



Color & Appearance Testing Program

Summary Report #215 - 1st Qtr 2026

[About the Color Program, About CTS](#)

[Key to Tables and Graphs \(Color Tests\)](#)

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<u>Analysis</u>	<u>Analysis Name</u>
408	Color & Color Difference-45-0, D65/10° Observer
409	Color & Color Difference Sphere, D65/10°Observer
411	Spectrophotometric - Sphere
440	Gloss 60 Degree

About The Color & Appearance Program

The Collaborative Reference Program for Color & Appearance is operated and maintained by Collaborative Testing Services, Inc. (CTS), with technical guidance and advice provided by representatives from various instrument manufacturers. The program allows laboratories to compare periodically the performance of their testing with that of other laboratories.

Paint chip samples, which have been custom-made specifically for Collaborative Testing Services by Munsell Color, X-Rite Inc., Grand Rapids, MI, are distributed four times per year to participating laboratories. Gloss participants test two pairs of paint chip samples at different gloss levels, approximately 5-10 units apart. Color & Color Difference participants measure a set of two opaque color paint chips, selected from throughout the full color spectrum, consisting of a nonmetameric match with small color differences. These data are analyzed in two separate tables based on the conditions of measurement used. Laboratories that also participate in the Spectrophotometric analyses measure one of the opaque color chips for % reflectance at 16 wavelengths.

Please refer to each test's 'Key' for definitions of terms used in the tables and graphs and guidelines to interpreting the results. Also shown are notes concerning specific laboratory results, as well as significant findings related to instrument types or other testing variations.

ABOUT CTS

Founded in 1971, Collaborative Testing Services, Inc. (CTS) is a privately - owned company that specializes in interlaboratory tests for a variety of industries including color, rubber, plastics, fasteners and metals, containerboard, paper, agriculture, hemp, and wine, as well as proficiency tests for forensic laboratories. All of the tests are designed to assist organizations in achieving and maintaining quality assurance objectives. Labs from the U.S., as well as more than 100 countries, currently participate in the CTS programs.

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Key for Color Program Web Summary Report

WebCode	Assigned laboratory identification number (temporary) used to ensure lab confidentiality while permitting a lab to locate its data in the Color Report published on the CTS web site. The Web Code for each analysis can be found in the Performance Analysis Report emailed to each participant.
Lab Mean	The average of the 2 test results obtained by the participant for CIE L*,a*,b* color space values.
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). The critical value for each CPV will vary depending on the number of labs participating in a test.
Graphs	For each laboratory, the LAB MEAN for the first sample is plotted against the LAB MEAN for the second sample with each point representing a laboratory. The horizontal and vertical axes are the GRAND MEANS for each sample. For each test there are three plots: L*2 vs L*1, a*2 vs a*1 and b*2 vs b*1. The a* and b* plots are created using absolute values.
Inst Code	A code indicating the manufacturer of the instrument used to perform the test (see separate INSTRUMENT CODE LIST for each test section).
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 95% ellipse but within a 99% ellipse that is calculated but not drawn.
X	EXCLUDED	STOP - immediate review of data and/or testing procedure is required. Results fall outside the 99% ellipse and one or more CPV are greater than critical value. See specific notes following each table for more information on why the data is excluded. It is also possible to have an "X" for individual color coordinate (L*, a* or b*) without overall "X" flag. It means that results fall outside the 99% ellipse for particular coordinate but have no CPV flags. Those results will not require any action.
M	EXCLUDED	PROCEED - lab was unable to report data for at least one sample. However, a lab receiving two of more M flags for a test may need to stop and review its testing procedures.

Key for Spectrophotometric Web Summary Report

WebCode	Assigned laboratory identification number (temporary) used to ensure lab confidentiality while permitting a lab to locate its data in the Color Report published on the CTS web site. The Web Code for each analysis can be found in the Performance Analysis Report emailed to each 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).
Inst Code	A code indicating the manufacturer of the instrument used to perform the test (see separate INSTRUMENT CODE LIST for each test section).
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>
X	EXCLUDED	STOP - immediate review of data and/or testing procedure is required. See specific notes following each table for more information on why the data is excluded.

In addition to the DATA FLAG column, it is also possible to have a flag on individual wavelength values as follows:

- * The laboratory's mean for that wavelength deviates from the GRAND MEAN by more than two BETWEEN-LAB STANDARD DEVIATIONS.
- X The laboratory's mean for that wavelength deviates from the GRAND MEAN by more than the critical limit determined by a 99.5% confidence interval.

Key for Gloss Web Summary Report

WebCode Assigned laboratory identification number (temporary) used to ensure lab confidentiality while permitting a lab to locate its data in the Color Report published on the CTS web site. The Web Code for each analysis can be found in the Performance Analysis Report emailed to each participant.

Lab Mean The average of the test results 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.

Difference from Grand Mean The difference of the LAB MEAN 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). The critical value for each CPV will vary depending on the number of labs participating in a test.

Inst Code A code indicating the manufacturer of the instrument used to perform the test (see separate INSTRUMENT CODE LIST for each test section).

Graphs 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 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.

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 95% ellipse but within a 99% ellipse that is calculated but not drawn.
X	EXCLUDED	STOP - immediate review of data and/or testing procedure is required. Results fall outside the 99% ellipse. See specific notes following each table 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 of more M flags for a test may need to stop and review its testing procedures.



CTS Interlaboratory Testing Program for Color & Appearance **Report #215**
Analysis 408 **1st Qtr 2026**

Color and Color Difference - Paint Chips - 45-0 Geometry Instruments
 CIE L*a*b* Color Space - Illuminant D65 - CIE 1964 (10 Degree) Observer

WebCode	Flag	Samples	CIE L* a* b* Color Values			Color Difference Values				InstrCode
			L*	a*	b*	ΔL^*	Δa^*	Δb^*	ΔE^*	
2TXMZK		A261	61.58	10.73	17.25	0.98	-0.25	-0.28	1.05	HL
		A262	62.56	10.49	16.97					
4REHFC		A261	61.26	10.82	17.62	0.94	-0.29	-0.33	1.04	BG
		A262	62.21	10.54	17.29					
6P8MAE		A261	60.81	10.79	17.23	0.99	-0.35	-0.39	1.12	GG
		A262	61.80	10.44	16.84					
6YW9FC		A261	61.01	10.98	17.33	0.96	-0.30	-0.33	1.06	XY
		A262	61.97	10.69	17.00					
7GB7XF	X	A261	61.76	9.90	17.78	0.92	-0.26	-0.31	1.00	XW
		A262	62.68	9.64	17.48					
8GM7UA		A261	61.70	10.80	17.40	1.05	-0.30	-0.35	1.15	HW
		A262	62.75	10.50	17.05					
9G6CRE		A261	61.61	10.78	17.41	0.95	-0.25	-0.32	1.04	HW
		A262	62.56	10.52	17.09					
AAY6LB		A261	61.27	10.72	17.19	0.97	-0.17	-0.24	1.01	XU
		A262	62.24	10.55	16.95					
AZN3ZA		A261	61.64	10.67	16.92	0.97	-0.26	-0.31	1.05	XE
		A262	62.60	10.41	16.60					
B937NN		A261	61.19	10.79	17.17	0.97	-0.23	-0.28	1.04	XU
		A262	62.16	10.56	16.88					
CMGTDC	X	A261	60.02	10.78	16.74	1.11	-0.30	-0.33	1.19	PR
		A262	61.13	10.48	16.42					
D9U4TZ		A261	61.70	10.63	16.57	0.94	-0.23	-0.30	1.01	XJ
		A262	62.64	10.40	16.27					
E3GHH9		A261	61.63	10.77	17.22	0.96	-0.23	-0.32	1.04	XM
		A262	62.59	10.54	16.90					
F62R6E		A261	61.62	10.70	17.37	1.01	-0.35	-0.39	1.13	MG
		A262	62.62	10.35	16.98					
FRZV98		A261	61.52	11.10	17.39	0.96	-0.26	-0.29	1.04	GE
		A262	62.49	10.85	17.09					
FYXMG2		A261	62.10	10.80	17.40	1.00	-0.30	-0.40	1.12	HW
		A262	63.10	10.50	17.00					



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Color and Color Difference - Paint Chips - 45-0 Geometry Instruments
 CIE L*a*b* Color Space - Illuminant D65 - CIE 1964 (10 Degree) Observer

WebCode	Flag	Samples	CIE L* a* b* Color Values			Color Difference Values				InstrCode
			L*	a*	b*	ΔL^*	Δa^*	Δb^*	ΔE^*	
H9CJ9C		A261	61.39	10.78	17.24	0.98	-0.27	-0.30	1.05	XU
		A262	62.36	10.51	16.95					
HA9YK9		A261	61.44	10.84	17.18	0.97	-0.25	-0.30	1.05	HW
		A262	62.41	10.60	16.88					
JQCTUU		A261	61.49	10.77	17.88	0.98	-0.28	-0.39	1.09	GE
		A262	62.47	10.49	17.49					
JUB6PU		A261	61.33	10.89	17.32	0.98	-0.21	-0.30	1.04	WA
		A262	62.31	10.69	17.03					
KAHKA2		A261	60.78	10.91	17.42	0.95	-0.28	-0.34	1.05	GA
		A262	61.74	10.63	17.08					
KPFY8A		A261	61.46	10.81	17.02	0.97	-0.29	-0.36	1.07	XW
		A262	62.42	10.52	16.66					
KVKHL3		A261	61.13	10.53	16.96	1.11	-0.24	-0.28	1.17	XI
		A262	62.24	10.29	16.69					
M8L3V6		A261	60.42	10.99	17.07	0.98	-0.21	-0.23	1.03	HX
		A262	61.39	10.77	16.84					
MC49KR		A261	61.70	10.70	17.30	1.05	-0.30	-0.35	1.15	HW
		A262	62.75	10.40	16.95					
MLQAZ2		A261	61.32	10.82	17.14	0.99	-0.31	-0.34	1.09	XU
		A262	62.31	10.51	16.80					
N38T9T		A261	61.34	11.19	17.29	0.98	-0.33	-0.37	1.10	HY
		A262	62.32	10.86	16.92					
N9GURC		A261	61.53	10.75	17.24	1.00	-0.27	-0.32	1.09	HW
		A262	62.53	10.48	16.92					
NW3WPT		A261	61.80	10.70	17.35	0.90	-0.30	-0.35	1.01	HW
		A262	62.70	10.40	17.00					
QFTRCZ		A261	61.50	10.89	17.23	0.82	-0.35	-0.39	0.97	XO
		A262	62.32	10.54	16.85					
RHUCEQ		A261	61.25	10.83	17.16	0.98	-0.25	-0.35	1.07	XS
		A262	62.23	10.58	16.81					
RVZ9W8		A261	61.80	10.73	16.86	0.98	-0.27	-0.30	1.06	XE
		A262	62.78	10.47	16.56					



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CIE L*a*b* Color Space - Illuminant D65 - CIE 1964 (10 Degree) Observer

WebCode	Flag	Samples	CIE L* a* b* Color Values			Color Difference Values				InstrCode
			L*	a*	b*	ΔL^*	Δa^*	Δb^*	ΔE^*	
U2FQ6Z		A261	61.56	10.58	16.75	0.97	-0.30	-0.35	1.07	XQ
		A262	62.53	10.28	16.40					
UHNH9Q		A261	60.84	10.85	17.32	0.98	-0.28	-0.34	1.07	GG
		A262	61.81	10.56	16.98					
UNUB3L		A261	61.36	10.90	17.30	0.97	-0.33	-0.38	1.09	XU
		A262	62.33	10.57	16.93					
VY7ZGG		A261	61.20	10.92	17.75	1.02	-0.25	-0.30	1.10	BG
		A262	62.23	10.67	17.44					
WYZ69V		A261	61.11	10.90	17.19	1.03	-0.30	-0.33	1.12	XU
		A262	62.14	10.59	16.86					
XC7H32		A261	61.48	10.49	16.57	0.97	-0.22	-0.22	1.02	XP
		A262	62.45	10.27	16.34					
ZN8TMT		A261	61.18	10.76	17.19	0.93	-0.26	-0.32	1.02	MT
		A262	62.11	10.50	16.87					

Summary Statistics								
Samples	L*	a*	b*	ΔL^*	Δa^*	Δb^*	ΔE^*	
Grand Means								
A261	61.39	10.80	17.22	0.98	-0.27	-0.33	1.07	
A262	62.37	10.52	16.90					
Std Dev Btwn Labs								
A261	0.34	0.14	0.29	0.04	0.04	0.04	0.04	
A262	0.34	0.13	0.28					

Statistics based on 37 of 39 reporting participants

Comments Assigned on Data Flags for Test #408

7GB7XF(X) - Very low data for both a* values.

CMGTDC(X) - Low L* values for both samples. Large Delta L & E.



Key to Instrument Codes Reported by Participants

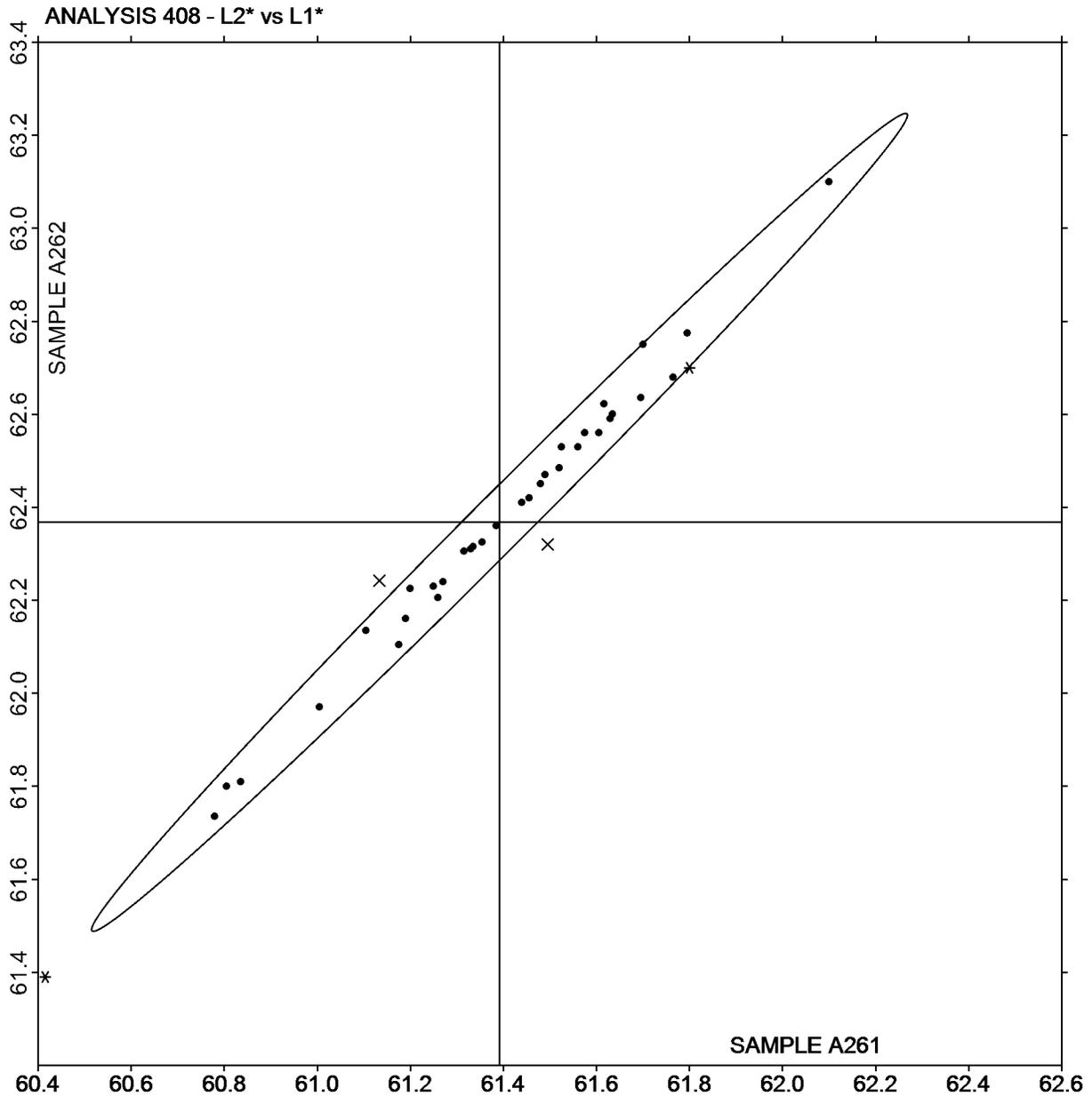
BG	BYK Mac i	GA	BYK-Gardner
GE	BYK-Gardner spectro-guide (45/0)	GG	BYK-Gardner spectro2-guide (45/0) gloss
HL	Hunter Agera	HW	Hunter LabScan XE
HX	Hunter Color FlexEZ 45/0	HY	Hunter Color Flex 45/0
MG	Macbeth 1500/PLUS or 2025+ Color Eye	MT	Minolta CM-25cG Spectrophotometer
PR	PhotoResearch PR730	WA	X-Rite MA-5 QC Multi-Angle Spectrophotometer
XE	X-Rite eXact Portable Spectrophotometer	XI	X-Rite i1 Pro 3
XJ	X-Rite CI7XX0	XM	X-Rite MA58 Multi-Angle Spectrophotometer
XO	X-Rite MA68 II Multi-Angle Spectrophotometer	XP	X-Rite MA9 Multi-Angle Spectrophotometer
XQ	X-Rite Ci6x	XS	X-Rite 962 Portable Spectrophotometer
XU	X-Rite 964 Portable Spectrophotometer	XW	X-Rite
XY	X-Rite MA T6 Multi-Angle Spectrophotometer		



L2* vs L1*

SAMPLE A261 = 61.39

SAMPLE A262 = 62.37

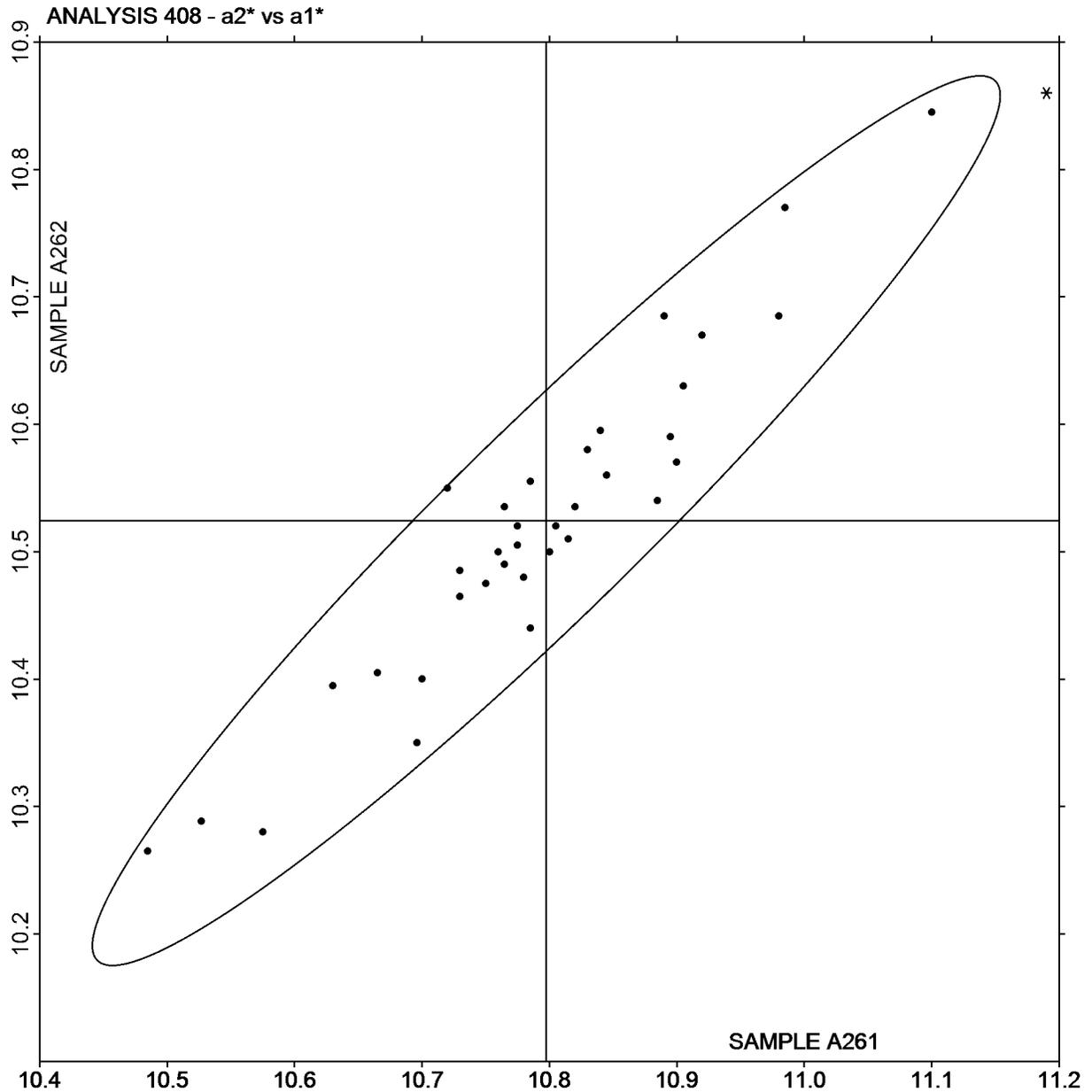




a2* vs a1*

SAMPLE A261 = 10.80

SAMPLE A262 = 10.52

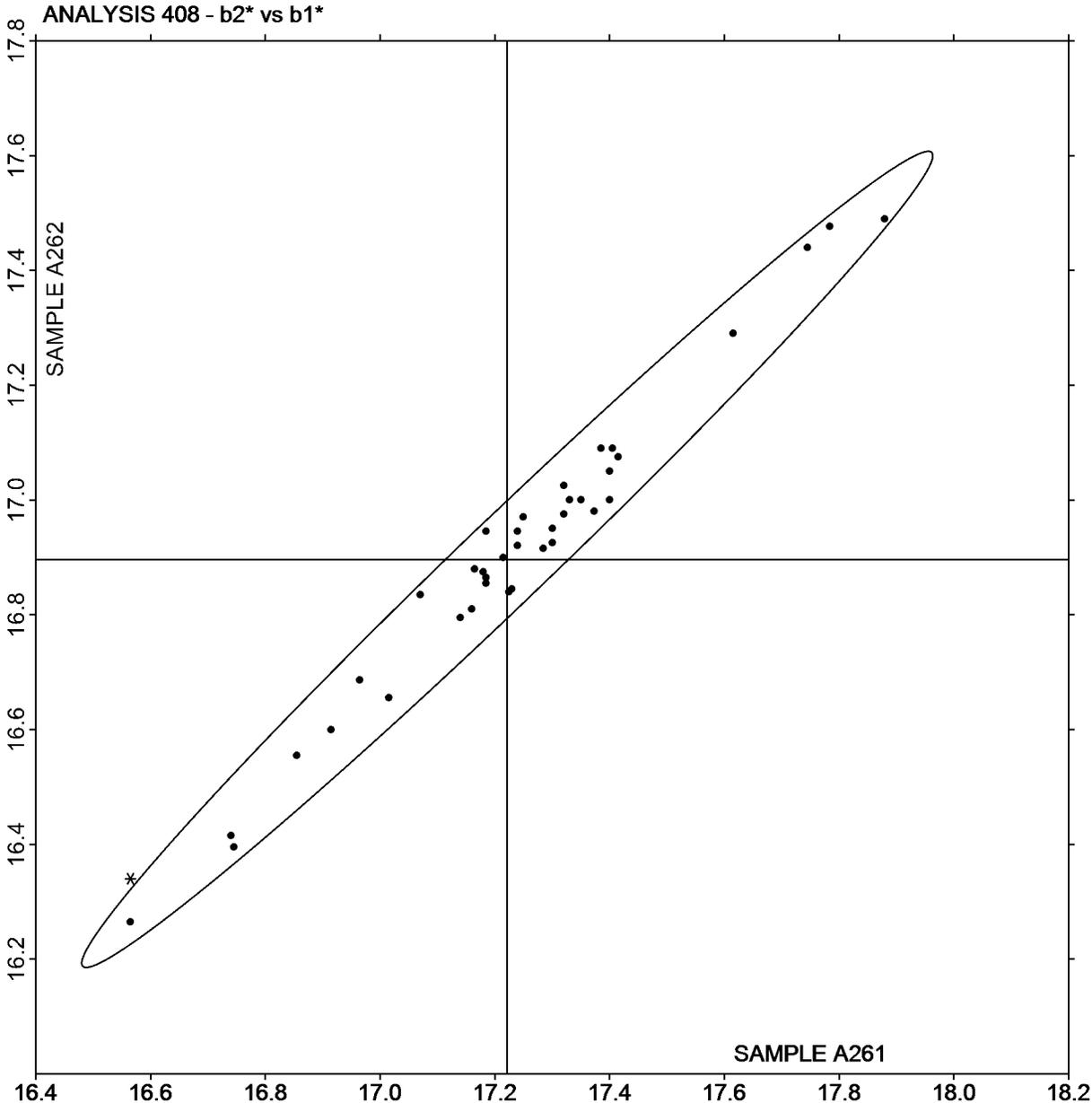




b2* vs b1*

SAMPLE A261 = 17.22

SAMPLE A262 = 16.90





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WebCode	Flag	Samples	CIE L* a* b* Color Values			Color Difference Values				InstrCode
			L*	a*	b*	ΔL^*	Δa^*	Δb^*	ΔE^*	
26Q94U		A261	61.55	10.45	16.65	0.97	-0.26	-0.34	1.06	AJ
		A262	62.52	10.19	16.31					
2WHEBM		A261	61.52	10.62	16.62	0.95	-0.26	-0.34	1.04	XE
		A262	62.46	10.36	16.29					
3BW3ZB	X	A261	61.47	10.59	17.03	0.97	-0.23	-0.26	1.03	GE
		A262	62.44	10.36	16.77					
3LH76P	X	A261	62.04	10.66	16.43	-0.01	0.00	0.01	0.02	AU
		A262	62.03	10.66	16.44					
3NL2NR		A261	61.39	10.76	16.61	0.96	-0.28	-0.31	1.05	XH
		A262	62.35	10.49	16.30					
3NLYYN		A261	61.54	10.60	16.71	1.01	-0.31	-0.36	1.12	XF
		A262	62.55	10.28	16.35					
3PGH2P		A261	61.61	10.62	16.40	0.97	-0.24	-0.29	1.04	HP
		A262	62.58	10.38	16.11					
6UXWHR		A261	61.66	10.72	16.54	0.97	-0.26	-0.29	1.04	AT
		A262	62.63	10.47	16.25					
6YW9FC		A261	61.30	10.85	16.61	0.96	-0.27	-0.28	1.04	MP
		A262	62.26	10.57	16.33					
76EZ6G		A261	61.55	10.64	16.48	0.95	-0.25	-0.30	1.02	XD
		A262	62.50	10.40	16.18					
84X4CH		A261	61.31	10.74	16.67	0.95	-0.26	-0.32	1.04	MP
		A262	62.27	10.48	16.35					
84X72L		A261	61.60	10.75	16.66	0.98	-0.29	-0.34	1.07	AW
		A262	62.58	10.46	16.32					
8FFQLH		A261	61.45	10.58	16.49	0.97	-0.24	-0.32	1.05	XI
		A262	62.42	10.33	16.16					
8GQQHD		A261	61.57	10.74	16.61	0.84	-0.22	-0.26	0.91	MV
		A262	62.41	10.53	16.35					
8WJKTH		A261	61.74	10.84	16.62	0.97	-0.23	-0.29	1.04	AW
		A262	62.71	10.61	16.33					
97JBAJ		A261	61.57	10.66	16.72	0.98	-0.23	-0.30	1.05	XC
		A262	62.55	10.43	16.42					



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WebCode	Flag	Samples	CIE L* a* b* Color Values			Color Difference Values				InstrCode
			L*	a*	b*	ΔL^*	Δa^*	Δb^*	ΔE^*	
98UA7E		A261	61.46	10.83	16.64	0.94	-0.30	-0.34	1.04	MW
		A262	62.40	10.54	16.30					
9KK78C		A261	61.64	10.71	16.63	0.95	-0.31	-0.32	1.05	XX
		A262	62.60	10.40	16.32					
9V2QPM		A261	61.61	10.68	16.52	0.97	-0.27	-0.30	1.06	AJ
		A262	62.58	10.41	16.22					
ADZ4ZA		A261	61.74	10.54	16.31	0.95	-0.23	-0.29	1.02	XD
		A262	62.69	10.31	16.02					
AYYUUE		A261	61.62	10.75	16.55	0.97	-0.33	-0.34	1.08	AP
		A262	62.59	10.42	16.21					
B937NN		A261	61.61	10.67	16.43	0.98	-0.24	-0.31	1.06	XE
		A262	62.60	10.43	16.12					
CMGTDC		A261	61.45	10.77	16.48	0.98	-0.33	-0.30	1.08	CA
		A262	62.43	10.44	16.18					
E3HFT4	X	A261	55.96	9.81	15.50	6.54	0.46	0.89	6.61	XF
		A262	62.50	10.27	16.40					
EEYYCZ		A261	61.57	10.79	16.56	0.96	-0.29	-0.32	1.05	AU
		A262	62.53	10.50	16.24					
ETGR27		A261	61.49	10.74	16.61	0.97	-0.26	-0.30	1.04	MU
		A262	62.46	10.49	16.31					
F48ZYZ		A261	61.79	10.80	16.62	0.97	-0.29	-0.33	1.06	AS
		A262	62.76	10.51	16.29					
F6PXPE		A261	61.89	10.53	16.61	0.97	-0.26	-0.30	1.05	AT
		A262	62.86	10.27	16.31					
FDJZTB		A261	61.53	10.68	16.58	0.98	-0.34	-0.35	1.09	XE
		A262	62.51	10.34	16.23					
G4NJGC		A261	61.42	10.60	16.61	1.02	-0.35	-0.40	1.15	XC
		A262	62.44	10.25	16.21					
GH9YKB		A261	61.63	10.68	16.39	0.98	-0.32	-0.34	1.08	HP
		A262	62.61	10.37	16.05					
GRD72W		A261	61.59	10.61	16.62	0.97	-0.27	-0.33	1.06	XD
		A262	62.56	10.35	16.29					



CTS Interlaboratory Testing Program for Color & Appearance **Report #215**
Analysis 409 **1st Qtr 2026**

Color and Color Difference - Paint Chips - Sphere Geometry Instruments
CIE L*a*b* Color Space - Illuminant D65 - CIE 1964 (10 Degree) Observer

WebCode	Flag	Samples	CIE L* a* b* Color Values			Color Difference Values				InstrCode
			L*	a*	b*	ΔL^*	Δa^*	Δb^*	ΔE^*	
H9CJ9C		A261	61.56	10.67	16.66	0.94	-0.26	-0.28	1.01	XD
		A262	62.50	10.42	16.39					
HFZ773		A261	61.52	10.61	16.59	0.95	-0.25	-0.30	1.03	XD
		A262	62.47	10.36	16.28					
HUDQCA		A261	61.55	10.65	16.50	0.95	-0.26	-0.30	1.03	XD
		A262	62.50	10.40	16.21					
JUB6PU		A261	61.59	10.61	16.42	0.98	-0.24	-0.26	1.05	HP
		A262	62.57	10.37	16.16					
JY8VV7		A261	61.49	10.54	16.59	0.98	-0.27	-0.33	1.06	XF
		A262	62.46	10.27	16.26					
KAHKA2		A261	61.58	10.74	16.66	0.95	-0.19	-0.28	1.01	AU
		A262	62.53	10.55	16.38					
KJA4NA		A261	61.76	10.65	16.69	0.96	-0.22	-0.26	1.01	MV
		A262	62.71	10.43	16.43					
KNW6G8		A261	61.59	10.69	16.53	0.98	-0.26	-0.30	1.06	AU
		A262	62.57	10.43	16.24					
LULQC2		A261	61.54	10.69	16.48	0.96	-0.24	-0.29	1.03	XG
		A262	62.49	10.45	16.19					
M63WNV		A261	61.63	10.75	16.49	0.95	-0.27	-0.30	1.04	AJ
		A262	62.58	10.49	16.18					
ME844V		A261	61.64	10.65	16.63	0.96	-0.29	-0.33	1.06	XD
		A262	62.60	10.36	16.30					
MLQAZ2		A261	61.42	10.70	16.54	0.97	-0.21	-0.28	1.03	XH
		A262	62.38	10.48	16.26					
MXDL4Y		A261	61.58	10.82	16.59	0.97	-0.32	-0.38	1.09	AV
		A262	62.55	10.50	16.21					
NJHGJ9		A261	61.54	10.76	16.58	0.97	-0.26	-0.31	1.05	MK
		A262	62.51	10.51	16.27					
P2RWFT		A261	61.57	10.63	16.56	0.98	-0.29	-0.35	1.08	XH
		A262	62.54	10.34	16.21					
P6BNRW		A261	61.61	10.68	16.67	0.93	-0.20	-0.27	0.99	MM
		A262	62.54	10.48	16.41					



CTS Interlaboratory Testing Program for Color & Appearance **Report #215**
Analysis 409 **1st Qtr 2026**

Color and Color Difference - Paint Chips - Sphere Geometry Instruments
CIE L*a*b* Color Space - Illuminant D65 - CIE 1964 (10 Degree) Observer

WebCode	Flag	Samples	CIE L* a* b* Color Values			Color Difference Values				InstrCode
			L*	a*	b*	ΔL^*	Δa^*	Δb^*	ΔE^*	
PAL28A		A261	61.68	10.73	16.63	0.97	-0.27	-0.31	1.05	AS
		A262	62.65	10.46	16.32					
PJCMD8		A261	61.61	10.67	16.60	0.93	-0.26	-0.31	1.02	XD
		A262	62.54	10.41	16.29					
QBCLD6		A261	61.58	10.75	16.61	0.92	-0.22	-0.27	0.99	XB
		A262	62.51	10.53	16.34					
QYMPN		A261	61.75	10.71	16.36	0.97	-0.30	-0.32	1.07	HP
		A262	62.72	10.41	16.04					
RCLXMU		A261	61.50	10.73	16.64	0.98	-0.31	-0.35	1.09	MQ
		A262	62.49	10.42	16.29					
RFKAHU		A261	61.45	10.83	16.66	0.98	-0.37	-0.39	1.12	MW
		A262	62.43	10.47	16.27					
RHUCEQ		A261	61.47	10.70	16.59	0.95	-0.26	-0.29	1.03	AJ
		A262	62.43	10.44	16.30					
RLAMTV		A261	61.64	10.68	16.58	0.98	-0.33	-0.31	1.08	AT
		A262	62.62	10.35	16.27					
T3WK8V		A261	61.74	10.73	16.55	0.98	-0.29	-0.33	1.07	AW
		A262	62.72	10.44	16.22					
T7FE93		A261	61.51	10.70	16.70	0.96	-0.28	-0.32	1.05	XD
		A262	62.47	10.42	16.38					
TBB974		A261	61.52	10.70	16.55	0.92	-0.31	-0.36	1.03	XU
		A262	62.44	10.39	16.19					
TCGQ4Y		A261	61.57	10.68	16.73	0.96	-0.33	-0.34	1.06	XI
		A262	62.52	10.35	16.39					
U2FQ6Z	X	A261	61.59	10.64	16.72	0.97	-0.16	-0.18	1.00	XD
		A262	62.56	10.48	16.54					
U6GQ6W		A261	61.61	10.54	16.61	0.95	-0.21	-0.28	1.02	XG
		A262	62.57	10.33	16.33					
UNUB3L		A261	61.64	10.73	16.52	0.94	-0.30	-0.34	1.05	XB
		A262	62.58	10.43	16.18					
V9WLKU		A261	61.59	10.55	16.66	0.98	-0.28	-0.33	1.07	XF
		A262	62.57	10.27	16.33					



CTS Interlaboratory Testing Program for Color & Appearance

Report #215

Analysis 409

1st Qtr 2026

**Color and Color Difference - Paint Chips - Sphere Geometry Instruments
CIE L*a*b* Color Space - Illuminant D65 - CIE 1964 (10 Degree) Observer**

WebCode	Flag	Samples	CIE L* a* b* Color Values			Color Difference Values				InstrCode
			L*	a*	b*	ΔL^*	Δa^*	Δb^*	ΔE^*	
VBZEET		A261	61.84	10.81	16.70	0.96	-0.34	-0.38	1.09	CA
		A262	62.80	10.47	16.32					
W26X3U		A261	61.65	10.69	16.61	0.95	-0.19	-0.26	1.00	XB
		A262	62.60	10.50	16.35					
WYP4NH		A261	61.78	10.74	16.57	0.98	-0.25	-0.29	1.05	AT
		A262	62.76	10.49	16.28					
X3UJ9P		A261	61.53	10.77	16.62	0.95	-0.24	-0.28	1.02	MW
		A262	62.49	10.53	16.34					
XC7H32	X	A261	61.37	10.89	17.33	0.95	-0.30	-0.30	1.04	XF
		A262	62.32	10.60	17.03					
XH8UYX		A261	61.64	10.73	16.51	0.97	-0.27	-0.32	1.06	AP
		A262	62.61	10.46	16.19					
XNX6BG		A261	61.65	10.73	16.68	1.00	-0.38	-0.37	1.13	XB
		A262	62.65	10.35	16.31					
YLBPH2		A261	61.50	10.62	16.58	0.95	-0.27	-0.28	1.02	XG
		A262	62.45	10.35	16.30					
YLNELD		A261	61.71	10.69	16.62	0.96	-0.26	-0.30	1.04	MT
		A262	62.67	10.42	16.32					
YMH6RR	X	A261	61.85	10.42	15.14	0.95	-0.25	-0.34	1.03	XD
		A262	62.79	10.16	14.80					
YT9HQV		A261	61.65	10.65	16.49	0.96	-0.22	-0.29	1.03	AT
		A262	62.62	10.43	16.20					
YXHV9T	X	A261	55.27	8.57	12.54	1.02	-0.24	-0.14	1.06	XD
		A262	56.29	8.33	12.40					
Z6V4CF		A261	61.47	10.84	16.73	0.95	-0.25	-0.32	1.03	AS
		A262	62.42	10.59	16.41					
ZEMPFT		A261	61.71	10.77	16.58	0.97	-0.28	-0.34	1.06	AT
		A262	62.67	10.49	16.24					
ZN8TMT		A261	61.64	10.68	16.55	0.97	-0.27	-0.27	1.04	XB
		A262	62.61	10.41	16.28					
ZDXDN		A261	61.60	10.60	16.68	0.96	-0.28	-0.33	1.05	XC
		A262	62.56	10.32	16.35					



Summary Statistics							
<u>Samples</u>	<u>L*</u>	<u>a*</u>	<u>b*</u>	<u>ΔL*</u>	<u>Δa*</u>	<u>Δb*</u>	<u>ΔE*</u>
Grand Means							
A261	61.59	10.69	16.58	0.96	-0.27	-0.31	1.05
A262	62.55	10.42	16.27				
Stnd Dev Btwn Labs							
A261	0.11	0.09	0.09	0.02	0.04	0.03	0.03
A262	0.12	0.09	0.09				

Statistics based on 73 of 80 reporting participants

Comments Assigned on Data Flags for Test #409

- 3BW3ZB(X) - Very high b* values for both samples.
- 3LH76P(X) - High L* values for Sample A261. Low L* values for Sample A262. Large replication difference for both samples for all values. Small Delta L & E. Large Delta a & b.
- E3HFT4(X) - Extreme data for Sample A261 for all values. Large Delta L, a, b & E.
- U2FQ6Z(X) - High b* values for Sample A262. Large replication difference for b* Sample A262. Small Delta a & b.
- XC7H32(X) - Extreme data for both b* values.
- YMH6RR(X) - Extreme data for both b* values.
- YXHV9T(X) - Extreme data for both samples for all values. Large Delta b.

Key to Instrument Codes Reported by Participants

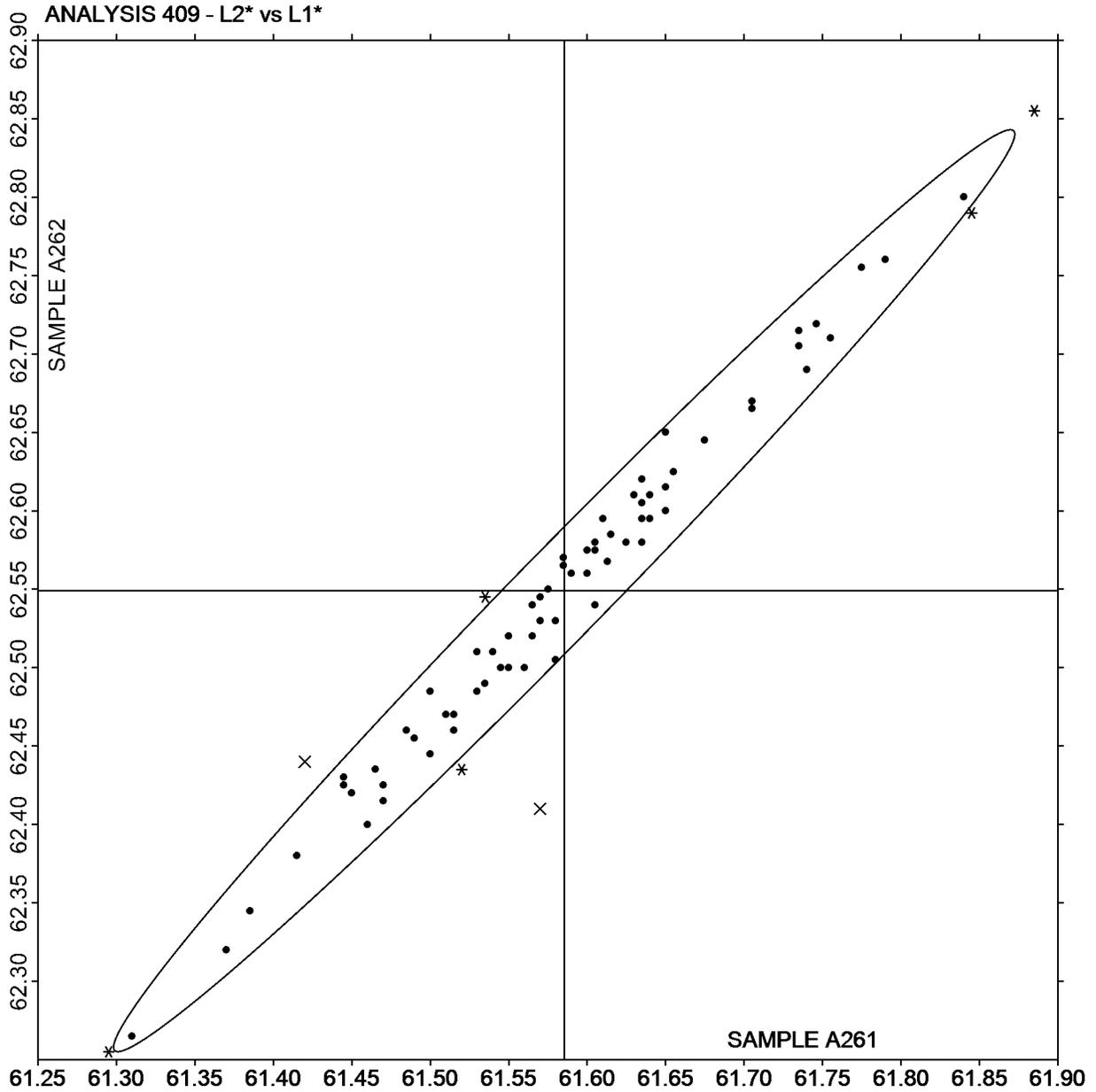
AJ Datacolor 600	AP Datacolor 750
AS Datacolor 800	AT Datacolor 850
AU Datacolor 1000	AV Datacolor 700
AW Datacolor 1050	CA Cary 5000
GE BYK-Gardner Spectro2-Guide Sphere Gloss	HP Hunter UltraScan PRO
MK Macbeth Color-Eye 7000	MM Macbeth Color-Eye 7000a
MP Minolta CM-36dG	MQ Minolta CM-700d
MT Minolta CM-2600d	MU Minolta
MV Minolta CM-3000d Spectrophotometer	MW Minolta CM 3700a Spectrophotometer
XB X-Rite Ci7000 Series Benchtop Spectrophotometer	XC X-Rite Ci4200 Benchtop Spectrophotometer
XD X-Rite Ci7800 Benchtop Spectrophotometer	XE X-Rite Ci7600 Benchtop Spectrophotometer
XF X-Rite Ci6x Portable Spectrophotometer	XG X-Rite Ci7860 Benchtop Spectrophotometer
XH X-Rite Color i5 Benchtop Spectrophotometer	XI X-Rite Color i7 Benchtop Spectrophotometer
XU X-Rite Color Premier 8200 Spectrophotometer	XX Instrument make/model not specified by lab



L2* vs L1*

SAMPLE A261 = 61.59

SAMPLE A262 = 62.55

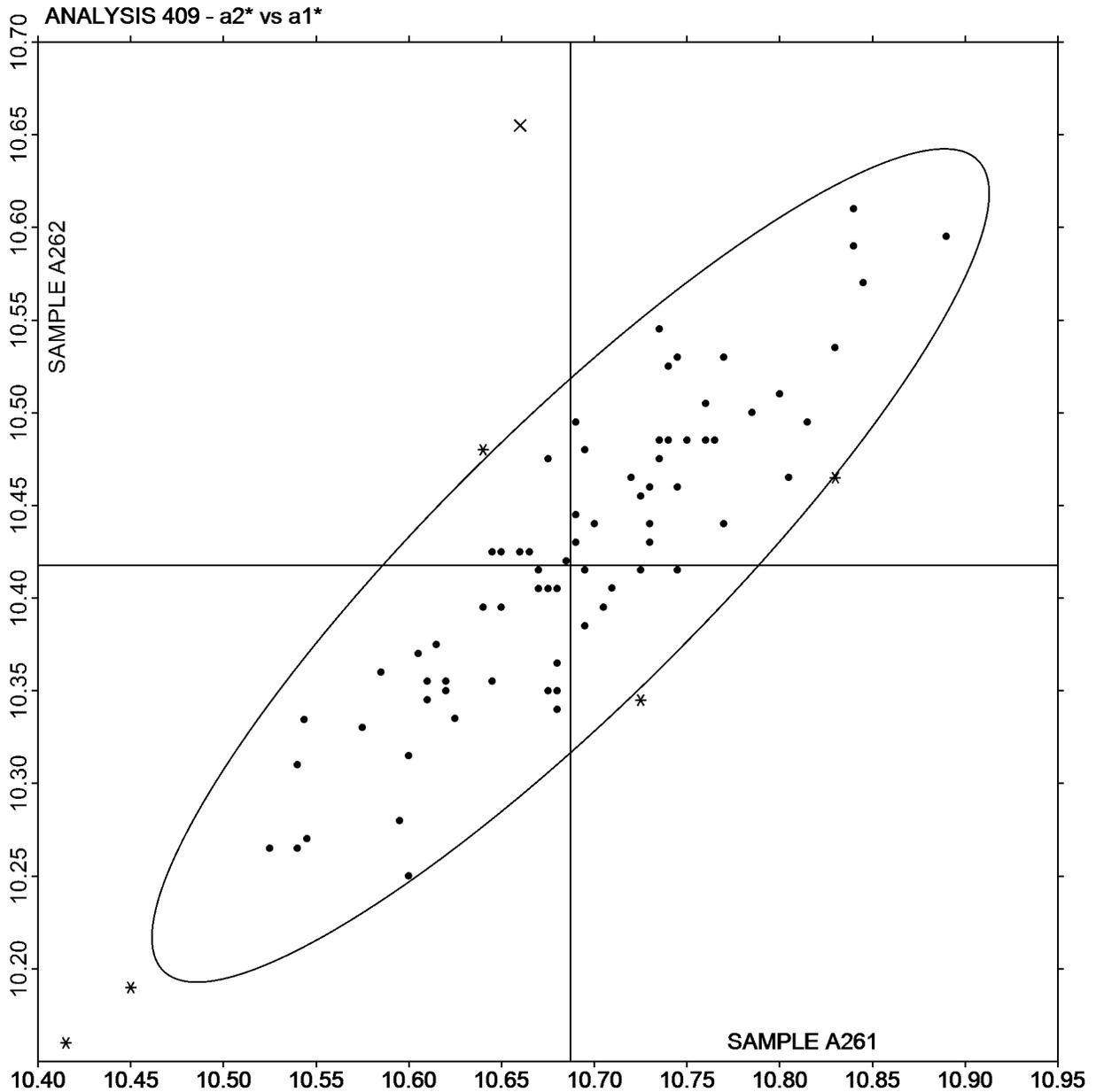




a2* vs a1*

SAMPLE A261 = 10.69

SAMPLE A262 = 10.42

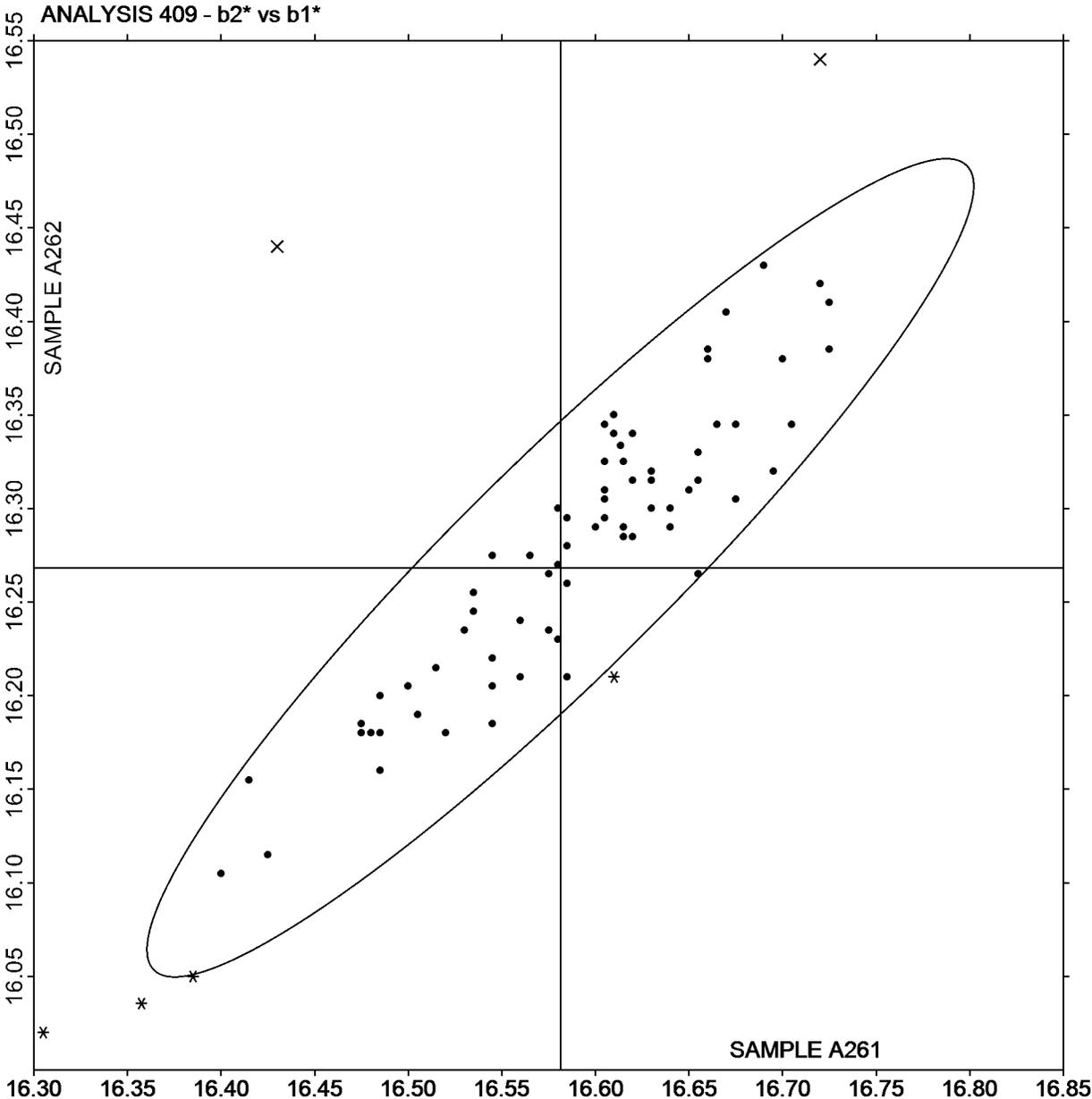




b2* vs b1*

SAMPLE A261 = 16.58

SAMPLE A262 = 16.27





CTS Interlaboratory Testing Program for Color & Appearance Analysis 411

**Report #215
1st Qtr 2026**

Spectrophotometric - Sphere Geometry Instruments
Reflectance at 16 Selected Wavelengths

WebCode	Data Flag	Spectrophotometric Reflectance values (as %) at selected wavelengths																Instr Code
		400	420	440	460	480	500	520	540	560	580	600	620	640	660	680	700	
Sample A261																		
26Q94U		15.26	17.68	19.64	20.70	21.10	22.19	24.24	26.66	30.15	35.63	39.34	40.30	40.42	40.42	40.19	39.47X	AJ
3LH76P		15.93	17.66	19.68	20.72	21.06	22.17	24.24	26.53	29.97	35.76	39.62	40.49	40.59	40.99	41.26X	41.02	AU
3NL2NR		15.55	17.59	19.54	20.60	20.84	21.96	24.02*	26.44	29.89	35.56	39.32	40.20	40.18	40.16	40.35	40.41	XH
6UXWHR		15.71	17.76	19.78	20.87	21.19	22.32	24.36	26.67	30.13	35.93	39.69	40.54	40.63	40.62	40.86	40.01	AT
6YW9FC		15.34	17.39	19.47	20.57	20.78	21.92*	23.96*	26.29*	29.61X	35.46*	39.34	40.22	40.27	40.24	40.38	40.57	MP
76EZ6G		15.67	17.75	19.74	20.81	21.07	22.20	24.26	26.64	30.04	35.73	39.42	40.37	40.41	40.36	40.43	40.55	XD
84X4CH		15.39	17.36	19.46	20.54	20.77	21.92*	23.99*	26.31*	29.70*	35.51	39.29	40.13*	40.11*	40.11	40.15	40.40	MP
84X72L		15.64	17.63	19.64	20.77	21.14	22.25	24.31	26.58	30.03	35.86	39.65	40.53	40.55	40.88	40.74	39.81*	AW
8FFQLH		15.60	17.68	19.63	20.74	20.97	22.16	24.17	26.51	29.96	35.58	39.22*	40.15	40.24	40.14	40.23	40.25	XI
8GQQHD		15.59	17.72	19.70	20.77	21.03	22.17	24.23	26.62	30.10	35.83	39.59	40.44	40.41	40.43	40.43	40.56	MV
8WJKTH		15.72	17.79	19.83	20.89	21.23	22.36	24.40	26.70	30.19	36.11	39.93	40.75	40.81	40.98	40.46	39.78*	AW
97JBAJ		15.48	17.61	19.61	20.67	20.95	22.19	24.25	26.59	30.17	35.82	39.53	40.32	40.38	40.40	40.54	40.68	XC
98UA7E		15.68	17.50	19.56	20.74	20.92	22.02	24.15	26.40	29.84	35.60	39.64	40.44	40.43	40.40	40.54	40.72	MY
9KK78C		15.50	17.71	19.72	20.82	21.11	22.25	24.33	26.72	30.08	35.92	39.70	40.57	40.49	40.40	40.40	40.43	XX
9V2QPM		15.71	17.77	19.62	20.90	21.22	22.28	24.32	26.68	29.99	35.72	39.59	40.58	40.54	40.67	40.59	40.64	AJ
ADZ4ZA		15.93	18.03	19.97	21.07	21.35	22.46	24.52	26.88	30.25	35.86	39.62	40.55	40.63	40.57	40.62	40.70	XD
B937NN		15.74	17.79	19.86	20.88	21.16	22.31	24.36	26.68	30.07	35.79	39.57	40.49	40.40	40.33	40.48	40.50	XE
CMGTDC		15.50	17.48	19.61	20.75	20.95	22.10	24.11	26.44	29.77	35.68	39.50	40.41	40.42	40.37	40.51	40.76	CA
E3HFT4		15.62	17.63	19.60	20.67	20.96	22.16	24.24	26.57	30.15	35.83	39.40	40.21	40.24	40.24	40.36	40.52	XF
EEYYCZ		15.50	17.68	19.71	20.79	21.09	22.21	24.26	26.50	30.02	35.77	39.65	40.49	40.55	40.65	40.38	39.85*	AU
ETGR27		15.35	17.62	19.57	20.78	21.00	22.07	24.21	26.49	29.87	35.59	39.58	40.44	40.45	40.43	40.56	40.74	MV
F48ZYZ		15.77	17.81	19.93	20.93	21.30	22.40	24.48	26.82	30.20	36.03	39.96*	40.88*	40.98*	41.03*	40.69	40.23	AS



CTS Interlaboratory Testing Program for Color & Appearance Analysis 411

**Report #215
1st Qtr 2026**

Spectrophotometric - Sphere Geometry Instruments
Reflectance at 16 Selected Wavelengths

WebCode	Data Flag	Spectrophotometric Reflectance values (as %) at selected wavelengths																Instr Code
		400	420	440	460	480	500	520	540	560	580	600	620	640	660	680	700	
Sample A261																		
F6PXPE		15.78	17.91	19.95	21.04	21.41	22.53*	24.63*	27.04X	30.49X	36.16*	39.93	40.81	40.72	40.83	40.61	40.43	AT
FDJZTB		15.69	17.70	19.70	20.71	20.99	22.15	24.21	26.58	30.03	35.80	39.46	40.31	40.36	40.35	40.40	40.54	XE
GH9YKB		16.01	17.76	19.85	20.91	21.23	22.37	24.39	26.79	29.74*	35.64	39.75	40.61	40.58	40.57	40.75	40.84	HP
GRD72W		16.37*	17.71	19.72	20.79	21.04	22.21	24.27	26.66	30.08	35.83	39.57	40.43	40.43	40.39	40.49	40.61	XD
H9C9C		15.59	17.68	19.66	20.73	21.00	22.15	24.22	26.60	30.04	35.79	39.54	40.46	40.48	40.41	40.47	40.61	XD
HFZ773		15.47	17.67	19.66	20.73	21.00	22.13	24.19	26.59	29.98	35.68	39.44	40.37	40.39	40.36	40.41	40.52	XD
HUDQCA		15.69	17.76	19.75	20.80	21.03	22.18	24.21	26.58	30.02	35.80	39.50	40.37	40.37	40.34	40.40	40.67	XD
JUB6PU		15.79	17.78	19.80	20.92	21.18	22.35	24.38	26.72	29.94	35.54	39.56	40.59	40.57	40.50	40.57	40.79	HP
KJA4NA		15.64	17.75	19.83	20.92	21.17	22.36	24.45	26.74	30.29	36.05	39.93	40.66	40.71	40.62	40.74	40.92	MV
LULQC2		15.71	17.75	19.76	20.79	21.04	22.18	24.21	26.59	30.04	35.79	39.42	40.34	40.36	40.31	40.40	40.65	XG
M63WNV		15.70	17.77	19.78	20.87	21.19	22.32	24.32	26.66	30.07	35.78	39.67	40.60	40.60	40.75	40.59	40.40	AJ
ME844V		15.61	17.71	19.73	20.81	21.09	22.25	24.33	26.72	30.15	35.90	39.59	40.48	40.50	40.49	40.59	40.67	XD
NJHGJ9		15.48	17.63	19.68	20.77	21.04	22.20	24.21	26.59	29.97	35.73	39.55	40.49	40.52	40.54	40.58	40.73	MK
P2RWFT		15.62	17.72	19.72	20.79	21.04	22.20	24.25	26.60	30.05	35.79	39.57	40.39	40.34	40.37	40.53	40.64	XH
P6BNRW		15.52	17.65	19.66	20.77	21.07	22.23	24.29	26.68	30.09	35.81	39.58	40.50	40.52	40.54	40.63	40.80	MM
PAL28A		15.64	17.79	19.65	20.85	21.18	22.28	24.33	26.71	30.14	35.92	39.73	40.66	40.61	40.77	41.09*	40.06	AS
QBCLD6		15.58	17.72	19.70	20.78	21.01	22.17	24.23	26.63	30.07	35.83	39.61	40.46	40.43	40.45	40.50	40.58	XB
QYMPN		16.11	17.90	20.02	21.09	21.29	22.45	24.46	26.89	30.09	35.78	39.87	40.90*	40.83	40.77	40.68	41.07	HP
RCLXMU		15.46	17.57	19.59	20.73	20.96	22.08	24.23	26.55	29.91	35.58	39.51	40.48	40.53	40.55	40.66	40.85	MQ
RFKAHU		15.23	17.56	19.49	20.72	20.92	22.04	24.15	26.43	29.80	35.52	39.56	40.52	40.54	40.55	40.68	40.89	MW
RLAMTV		15.78	17.77	19.74	20.82	21.17	22.27	24.35	26.67	30.03	35.89	39.70	40.55	40.68	40.71	40.31	40.39	AT
T3WK8V		15.65	17.83	19.84	20.93	21.31	22.42	24.45	26.72	30.21	35.99	39.83	40.67	40.79	40.98	40.88	40.00	AW



CTS Interlaboratory Testing Program for Color & Appearance Analysis 411

**Report #215
1st Qtr 2026**

Spectrophotometric - Sphere Geometry Instruments
Reflectance at 16 Selected Wavelengths

WebCode	Data Flag	Spectrophotometric Reflectance values (as %) at selected wavelengths																Instr Code
		400	420	440	460	480	500	520	540	560	580	600	620	640	660	680	700	
Sample A261																		
T7FE93		15.48	17.60	19.59	20.66	20.92	22.06	24.14	26.58	30.03	35.77	39.47	40.32	40.33	40.27	40.49	40.66	XD
TBB974		15.68	17.67	19.69	20.75	20.99	22.17	24.23	26.56	29.96	35.77	39.47	40.35	40.28	40.31	40.44	40.62	XU
TCGQ4Y		15.50	17.59	19.59	20.71	20.75*	22.13	24.20	26.57	30.00	35.78	39.54	40.45	40.48	40.52	40.61	40.77	XI
U2FQ6Z		15.54	17.63	19.62	20.75	21.04	22.20	24.27	26.63	30.09	35.83	39.58	40.50	40.54	40.60	40.71	40.91	XD
U6GQ6W		15.67	17.75	19.73	20.79	21.09	22.23	24.28	26.71	30.14	35.84	39.54	40.41	40.44	40.39	40.46	40.55	XD
UNUB3L		15.76	17.79	19.82	20.86	21.11	22.29	24.29	26.65	30.11	36.01	39.66	40.49	40.41	40.41	40.55	40.73	XB
V9WLKU		15.71	17.66	19.70	20.71	21.00	22.21	24.28	26.62	30.18	35.85	39.49	40.30	40.32	40.36	40.48	40.67	XF
VBZEET		15.74	17.74	19.89	21.00	21.24	22.41	24.51	26.88	30.23	36.20*	40.10X	40.98X	40.98*	40.97	41.07*	41.27*	CA
W26X3U		16.38*	17.76	19.74	20.83	21.10	22.26	24.32	26.76	30.15	35.82	39.64	40.58	40.63	40.56	40.61	40.73	XB
WYP4NH		15.99	17.83	19.88	20.98	21.27	22.42	24.47	26.78	30.24	36.09	39.88	40.70	40.80	40.92	41.41X	41.14	AT
X3UJ9P		15.30	17.65	19.60	20.80	21.00	22.10	24.25	26.50	29.90	35.65	39.65	40.55	40.55	40.55	40.65	40.85	MW
XC7H32		15.57	17.62	19.65	20.67	20.94	22.14	24.22	26.56	30.03	35.63	39.29	40.16	40.18	40.21	40.30	40.42	XF
XH8UYX		15.66	17.76	19.80	20.88	21.22	22.31	24.35	26.66	30.09	35.86	39.69	40.55	40.63	40.76	40.83	40.20	AP
XNX6BG		15.67	17.73	19.76	20.80	21.06	22.21	24.27	26.69	30.14	35.97	39.71	40.59	40.63	40.62	40.72	40.94	XB
YLBPH2		15.59	17.67	19.65	20.72	20.98	22.12	24.17	26.57	29.98	35.66	39.41	40.35	40.37	40.32	40.42	40.54	XG
YLNELD		15.42	17.67	19.80	20.97	21.19	22.35	24.43	26.74	30.14	35.89	39.78	40.74	40.73	40.66	40.76	40.93	MT
YMH6RR		17.42X	19.19X	20.79X	21.64X	21.77X	22.82X	24.75X	27.06X	30.36*	35.83	39.53	40.34	40.29	40.16	40.34	40.44	XD
YT9HQV		15.65	17.83	19.82	20.87	21.22	22.36	24.38	26.75	30.09	35.85	39.64	40.52	40.58	40.62	40.57	40.25	AT
YXHV9T	X	15.94	18.11	20.16*	21.27X	21.57X	22.72X	24.80X	27.19X	30.62X	36.36X	40.08X	40.96*	40.99*	41.03*	41.14*	41.31*	XD
Z6V4CF		15.53	17.58	19.50	20.66	20.91	22.03	24.18	26.49	29.93	35.57	39.44	40.49	40.59	40.55	40.78	40.58	AS
ZEMPFT		15.77	17.75	19.82	20.89	21.25	22.38	24.43	26.68	30.13	36.01	39.71	40.72	40.77	40.98	40.23	40.77	AT
ZN8TMT		15.63	17.74	19.79	20.88	21.13	22.29	24.36	26.72	30.07	35.91	39.67	40.54	40.37	40.29	40.37	40.46	XB



CTS Interlaboratory Testing Program for Color & Appearance Analysis 411

**Report #215
1st Qtr 2026**

Spectrophotometric - Sphere Geometry Instruments
Reflectance at 16 Selected Wavelengths

WebCode	Data Flag	Spectrophotometric Reflectance values (as %) at selected wavelengths																Instr Code
		400	420	440	460	480	500	520	540	560	580	600	620	640	660	680	700	
		Sample A261																
ZXDNDN		15.50	17.65	19.70	20.71	20.99	22.22	24.28	26.65	30.22	35.83	39.48	40.33	40.38	40.37	40.48	40.67	XC

Summary Statistics

	400	420	440	460	480	500	520	540	560	580	600	620	640	660	680	700
Grand Means	15.67	17.72	19.73	20.81	21.09	22.23	24.29	26.64	30.05	35.80	39.59	40.48	40.50	40.52	40.56	40.56
SD Btw Labs	0.30	0.21	0.18	0.15	0.16	0.15	0.13	0.14	0.15	0.16	0.17	0.18	0.18	0.23	0.23	0.33

YXHV9T (X) - High % reflectance data for half the wavelengths. Large replication difference for all wavelengths.

Key to Instrument Codes Reported by Participants

AJ Datacolor 600	AP Datacolor 750	AS Datacolor 800
AT Datacolor 850	AU Datacolor 1000	AW Datacolor 1050
CA Cary 5000	HP Hunter UltraScan PRO	MK Macbeth Color-Eye 7000
MM Macbeth Color-Eye 7000a	MP Minolta CM-36dG	MQ Minolta CM-700d
MT Minolta CM-2600d	MV Minolta CM-3000d Spectrophotometer	MW Minolta CM 3700a Spectrophotometer
MY Minolta Benchtop Spectrophotometer CM-3600a	XB X-Rite Ci7000 Series Benchtop Spectrophotometer	XC X-Rite Ci4200 Benchtop Spectrophotometer
XD X-Rite Ci7800 Benchtop Spectrophotometer	XE X-Rite Ci7600 Benchtop Spectrophotometer	XF X-Rite Ci6x Portable Spectrophotometer
XG X-Rite Ci7860 Benchtop Spectrophotometer	XH X-Rite Color i5 Benchtop Spectrophotometer	XI X-Rite Color i7 Benchtop Spectrophotometer
XU X-Rite Color Premier 8200 Spectrophotometer	XX Instrument make/model not specified by lab	



Interlaboratory Testing Program for Color & Appearance

Report #215

Analysis 440

1st Qtr 2026

60 Degree Gloss - Paint Chips

ASTM Method D 523

WebCode	Data Flag	Sample E261			Sample E262			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
26Q94U		25.88	-0.14	-0.24	37.28	0.37	0.55	GL
2AMMZR		26.40	0.39	0.66	37.50	0.60	0.88	GL
2PYC4K		26.30	0.29	0.49	36.58	-0.33	-0.48	PA
2WHEBM		26.00	-0.01	-0.02	36.48	-0.43	-0.63	GL
3BW3ZB		26.05	0.04	0.06	37.00	0.10	0.14	GL
3PGH2P		26.53	0.51	0.88	37.90	1.00	1.47	GL
4YE3GM		27.15	1.14	1.95	37.23	0.32	0.48	RA
6P8MAE	*	26.78	0.76	1.31	36.45	-0.45	-0.67	GD
6YW9FC		26.90	0.89	1.52	37.95	1.05	1.54	RQ
7P2R4D	X	25.35	-0.66	-1.14	25.35	-11.55	-17.03	GN
7QVHAT		26.10	0.09	0.15	36.73	-0.18	-0.26	GL
7QW9FB		26.00	-0.01	-0.02	36.33	-0.58	-0.85	GL
8FFQLH		26.31	0.30	0.51	37.01	0.10	0.15	GL
98UA7E		26.33	0.31	0.53	37.53	0.62	0.92	GL
9G6CRE		25.65	-0.36	-0.63	36.88	-0.03	-0.04	GL
9V2QPM	X	31.98	5.96	10.26	38.70	1.80	2.65	NH
AA66LB		25.33	-0.69	-1.19	36.48	-0.43	-0.63	EN
B937NN		26.23	0.21	0.36	37.05	0.15	0.22	GL
CMGTDC		25.63	-0.39	-0.67	36.83	-0.08	-0.11	GL
DG493J		26.50	0.49	0.84	36.90	0.00	0.00	RC
DJUF49		25.13	-0.89	-1.53	35.50	-1.40	-2.07	ST
E3GHH9		25.78	-0.24	-0.41	37.13	0.22	0.33	GL
E3HFT4		26.03	0.01	0.02	36.30	-0.60	-0.89	GN
EEYYCZ		25.35	-0.66	-1.14	37.40	0.50	0.73	GL
ETGR27		25.93	-0.09	-0.15	36.40	-0.50	-0.74	GL
FRZV98		26.53	0.51	0.88	37.43	0.52	0.77	GL
GH9WV8		26.20	0.19	0.32	37.55	0.65	0.95	GN
GH9YKB		25.65	-0.36	-0.63	36.20	-0.70	-1.04	GL
GNVMG2		26.30	0.29	0.49	36.90	0.00	0.00	GL
H9CJ9C		25.60	-0.41	-0.71	36.48	-0.43	-0.63	GL
HFZ773		26.15	0.14	0.23	37.13	0.22	0.33	GL
HUDQCA		26.03	0.01	0.02	36.35	-0.55	-0.81	GK
JQCTUU		26.56	0.55	0.94	38.30	1.40	2.06	GL



Interlaboratory Testing Program for Color & Appearance

Report #215

Analysis 440

1st Qtr 2026

60 Degree Gloss - Paint Chips

ASTM Method D 523

WebCode	Data Flag	Sample E261			Sample E262			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
JUB6PU		24.79	-1.22	-2.11	35.88	-1.03	-1.51	EN
JV8MRV		25.98	-0.04	-0.07	37.68	0.77	1.14	MW
JY8V7		25.40	-0.61	-1.06	36.28	-0.63	-0.92	GN
KAHKA2		26.03	0.01	0.02	36.15	-0.75	-1.11	GK
KNW6G8	*	24.60	-1.41	-2.43	36.38	-0.53	-0.78	EN
KPFY8A		26.33	0.31	0.53	37.60	0.70	1.03	GN
LULQC2		25.38	-0.64	-1.10	35.93	-0.98	-1.44	GL
MLQAZ2		25.53	-0.49	-0.84	36.20	-0.70	-1.04	GL
MPA629	*	25.83	-0.19	-0.33	35.40	-1.50	-2.21	XX
MQJ8PT		25.25	-0.76	-1.31	36.43	-0.48	-0.70	GK
MXDL4Y		26.93	0.91	1.57	37.60	0.70	1.03	GL
P2RWFT		26.43	0.41	0.71	37.70	0.80	1.18	GL
P6BNRW		26.80	0.79	1.35	38.10	1.20	1.76	GL
PJCMD8		25.58	-0.44	-0.76	37.03	0.12	0.18	GL
QFTRCZ		27.08	1.06	1.82	37.78	0.87	1.29	GL
R272Q4		25.70	-0.31	-0.54	36.98	0.07	0.11	GK
RCLXMU		26.23	0.21	0.36	36.78	-0.13	-0.19	MW
RFKAHU		26.30	0.29	0.49	37.35	0.45	0.66	GN
RHUCEQ	X	25.23	-0.79	-1.36	34.58	-2.33	-3.43	GL
RVZ9W8	*	24.35	-1.66	-2.86	35.40	-1.50	-2.21	DE
T3WK8V		26.33	0.31	0.53	38.08	1.17	1.73	GL
TBB974	X	28.30	2.29	3.93	39.38	2.47	3.64	RC
TCGQ4Y		25.58	-0.44	-0.76	36.05	-0.85	-1.26	GL
U2FQ6Z		25.40	-0.61	-1.06	36.05	-0.85	-1.26	GN
UHNH9Q		25.80	-0.21	-0.37	36.88	-0.03	-0.04	GK
UNUB3L		26.18	0.16	0.28	37.23	0.32	0.48	GL
VY7ZGG		26.78	0.76	1.31	37.65	0.75	1.10	GL
WYZ69V		25.83	-0.19	-0.33	37.20	0.30	0.44	GL
X3UJ9P		26.45	0.44	0.75	37.23	0.32	0.48	GK
XC7H32		25.65	-0.36	-0.63	36.90	0.00	0.00	GL
XWTA3X		25.95	-0.06	-0.11	36.55	-0.35	-0.52	GK
Z6V4CF		26.23	0.21	0.36	36.90	0.00	0.00	GK



Interlaboratory Testing Program for Color & Appearance

Report #215

Analysis 440

1st Qtr 2026

60 Degree Gloss - Paint Chips

ASTM Method D 523

WebCode	Data Flag	Sample E261			Sample E262			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
ZN8TMT		27.03	1.01	1.74	37.55	0.65	0.95	ZA

Summary Statistics	
Grand Means	
26.01 Gloss Units	36.90 Gloss Units
Std Dev Btwn Labs	
0.58 Gloss Units	0.68 Gloss Units
Statistics based on 62 of 66 reporting participants	

Comments on Assigned Data Flags for Test #440

- 7P2R4D(X) - Extreme data for Sample E262.
- 9V2QPM(X) - Extreme data for Sample E261.
- RHUCEQ(X) - Low data for Sample E262. Inconsistent within the determinations for Sample E262.
- TBB974(X) - Data for both samples are high. Possible systematic error.

Key to Instrument Codes Reported by Participants

DE	DeFelsko PosiTector GLS 60	EN	Elcometer 480
GD	BYK Gardner Spectro2Guide 45/0	GK	BYK-Gardner micro-gloss (60)
GL	BYK-Gardner micro-TRI-gloss	GN	BYK-Gardner new micro-TRI-gloss
MW	Minolta Multi-Gloss 268	NH	3nh NHG268 Multi-angle Precise Gloss Meter
PA	Photovolt micro-TRI-gloss G3	RA	Rhopoint Novo-Gloss Glossmeter
RC	Novo-Gloss Trio 20/60/85 Glossmeter	RQ	Rhopoint IQ Goniophotometer 20/60/85°
ST	Sheen Tri-Glossmaster	XX	Instrument make/model not specified by lab
ZA	Zehntner ZGM Series		



Interlaboratory Testing Program for Color & Appearance

Report #215

Analysis 440

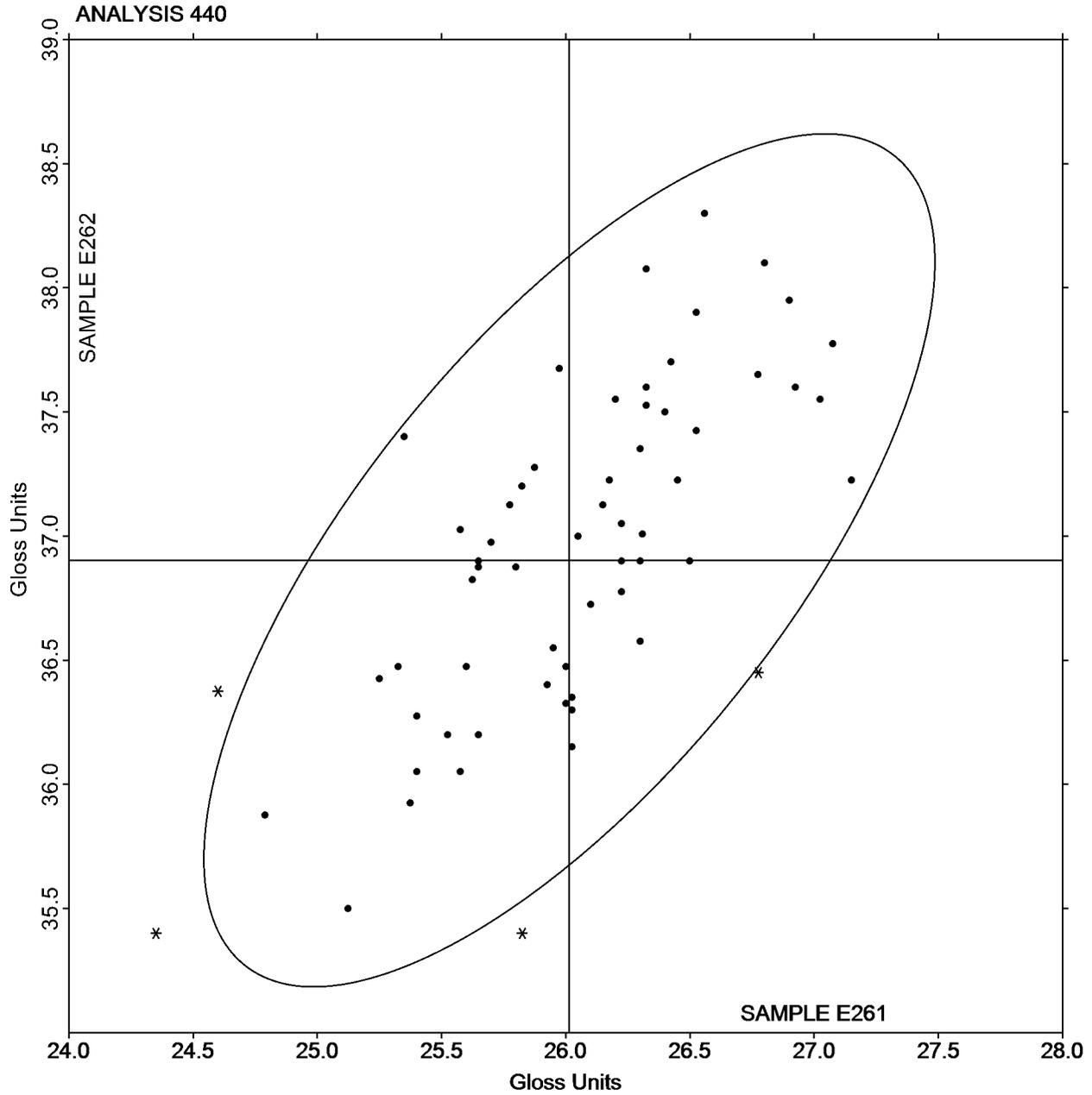
1st Qtr 2026

60 Degree Gloss - Paint Chips

ASTM Method D 523

SAMPLE E261 = 26.01 Gloss Units

SAMPLE E262 = 36.90 Gloss Units



-End of Report-