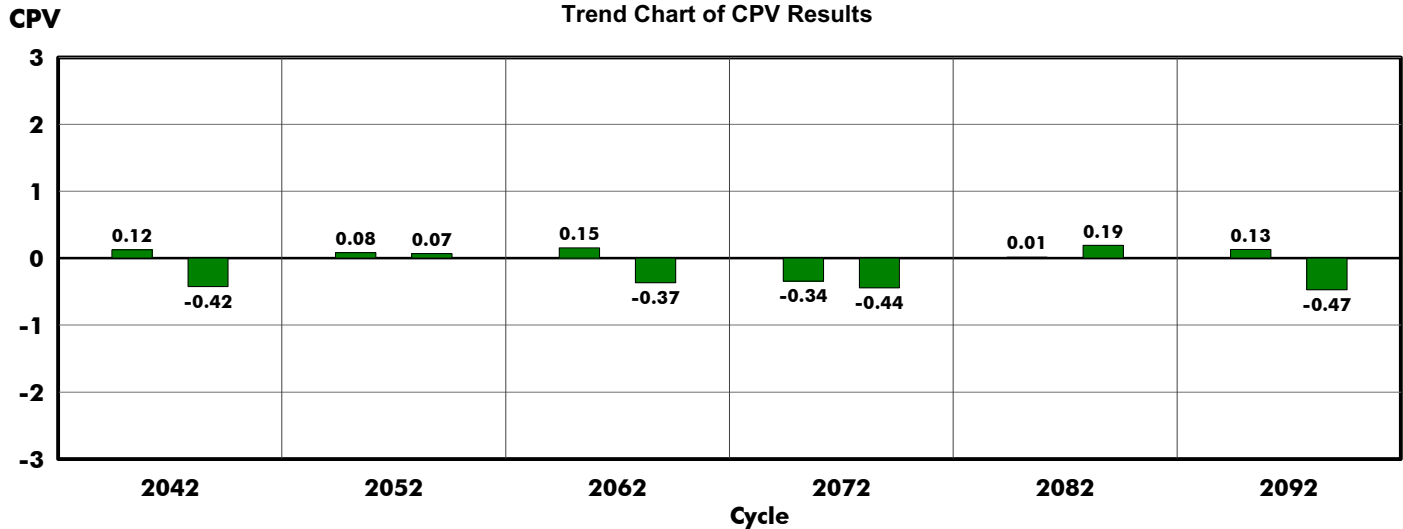
Graph

For each laboratory, the **Lab Mean** for the first sample (x-axis) is plotted against the **Lab Mean** for the second sample (y-axis) with each point representing a laboratory. The horizontal and vertical cross-hairs are the **Grand Means** for each sample. When 20 or more laboratories are included in the statistics, an ellipse is also drawn so that 95% of the time a randomly selected laboratory will be included inside the ellipse. Plotted Data Flags are explained above. Labs not receiving a data flag appear as points on the plot.



Performance Analysis Report - Trend Chart
Analysis #360: Thickness - Printing papers
 using TAPPI Official Test Method T411
 data in units of mils

Lab Code: U****A



A maximum of 6 test cycles are printed on this page. If there are fewer sets of bars than the maximum and the laboratory was enrolled for all cycles, then one of the following situations occurred: lab did not submit data for a particular test/testing cycle or the data sheets were received late.

WebCode	Test Cycle	Sample Code	$\left(\begin{matrix} \text{Lab} \\ \text{Mean} \end{matrix} - \begin{matrix} \text{Grand} \\ \text{Mean} \end{matrix} \right) \div \begin{matrix} \text{Between} \\ \text{Lab Std Dev} \end{matrix} = \text{CPV}$		CPV	Data Flag (if assigned)
AAAAA1	204G June 2003	GV69	4.595	4.5877	0.0590	108 of 115 labs included
		GV70	5.922	5.9531	0.0736	
BBBBB1	205G August 2003	GV71	4.683	4.6780	0.0612	94 of 110 labs included
		GV72	4.761	4.7562	0.0695	
CCCCC1	206G October 2003	GV73	3.907	3.8974	0.0627	106 of 109 labs included
		GV74	4.621	4.6461	0.0681	
DDDDD1	207G December 2003	GV75	4.585	4.6087	0.0692	105 of 107 labs included
		GV76	5.873	5.9094	0.0821	
EEEEEE1	208G February 2004	GV77	3.831	3.8299	0.0719	79 of 88 labs included
		GV78	3.887	3.8730	0.0730	
FFFFFF1	209G April 2004	GV79	3.850	3.8419	0.0623	94 of 103 labs included
		GV80	4.587	4.6200	0.0697	

Sample Report

Performance Analysis Report - Current Cycle

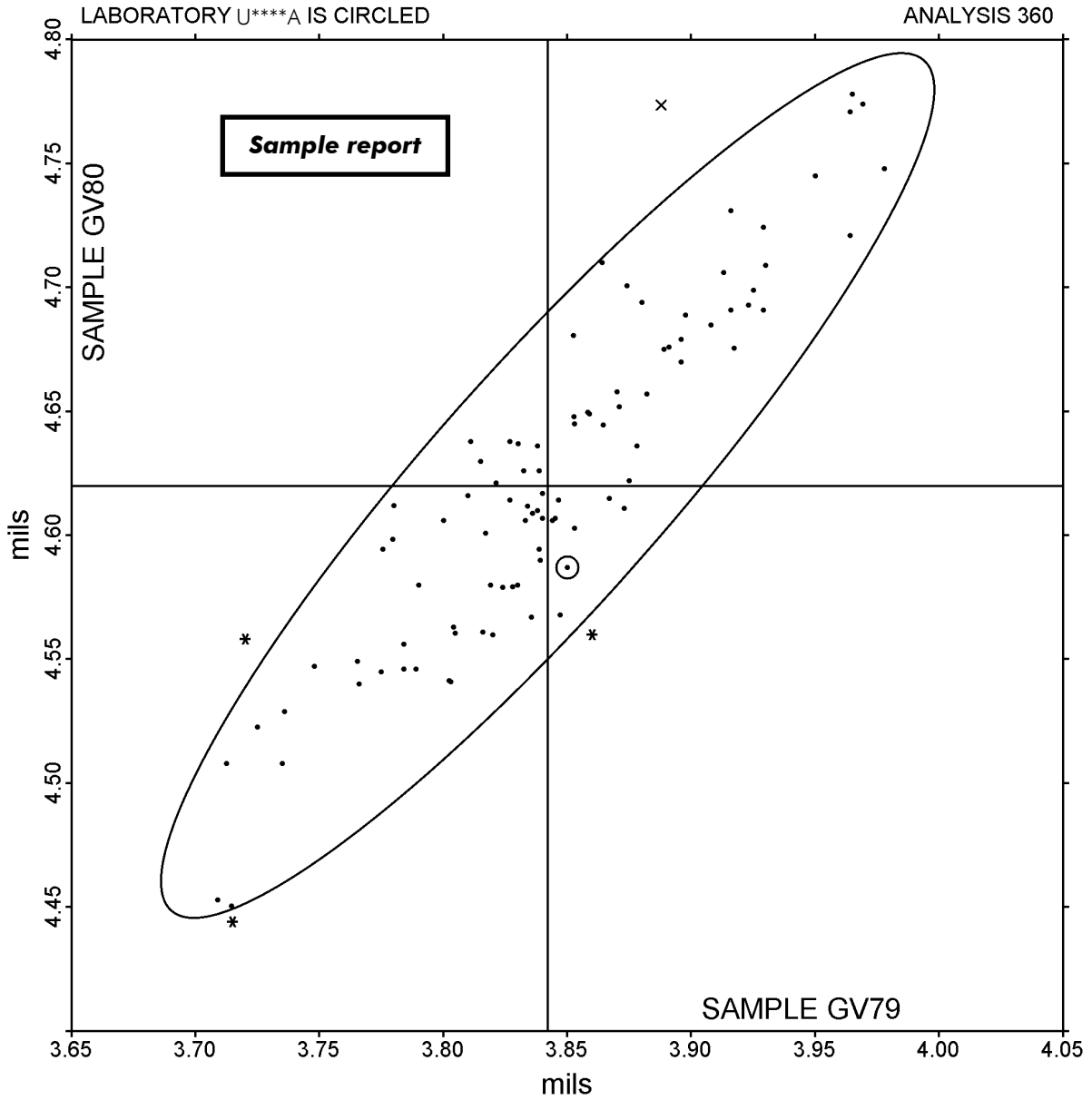
Analysis #360: Thickness - Printing papers

Lab Code: U****A

Test Cycle 209G - April 2004

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Data in units of: mils



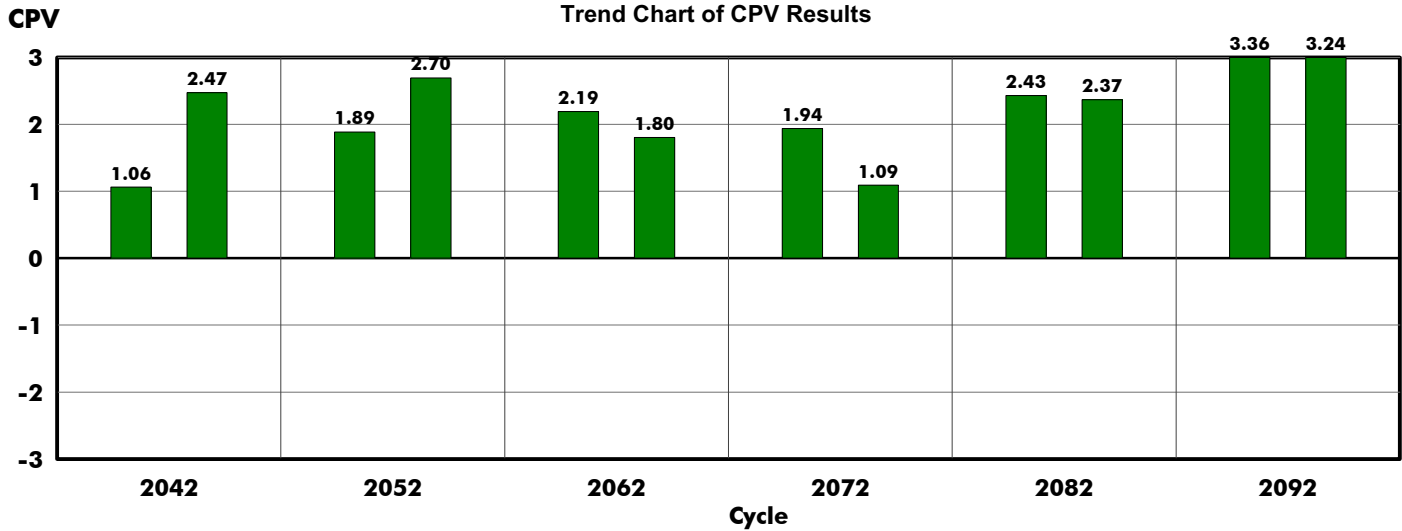
WebCode	Data Flag	Sample GV79			Sample GV80		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
FFFFF1		3.850	0.008	0.13	4.587	-0.033	-0.47

Consensus Results (all laboratories)			
Grand Means	3.8419 mils	4.6200 mils	
Btwn Lab Standard Deviation	0.0623 mils	0.0697 mils	
<i>Consensus statistics based on 94 of 103 reporting participants</i>			



Performance Analysis Report - Trend Chart
Analysis #378: Roughness - Sheffield
 using TAPPI Official Test Method T538
 data in units of Sheffield

Lab Code: U****A



A maximum of 6 test cycles are printed on this page. If there are fewer sets of bars than the maximum and the laboratory was enrolled for all cycles, then one of the following situations occurred: lab did not submit data for a particular test/testing cycle or the data sheets were received late.

WebCode	Test Cycle	Sample Code	Lab Mean	Grand Mean	Between Lab Std Dev	CPV	Data Flag (if assigned)	
AAAAA2	204G June 2003	GL69	100.4	91.66	8.23	1.06	*	109 of 116 labs included
		GL70	178.2	153.66	9.93	2.47		
BBBBB2	205G August 2003	GL71	186.7	163.54	12.28	1.89	*	104 of 108 labs included
		GL72	278.1	227.74	18.68	2.70		
CCCCC2	206G October 2003	GL73	154.0	133.47	9.38	2.19		111 of 115 labs included
		GL74	149.6	131.67	9.95	1.80		
DDDDD2	207G December 2003	GL75	141.9	124.27	9.09	1.94		100 of 106 labs included
		GL76	50.90	44.843	5.561	1.09		
EEEEEE2	208G February 2004	GL77	178.3	145.77	13.39	2.43	*	92 of 95 labs included
		GL78	152.3	129.84	9.49	2.37		
FFFFFF2	209G April 2004	GL79	173.8	138.28	10.58	3.36	X	112 of 115 labs included
		GL80	167.9	136.27	9.77	3.24		

Action Item ! Your performance for this cycle was assigned an X Data Flag. Analyst Comment: Data for both samples are high. Possible systematic error.

Sample Report

Performance Analysis Report - Current Cycle

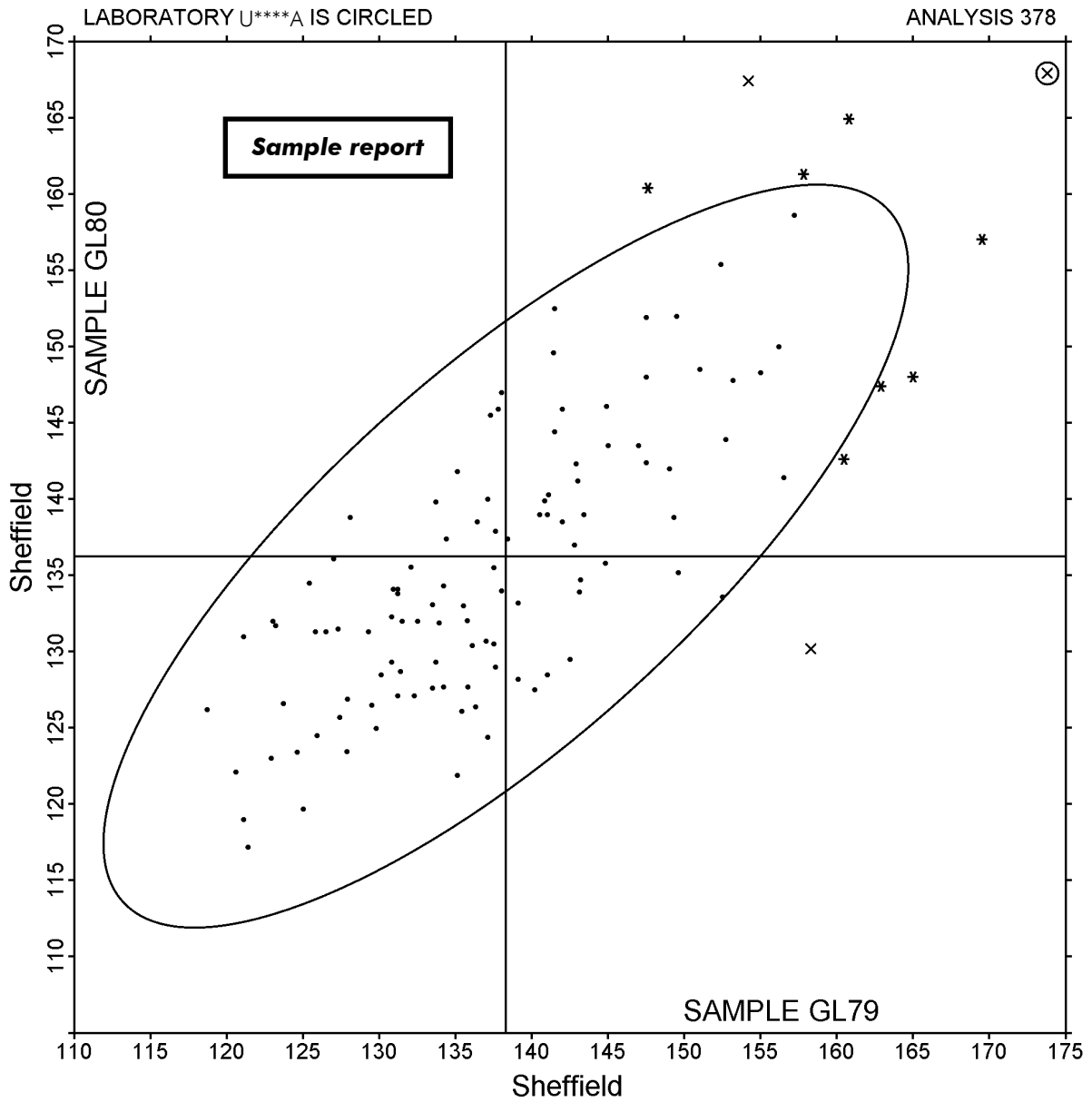
Analysis #378: Roughness - Sheffield

Lab Code: U****A

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Data in units of: Sheffield



WebCode	Data Flag	Sample GL79			Sample GL80		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
FFFFF2	X	173.8	35.5	3.36	167.9	31.6	3.24

Consensus Results (all laboratories)			
Grand Means	138.28	Sheffield	136.27 Sheffield
Btwn Lab Standard Deviation	10.58	Sheffield	9.77 Sheffield
<i>Consensus statistics based on 112 of 115 reporting participants</i>			