



Color & Appearance Testing Program

Summary Report # 174 - 4th Qtr 2015

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Analysis **Analysis Name**

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ABOUT THE 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, 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.

If there are any questions on the report or testing program, please contact:

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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 mailed 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 mailed 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> |
|------------------|--|--|
| * | 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. 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 an X on individual wavelength values as follows:

- X - The laboratory's mean for that wavelength is greater than a 95% deviation from the GRAND MEAN.

Key for Color Program (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 mailed 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. |

**Interlaboratory Testing Program for Color & Appearance
Analysis 408**

**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^* | |
| 377LP2 | | D151 | 59.12 | -11.81 | 21.56 | 0.87 | 0.06 | -0.16 | 0.89 | XN |
| | | D152 | 59.99 | -11.75 | 21.40 | | | | | |
| 3CBH92 | | D151 | 59.01 | -11.82 | 21.77 | 1.01 | 0.07 | -0.29 | 1.05 | XU |
| | | D152 | 60.02 | -11.75 | 21.48 | | | | | |
| 3M9LDV | X | D151 | 58.73 | -12.34 | 21.25 | 1.35 | 0.76 | 0.83 | 1.76 | MG |
| | | D152 | 60.08 | -11.58 | 22.08 | | | | | |
| 3VN266 | X | D151 | 59.17 | -12.00 | 22.25 | 0.98 | 0.04 | -0.63 | 1.16 | GB |
| | | D152 | 60.15 | -11.96 | 21.62 | | | | | |
| 7FFJJM | | D151 | 58.95 | -12.35 | 21.32 | 0.89 | 0.08 | -0.33 | 0.95 | HW |
| | | D152 | 59.84 | -12.27 | 20.99 | | | | | |
| 8FWXMP | | D151 | 58.50 | -11.91 | 21.78 | 0.94 | 0.07 | -0.28 | 0.98 | HY |
| | | D152 | 59.44 | -11.84 | 21.51 | | | | | |
| 8Z44CK | | D151 | 59.14 | -11.87 | 21.67 | 0.78 | 0.08 | -0.24 | 0.82 | XO |
| | | D152 | 59.92 | -11.80 | 21.43 | | | | | |
| B6FKVW | | D151 | 58.85 | -12.32 | 21.48 | 0.92 | 0.14 | -0.24 | 0.96 | HW |
| | | D152 | 59.77 | -12.18 | 21.25 | | | | | |
| BFZRUL | | D151 | 58.83 | -11.73 | 21.43 | 0.88 | 0.06 | -0.30 | 0.93 | XK |
| | | D152 | 59.71 | -11.67 | 21.13 | | | | | |
| C7U88J | | D151 | 59.10 | -12.28 | 21.56 | 0.95 | 0.02 | -0.24 | 0.98 | HW |
| | | D152 | 60.05 | -12.27 | 21.32 | | | | | |
| CLM2GN | | D151 | 59.41 | -11.86 | 21.26 | 0.81 | 0.07 | -0.45 | 0.93 | AE |
| | | D152 | 60.22 | -11.79 | 20.82 | | | | | |
| DCQL6P | | D151 | 59.25 | -11.87 | 21.69 | 1.03 | 0.10 | -0.40 | 1.11 | XZ |
| | | D152 | 60.28 | -11.78 | 21.29 | | | | | |
| DCV6VE | | D151 | 59.14 | -12.63 | 21.47 | 0.86 | 0.08 | -0.35 | 0.93 | HW |
| | | D152 | 59.99 | -12.55 | 21.12 | | | | | |
| E76TTQ | | D151 | 58.80 | -12.23 | 21.78 | 0.87 | 0.04 | -0.20 | 0.89 | GH |
| | | D152 | 59.66 | -12.19 | 21.58 | | | | | |

**Interlaboratory Testing Program for Color & Appearance
Analysis 408**

**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^* | |
| EG2YMN | | D151 | 58.48 | -11.21 | 20.95 | 0.99 | 0.04 | -0.23 | 1.02 | HK |
| | | D152 | 59.47 | -11.18 | 20.73 | | | | | |
| EKZAJN | X | D151 | 60.07 | 59.10 | 59.13 | 0.88 | 0.90 | 0.90 | 1.55 | MA |
| | | D152 | 60.96 | 60.01 | 60.03 | | | | | |
| GQ7P6H | | D151 | 59.03 | -11.91 | 21.98 | 0.95 | 0.05 | -0.34 | 1.01 | GH |
| | | D152 | 59.98 | -11.86 | 21.64 | | | | | |
| H6X3WH | | D151 | 59.18 | -11.73 | 21.31 | 0.88 | 0.04 | -0.19 | 0.90 | MU |
| | | D152 | 60.06 | -11.69 | 21.12 | | | | | |
| H7TKYJ | | D151 | 58.88 | -11.55 | 21.55 | 0.86 | 0.09 | -0.35 | 0.93 | HG |
| | | D152 | 59.74 | -11.46 | 21.20 | | | | | |
| HGAATH | | D151 | 59.50 | -11.87 | 21.66 | 0.92 | 0.05 | -0.26 | 0.96 | XD |
| | | D152 | 60.42 | -11.82 | 21.41 | | | | | |
| HRVBBD | | D151 | 59.04 | -12.17 | 21.53 | 0.87 | 0.09 | -0.25 | 0.91 | HW |
| | | D152 | 59.91 | -12.08 | 21.28 | | | | | |
| JHK9PD | | D151 | 59.01 | -12.18 | 21.24 | 0.93 | 0.08 | -0.28 | 0.97 | HW |
| | | D152 | 59.94 | -12.10 | 20.97 | | | | | |
| JHZVYE | | D151 | 58.70 | -11.60 | 21.30 | 0.87 | 0.04 | -0.23 | 0.90 | HK |
| | | D152 | 59.57 | -11.56 | 21.07 | | | | | |
| KHG7HK | | D151 | 58.76 | -12.17 | 21.30 | 0.87 | 0.05 | -0.22 | 0.89 | HW |
| | | D152 | 59.63 | -12.12 | 21.08 | | | | | |
| M48AA2 | | D151 | 59.54 | -11.77 | 21.62 | 0.90 | 0.03 | -0.19 | 0.91 | XZ |
| | | D152 | 60.43 | -11.74 | 21.43 | | | | | |
| MHPZ7J | | D151 | 58.59 | -12.17 | 21.76 | 1.07 | 0.11 | -0.39 | 1.14 | TO |
| | | D152 | 59.66 | -12.06 | 21.37 | | | | | |
| QTYUT8 | | D151 | 59.25 | -11.93 | 21.86 | 0.87 | 0.06 | -0.19 | 0.89 | GH |
| | | D152 | 60.11 | -11.87 | 21.67 | | | | | |
| VRBWPW | | D151 | 59.68 | -11.61 | 21.27 | 0.91 | 0.06 | -0.31 | 0.96 | XX |
| | | D152 | 60.59 | -11.55 | 20.96 | | | | | |

**Interlaboratory Testing Program for Color & Appearance
Analysis 408**

**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^* | |
| WBX4XC | | D151 | 59.07 | -11.89 | 21.65 | 0.84 | 0.05 | -0.23 | 0.87 | X0 |
| | | D152 | 59.91 | -11.84 | 21.43 | | | | | |
| WVKNW2 | | D151 | 59.09 | -11.83 | 21.82 | 0.95 | 0.05 | -0.22 | 0.97 | XZ |
| | | D152 | 60.04 | -11.79 | 21.60 | | | | | |
| WWZTP8 | | D151 | 59.00 | -11.92 | 21.74 | 0.98 | 0.06 | -0.28 | 1.01 | XM |
| | | D152 | 59.98 | -11.86 | 21.47 | | | | | |
| XF9D69 | | D151 | 58.66 | -11.75 | 21.68 | 0.91 | 0.05 | -0.30 | 0.96 | XU |
| | | D152 | 59.57 | -11.70 | 21.39 | | | | | |
| XLU827 | | D151 | 59.14 | -11.99 | 21.92 | 0.89 | 0.04 | -0.22 | 0.91 | GE |
| | | D152 | 60.02 | -11.95 | 21.70 | | | | | |
| XVWR3D | | D151 | 58.97 | -12.17 | 21.40 | 0.96 | 0.08 | -0.26 | 1.00 | HW |
| | | D152 | 59.93 | -12.10 | 21.15 | | | | | |
| YDYRP8 | | D151 | 59.13 | -11.87 | 21.61 | 0.99 | 0.08 | -0.32 | 1.04 | X0 |
| | | D152 | 60.11 | -11.80 | 21.29 | | | | | |
| YRU7PZ | | D151 | 58.82 | -12.17 | 21.41 | 0.98 | 0.04 | -0.29 | 1.02 | HW |
| | | D152 | 59.79 | -12.13 | 21.12 | | | | | |
| YTPRJR | X | D151 | 58.69 | -12.21 | 22.54 | 0.93 | 0.05 | -0.40 | 1.01 | FA |
| | | D152 | 59.62 | -12.16 | 22.14 | | | | | |
| Z7WXB6 | | D151 | 58.92 | -12.07 | 21.63 | 0.96 | 0.05 | -0.21 | 0.98 | XZ |
| | | D152 | 59.88 | -12.03 | 21.42 | | | | | |
| ZKTC8T | | D151 | 59.05 | -12.22 | 21.64 | 0.94 | 0.06 | -0.41 | 1.02 | HW |
| | | D152 | 59.98 | -12.17 | 21.24 | | | | | |
| ZNCBM9 | | D151 | 58.74 | -11.65 | 21.89 | 0.92 | 0.02 | -0.18 | 0.94 | XR |
| | | D152 | 59.66 | -11.63 | 21.71 | | | | | |

**Interlaboratory Testing Program for Color & Appearance
Analysis 408**

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

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 | | | | | | | |
| D151 | 59.00 | -11.95 | 21.57 | | | | |
| D152 | 59.92 | -11.89 | 21.30 | 0.91 | 0.06 | -0.27 | 0.96 |
| Std Dev Btwn Labs | | | | | | | |
| D151 | 0.27 | 0.27 | 0.23 | | | | |
| D152 | 0.26 | 0.26 | 0.25 | 0.06 | 0.03 | 0.07 | 0.07 |

Statistics based on 36 of 40 reporting participants

Comments assigned on Data Flags for Test #408

3M9LDV(X) - High b* values for Sample D152. Large replication difference for L*, a*, and b* values on Sample D152. Large DL, Da, Db and DE values.

3VN266(X) - High b* values for Sample D151. Large replication difference for b* values on Sample D152. Large Db and DE values.

EKZAJN(X) - High L*, a* and b* values. Large Da, Db, and DE values.

YTPRJR(X) - High b* values. Large replication difference for b* values on Sample D151.

Interlaboratory Testing Program for Color & Appearance

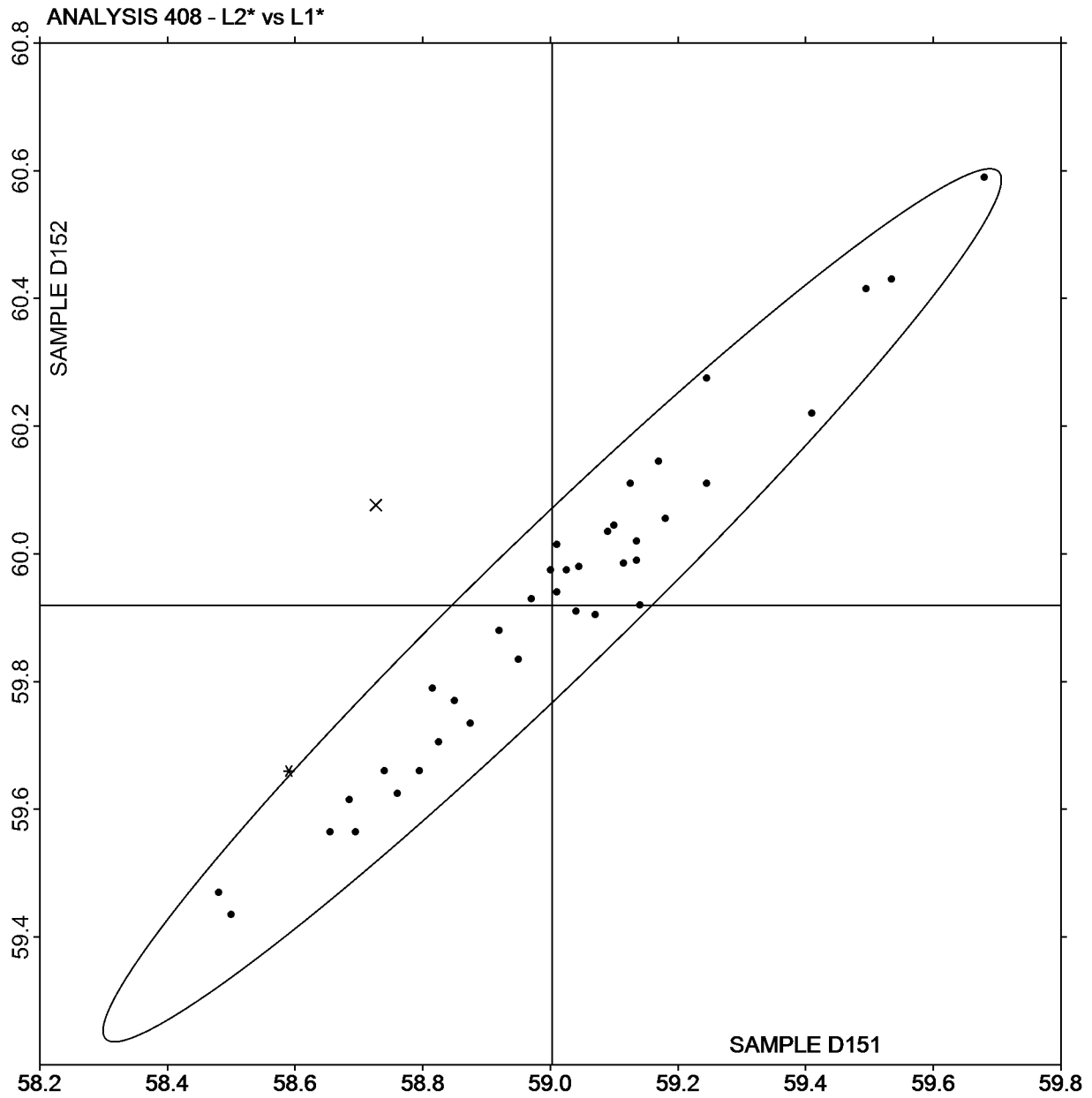
Analysis 408

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

L2* vs L1*

SAMPLE D151 = 59.00

SAMPLE D152 = 59.92



Interlaboratory Testing Program for Color & Appearance

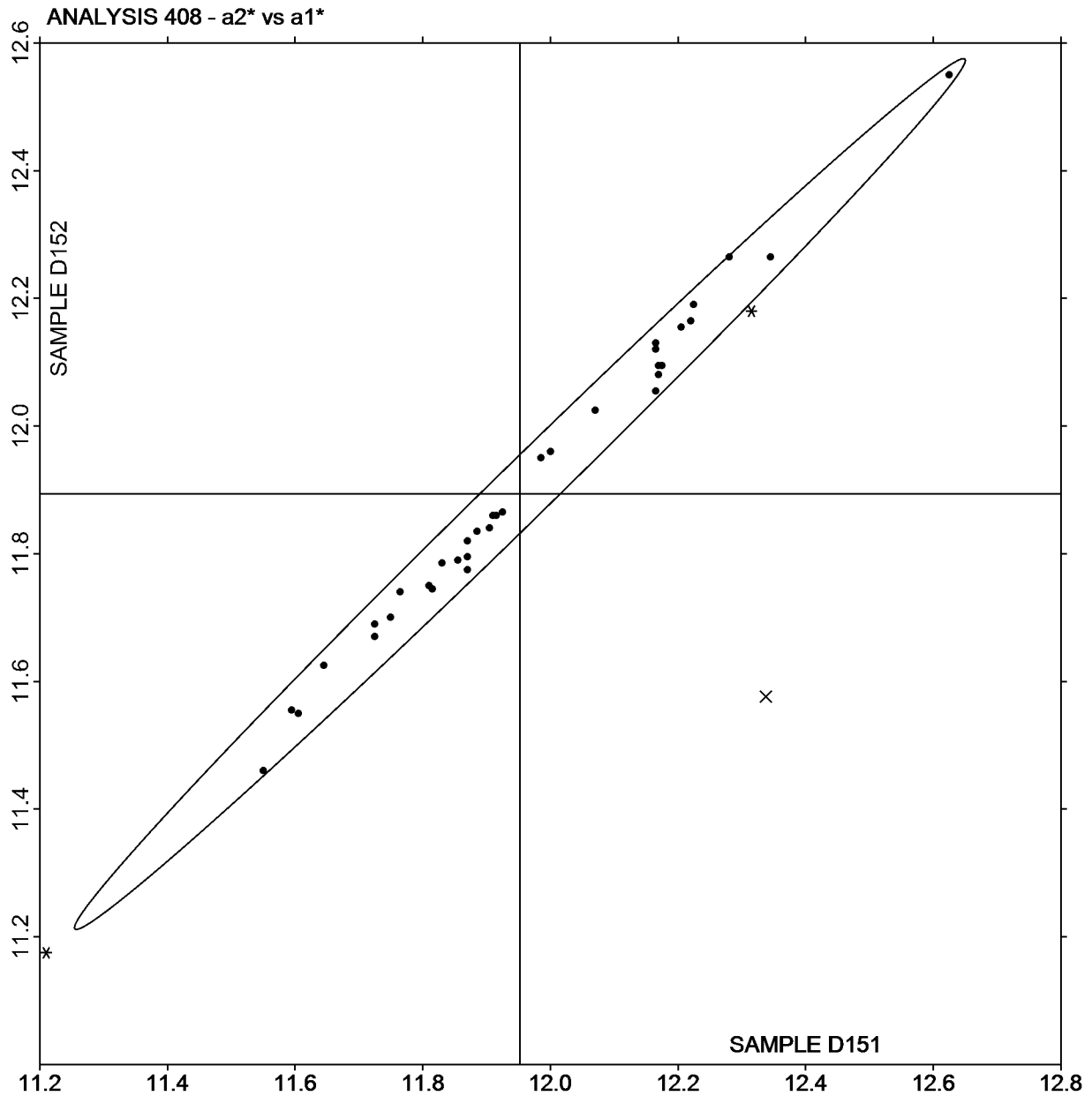
Analysis 408

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

a2* vs a1*

SAMPLE D151 = -11.95

SAMPLE D152 = -11.89



Plot created using absolute values.

Interlaboratory Testing Program for Color & Appearance

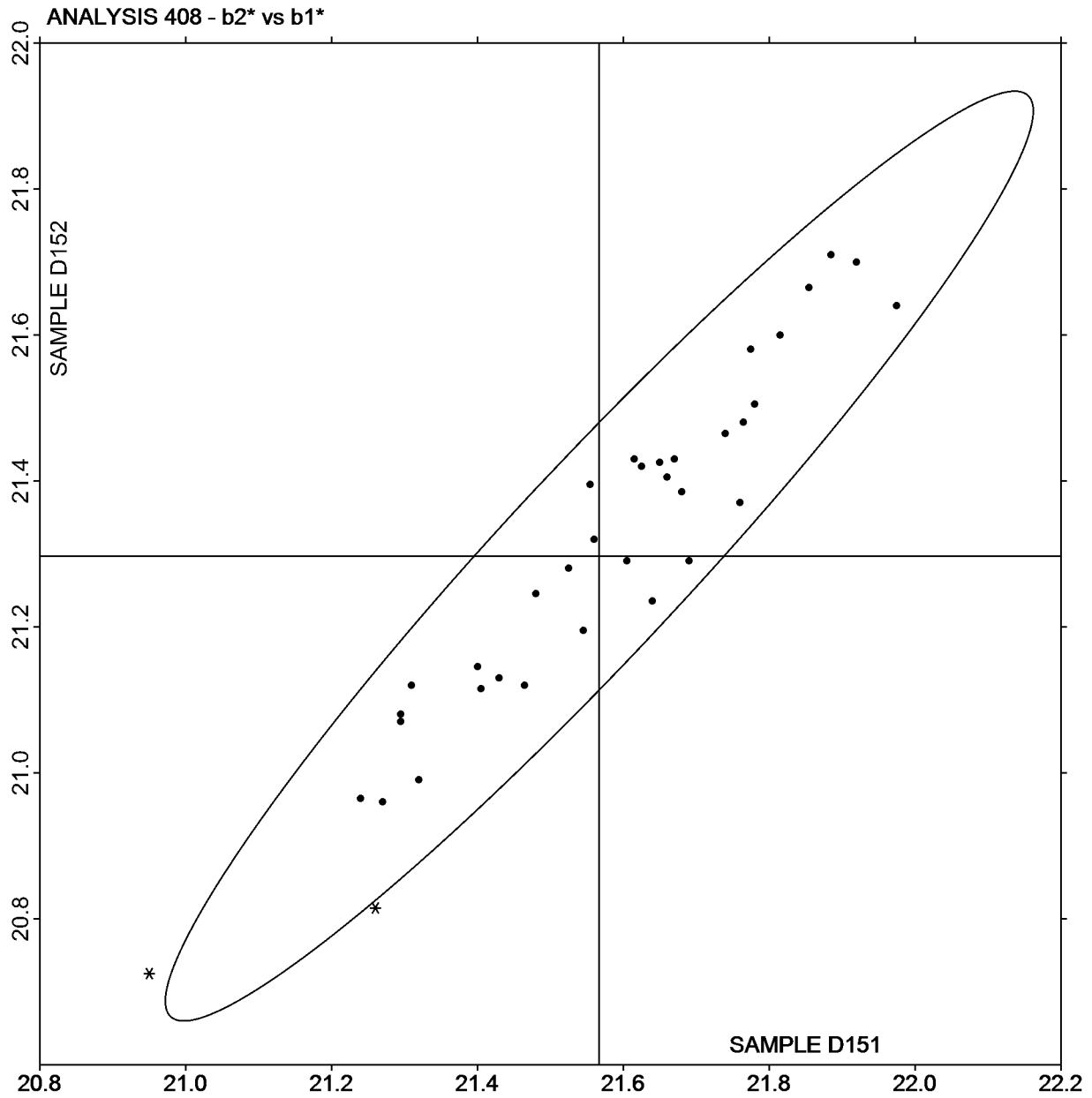
Analysis 408

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

b2* vs b1*

SAMPLE D151 = 21.57

SAMPLE D152 = 21.30



Plot created using absolute values.

**Interlaboratory Testing Program for Color & Appearance
Analysis 409**

**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^* | |
| 23PYBW | | D151 | 59.07 | -11.61 | 21.30 | 1.04 | 0.00 | -0.36 | 1.09 | SH |
| | | D152 | 60.11 | -11.61 | 20.95 | | | | | |
| 2CWVYZ | | D151 | 59.41 | -11.78 | 21.18 | 0.92 | 0.05 | -0.22 | 0.95 | A0 |
| | | D152 | 60.33 | -11.73 | 20.96 | | | | | |
| 2EFVBA | | D151 | 59.22 | -11.78 | 21.40 | 0.84 | 0.04 | -0.28 | 0.88 | HP |
| | | D152 | 60.05 | -11.74 | 21.13 | | | | | |
| 2JYQD2 | | D151 | 59.21 | -11.75 | 21.21 | 0.92 | 0.08 | -0.32 | 0.98 | AJ |
| | | D152 | 60.13 | -11.67 | 20.90 | | | | | |
| 2K8XKZ | | D151 | 59.32 | -11.93 | 21.27 | 0.97 | 0.08 | -0.30 | 1.01 | MV |
| | | D152 | 60.29 | -11.85 | 20.98 | | | | | |
| 2L3GM3 | | D151 | 59.27 | -11.72 | 21.60 | 0.93 | 0.12 | -0.33 | 0.99 | AJ |
| | | D152 | 60.20 | -11.60 | 21.27 | | | | | |
| 2R6RC8 | X | D151 | 62.19 | -12.22 | 21.96 | 0.79 | 0.15 | -0.32 | 0.86 | HF |
| | | D152 | 62.98 | -12.07 | 21.64 | | | | | |
| 2R8HJP | | D151 | 59.39 | -11.70 | 21.51 | 0.91 | 0.07 | -0.30 | 0.96 | AM |
| | | D152 | 60.30 | -11.63 | 21.21 | | | | | |
| 377LP2 | | D151 | 58.94 | -12.08 | 21.11 | 0.99 | 0.05 | -0.28 | 1.03 | X0 |
| | | D152 | 59.93 | -12.03 | 20.83 | | | | | |
| 3CBH92 | | D151 | 58.96 | -11.77 | 21.16 | 1.00 | 0.06 | -0.31 | 1.05 | XI |
| | | D152 | 59.96 | -11.71 | 20.85 | | | | | |
| 3ECMLM | | D151 | 59.26 | -11.82 | 21.16 | 0.87 | 0.06 | -0.24 | 0.90 | AQ |
| | | D152 | 60.12 | -11.76 | 20.92 | | | | | |
| 3JACZ9 | | D151 | 59.09 | -11.64 | 21.07 | 0.92 | 0.07 | -0.33 | 0.97 | AJ |
| | | D152 | 60.00 | -11.57 | 20.75 | | | | | |
| 3L24EZ | | D151 | 59.24 | -11.43 | 21.13 | 0.81 | 0.04 | -0.16 | 0.82 | A0 |
| | | D152 | 60.05 | -11.39 | 20.97 | | | | | |
| 3UCAB3 | | D151 | 59.13 | -11.87 | 21.01 | 0.86 | 0.05 | -0.23 | 0.89 | XI |
| | | D152 | 59.98 | -11.82 | 20.78 | | | | | |

**Interlaboratory Testing Program for Color & Appearance
Analysis 409**

**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^* | |
| 3YKQKR | | D151 | 59.35 | -11.91 | 21.38 | 0.89 | 0.04 | -0.20 | 0.91 | CE |
| | | D152 | 60.24 | -11.87 | 21.18 | | | | | |
| 43ZFM2 | | D151 | 59.03 | -11.75 | 20.93 | 0.95 | 0.05 | -0.21 | 0.97 | XH |
| | | D152 | 59.97 | -11.71 | 20.72 | | | | | |
| 4KFUY4 | | D151 | 59.02 | -11.95 | 21.26 | 0.94 | 0.06 | -0.32 | 0.99 | XM |
| | | D152 | 59.96 | -11.89 | 20.94 | | | | | |
| 4QPA9R | | D151 | 59.28 | -11.74 | 21.35 | 0.92 | 0.08 | -0.32 | 0.97 | AJ |
| | | D152 | 60.19 | -11.66 | 21.03 | | | | | |
| 4TECF2 | | D151 | 59.21 | -11.84 | 21.19 | 0.90 | 0.06 | -0.19 | 0.92 | XZ |
| | | D152 | 60.10 | -11.79 | 21.00 | | | | | |
| 6AWYYV | | D151 | 58.93 | -11.66 | 20.99 | 0.96 | 0.07 | -0.29 | 1.00 | XI |
| | | D152 | 59.88 | -11.60 | 20.70 | | | | | |
| 6NGGTK | | D151 | 59.24 | -11.59 | 21.28 | 0.96 | -0.03 | -0.29 | 1.00 | AM |
| | | D152 | 60.19 | -11.62 | 20.99 | | | | | |
| 6XZVU2 | | D151 | 58.82 | -11.94 | 21.20 | 0.99 | 0.09 | -0.38 | 1.06 | XM |
| | | D152 | 59.81 | -11.85 | 20.83 | | | | | |
| 7JXJY3 | | D151 | 59.38 | -11.98 | 21.15 | 0.72 | 0.06 | -0.19 | 0.75 | X0 |
| | | D152 | 60.10 | -11.92 | 20.96 | | | | | |
| 7PPU9Z | | D151 | 59.37 | -11.73 | 21.26 | 0.98 | 0.07 | -0.33 | 1.04 | A0 |
| | | D152 | 60.35 | -11.66 | 20.93 | | | | | |
| 7XYHLY | | D151 | 59.03 | -11.96 | 21.34 | 0.99 | 0.09 | -0.31 | 1.04 | PE |
| | | D152 | 60.01 | -11.87 | 21.03 | | | | | |
| 86BUEQ | | D151 | 58.78 | -11.61 | 21.16 | 0.95 | 0.07 | -0.38 | 1.02 | XH |
| | | D152 | 59.72 | -11.54 | 20.78 | | | | | |
| 88J4BU | | D151 | 59.27 | -11.92 | 21.19 | 0.95 | 0.10 | -0.30 | 0.99 | MK |
| | | D152 | 60.22 | -11.82 | 20.90 | | | | | |
| 89UNHH | X | D151 | 59.87 | -16.10 | 21.68 | 0.91 | 0.15 | -0.36 | 0.99 | MU |
| | | D152 | 60.78 | -15.95 | 21.32 | | | | | |

**Interlaboratory Testing Program for Color & Appearance
Analysis 409**

**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^* | |
| 8HMZUY | X | D151 | 59.04 | -12.34 | 21.43 | 0.95 | 0.12 | -0.26 | 0.99 | GD |
| | | D152 | 59.99 | -12.23 | 21.17 | | | | | |
| 8YN7JK | | D151 | 59.20 | -11.73 | 21.22 | 0.94 | 0.07 | -0.28 | 0.98 | MM |
| | D152 | 60.13 | -11.66 | 20.94 | | | | | | |
| 99APGQ | | D151 | 59.31 | -11.83 | 21.36 | 0.86 | 0.04 | -0.23 | 0.88 | AJ |
| | D152 | 60.16 | -11.80 | 21.14 | | | | | | |
| 9BX7RX | | D151 | 59.26 | -11.65 | 21.06 | 0.94 | 0.05 | -0.24 | 0.97 | MM |
| | D152 | 60.19 | -11.61 | 20.82 | | | | | | |
| 9WFD3R | | D151 | 59.01 | -11.95 | 20.97 | 0.85 | 0.05 | -0.21 | 0.87 | MM |
| | D152 | 59.85 | -11.90 | 20.77 | | | | | | |
| AC8B6M | | D151 | 59.40 | -11.87 | 21.27 | 0.86 | 0.04 | -0.27 | 0.90 | MM |
| | D152 | 60.26 | -11.83 | 21.00 | | | | | | |
| AF8J9W | | D151 | 58.74 | -11.64 | 21.26 | 1.00 | 0.07 | -0.38 | 1.07 | MU |
| | D152 | 59.74 | -11.57 | 20.88 | | | | | | |
| APW87K | | D151 | 59.31 | -11.85 | 21.14 | 0.87 | 0.05 | -0.20 | 0.89 | HP |
| | D152 | 60.18 | -11.81 | 20.95 | | | | | | |
| AQRQ9L | | D151 | 58.89 | -11.75 | 21.39 | 0.88 | 0.02 | -0.25 | 0.91 | MI |
| | D152 | 59.77 | -11.74 | 21.14 | | | | | | |
| AYYMVP | | D151 | 58.92 | -11.87 | 21.15 | 0.88 | 0.06 | -0.23 | 0.91 | XI |
| | D152 | 59.80 | -11.82 | 20.92 | | | | | | |
| B49ZDN | | D151 | 58.97 | -11.81 | 20.91 | 0.97 | 0.06 | -0.32 | 1.02 | XI |
| | D152 | 59.94 | -11.75 | 20.59 | | | | | | |
| B89CAN | | D151 | 59.25 | -11.86 | 21.45 | 0.90 | 0.05 | -0.29 | 0.95 | AJ |
| | D152 | 60.15 | -11.81 | 21.16 | | | | | | |
| BFZRUL | | D151 | 59.31 | -11.74 | 21.16 | 0.93 | 0.03 | -0.31 | 0.98 | A0 |
| | D152 | 60.24 | -11.71 | 20.85 | | | | | | |
| BHQT3U | | D151 | 59.05 | -11.55 | 21.34 | 0.96 | 0.06 | -0.29 | 1.00 | AJ |
| | D152 | 60.01 | -11.49 | 21.05 | | | | | | |

**Interlaboratory Testing Program for Color & Appearance
Analysis 409**

**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^* | |
| BMMHGG | X | D151 | 58.81 | -12.43 | 19.48 | 0.83 | 0.16 | -0.37 | 0.92 | X0 |
| | | D152 | 59.64 | -12.28 | 19.11 | | | | | |
| CFG4CQ | | D151 | 59.19 | -11.52 | 21.15 | 0.95 | 0.06 | -0.29 | 0.99 | MM |
| | | D152 | 60.13 | -11.46 | 20.86 | | | | | |
| CYCVXP | | D151 | 58.91 | -11.76 | 21.14 | 0.95 | 0.09 | -0.31 | 1.00 | MV |
| | | D152 | 59.86 | -11.68 | 20.83 | | | | | |
| DK76PP | | D151 | 58.90 | -11.76 | 21.13 | 0.83 | 0.04 | -0.18 | 0.85 | MI |
| | | D152 | 59.73 | -11.72 | 20.95 | | | | | |
| DL2MQQ | | D151 | 59.20 | -11.73 | 21.32 | 0.96 | 0.03 | -0.25 | 0.99 | MV |
| | | D152 | 60.16 | -11.70 | 21.07 | | | | | |
| DUWPVM | | D151 | 59.14 | -11.58 | 21.20 | 0.95 | 0.04 | -0.33 | 1.00 | AM |
| | | D152 | 60.09 | -11.54 | 20.88 | | | | | |
| DWYQVK | | D151 | 59.34 | -11.70 | 21.34 | 0.92 | 0.05 | -0.24 | 0.95 | AJ |
| | | D152 | 60.26 | -11.66 | 21.10 | | | | | |
| E6PQQN | | D151 | 59.17 | -11.80 | 21.50 | 1.03 | 0.09 | -0.43 | 1.11 | AL |
| | | D152 | 60.19 | -11.72 | 21.07 | | | | | |
| E8ZBVR | | D151 | 58.67 | -11.65 | 21.08 | 0.96 | 0.13 | -0.43 | 1.06 | MG |
| | | D152 | 59.62 | -11.52 | 20.65 | | | | | |
| ECBNDQ | | D151 | 58.81 | -11.74 | 21.14 | 0.98 | 0.07 | -0.41 | 1.06 | XI |
| | | D152 | 59.79 | -11.68 | 20.73 | | | | | |
| EG3T7U | | D151 | 59.33 | -11.55 | 21.36 | 0.95 | 0.09 | -0.27 | 0.99 | GF |
| | | D152 | 60.28 | -11.46 | 21.09 | | | | | |
| EM7U9A | X | D151 | 57.81 | -11.53 | 20.17 | 0.78 | 0.05 | -0.25 | 0.82 | HH |
| | | D152 | 58.59 | -11.48 | 19.92 | | | | | |
| FLUFE9 | | D151 | 59.32 | -11.84 | 21.34 | 0.97 | 0.06 | -0.34 | 1.03 | MT |
| | | D152 | 60.29 | -11.78 | 21.01 | | | | | |
| FVLV8J | | D151 | 59.21 | -11.70 | 21.05 | 0.89 | 0.05 | -0.20 | 0.91 | XI |
| | | D152 | 60.10 | -11.66 | 20.85 | | | | | |

**Interlaboratory Testing Program for Color & Appearance
Analysis 409**

**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^* | |
| GHMJ7P | | D151 | 58.90 | -11.74 | 21.24 | 0.92 | 0.09 | -0.28 | 0.97 | MI |
| | | D152 | 59.82 | -11.66 | 20.96 | | | | | |
| GZ932C | | D151 | 59.51 | -12.27 | 21.63 | 0.94 | 0.08 | -0.35 | 1.01 | CA |
| | | D152 | 60.45 | -12.19 | 21.28 | | | | | |
| H7TKYJ | | D151 | 58.87 | -11.55 | 21.03 | 0.92 | 0.06 | -0.26 | 0.95 | XI |
| | | D152 | 59.79 | -11.49 | 20.77 | | | | | |
| HCYY3A | | D151 | 59.40 | -12.17 | 21.28 | 0.99 | 0.10 | -0.44 | 1.09 | HW |
| | | D152 | 60.39 | -12.07 | 20.84 | | | | | |
| HDWAWR | | D151 | 59.22 | -11.48 | 21.39 | 0.98 | 0.07 | -0.31 | 1.03 | AM |
| | | D152 | 60.20 | -11.41 | 21.08 | | | | | |
| HRCMTJ | | D151 | 59.44 | -11.81 | 21.49 | 0.98 | 0.07 | -0.33 | 1.03 | AM |
| | | D152 | 60.41 | -11.75 | 21.17 | | | | | |
| HYEG9K | | D151 | 58.82 | -11.95 | 21.34 | 0.98 | 0.07 | -0.28 | 1.02 | XH |
| | | D152 | 59.79 | -11.88 | 21.07 | | | | | |
| J3MJA7 | | D151 | 59.00 | -11.83 | 21.18 | 0.93 | 0.07 | -0.24 | 0.96 | MU |
| | | D152 | 59.93 | -11.76 | 20.94 | | | | | |
| K8HBFH | | D151 | 59.15 | -11.62 | 21.16 | 0.87 | 0.04 | -0.20 | 0.89 | MM |
| | | D152 | 60.02 | -11.58 | 20.96 | | | | | |
| K9PTDE | | D151 | 59.36 | -11.52 | 21.14 | 0.87 | 0.02 | -0.20 | 0.89 | XX |
| | | D152 | 60.23 | -11.50 | 20.95 | | | | | |
| KTWX49 | | D151 | 59.14 | -11.85 | 21.29 | 1.02 | 0.08 | -0.38 | 1.09 | AR |
| | | D152 | 60.15 | -11.77 | 20.91 | | | | | |
| L99WLE | | D151 | 59.25 | -11.64 | 21.23 | 0.95 | 0.09 | -0.26 | 0.99 | AJ |
| | | D152 | 60.20 | -11.55 | 20.97 | | | | | |
| LGYGRC | | D151 | 59.31 | -11.78 | 21.21 | 0.94 | 0.07 | -0.36 | 1.01 | XI |
| | | D152 | 60.25 | -11.71 | 20.85 | | | | | |
| LJ7WYH | | D151 | 58.89 | -11.40 | 21.07 | 0.91 | 0.04 | -0.25 | 0.94 | XH |
| | | D152 | 59.80 | -11.36 | 20.82 | | | | | |

**Interlaboratory Testing Program for Color & Appearance
Analysis 409**

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

| WebCode | Flag | CIE L* a* b* Color Values | | | Color Difference Values | | | | InstrCode |
|---------|------|---------------------------|--------|-------|-------------------------|--------------|--------------|--------------|-----------|
| | | L* | a* | b* | ΔL^* | Δa^* | Δb^* | ΔE^* | |
| M88HDC | D151 | 59.13 | -11.69 | 21.61 | 1.02 | -0.05 | -0.34 | 1.07 | AJ |
| | D152 | 60.15 | -11.73 | 21.28 | | | | | |
| MHPZ7J | D151 | 58.81 | -11.96 | 21.62 | 1.03 | 0.06 | -0.32 | 1.07 | CA |
| | D152 | 59.83 | -11.90 | 21.30 | | | | | |
| MNDM2N | D151 | 59.02 | -11.94 | 21.01 | 0.98 | 0.05 | -0.30 | 1.02 | XI |
| | D152 | 60.00 | -11.89 | 20.71 | | | | | |
| MUJGVK | D151 | 59.18 | -11.57 | 21.02 | 0.83 | 0.03 | -0.14 | 0.84 | MM |
| | D152 | 60.01 | -11.54 | 20.89 | | | | | |
| NEKQED | D151 | 59.39 | -11.62 | 21.19 | 0.89 | 0.02 | -0.19 | 0.91 | AO |
| | D152 | 60.28 | -11.61 | 21.00 | | | | | |
| NFFC96 | D151 | 59.02 | -11.88 | 21.08 | 1.00 | 0.06 | -0.34 | 1.05 | XI |
| | D152 | 60.02 | -11.82 | 20.74 | | | | | |
| NYB32D | D151 | 59.19 | -11.65 | 21.28 | 0.93 | 0.07 | -0.32 | 0.98 | HP |
| | D152 | 60.11 | -11.58 | 20.97 | | | | | |
| P7PB3E | D151 | 59.26 | -11.84 | 21.27 | 0.84 | 0.03 | -0.19 | 0.86 | MV |
| | D152 | 60.10 | -11.81 | 21.08 | | | | | |
| PD8G28 | D151 | 59.14 | -11.92 | 21.19 | 0.96 | 0.11 | -0.35 | 1.03 | HP |
| | D152 | 60.10 | -11.81 | 20.84 | | | | | |
| Q4GHN7 | D151 | 59.09 | -11.67 | 21.22 | 1.04 | 0.06 | -0.39 | 1.11 | AQ |
| | D152 | 60.12 | -11.62 | 20.83 | | | | | |
| QEEEQ9 | D151 | 59.22 | -11.28 | 21.20 | 0.94 | 0.05 | -0.25 | 0.97 | AO |
| | D152 | 60.16 | -11.23 | 20.95 | | | | | |
| QTYUT8 | D151 | 59.31 | -11.86 | 21.40 | 0.86 | 0.03 | -0.22 | 0.89 | MV |
| | D152 | 60.17 | -11.83 | 21.18 | | | | | |
| R674U3 | D151 | 58.95 | -11.81 | 21.23 | 0.92 | 0.05 | -0.31 | 0.97 | XH |
| | D152 | 59.86 | -11.76 | 20.92 | | | | | |
| REWPZ2 | D151 | 59.07 | -11.57 | 21.12 | 0.84 | 0.06 | -0.20 | 0.87 | MM |
| | D152 | 59.91 | -11.51 | 20.92 | | | | | |

**Interlaboratory Testing Program for Color & Appearance
Analysis 409**

**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^* | |
| RQ83FF | | D151 | 59.35 | -11.63 | 21.00 | 0.87 | 0.02 | -0.22 | 0.90 | AM |
| | | D152 | 60.22 | -11.62 | 20.79 | | | | | |
| RUK3C8 | | D151 | 59.08 | -12.01 | 21.21 | 0.95 | 0.11 | -0.30 | 1.00 | MV |
| | | D152 | 60.03 | -11.90 | 20.91 | | | | | |
| T46QLZ | | D151 | 59.16 | -11.72 | 21.22 | 0.94 | 0.03 | -0.27 | 0.98 | MM |
| | | D152 | 60.10 | -11.70 | 20.96 | | | | | |
| TEN8E8 | | D151 | 59.18 | -11.78 | 21.12 | 0.83 | 0.06 | -0.15 | 0.84 | MM |
| | | D152 | 60.01 | -11.72 | 20.97 | | | | | |
| TKBUAD | | D151 | 58.95 | -12.03 | 20.97 | 0.96 | 0.07 | -0.23 | 0.99 | XI |
| | | D152 | 59.91 | -11.96 | 20.75 | | | | | |
| TYZPQD X | | D151 | 59.04 | -12.34 | 21.43 | 0.95 | 0.12 | -0.26 | 0.99 | GD |
| | | D152 | 59.99 | -12.23 | 21.17 | | | | | |
| UJYDUD | | D151 | 58.61 | -11.57 | 21.15 | 1.00 | 0.05 | -0.30 | 1.05 | XH |
| | | D152 | 59.61 | -11.52 | 20.85 | | | | | |
| UXYCHB | | D151 | 59.02 | -11.85 | 21.19 | 0.89 | 0.05 | -0.21 | 0.92 | XH |
| | | D152 | 59.91 | -11.80 | 20.98 | | | | | |
| V6DKJC | | D151 | 59.33 | -11.76 | 21.35 | 0.95 | 0.09 | -0.33 | 1.01 | AJ |
| | | D152 | 60.28 | -11.67 | 21.02 | | | | | |
| V6W928 | | D151 | 59.22 | -11.94 | 21.37 | 0.95 | 0.06 | -0.34 | 1.01 | MU |
| | | D152 | 60.17 | -11.88 | 21.03 | | | | | |
| VHL8RA | | D151 | 59.34 | -11.84 | 20.98 | 0.86 | 0.04 | -0.21 | 0.88 | MM |
| | | D152 | 60.19 | -11.80 | 20.77 | | | | | |
| VK6HK8 | | D151 | 59.21 | -11.49 | 21.40 | 0.93 | 0.08 | -0.30 | 0.98 | AJ |
| | | D152 | 60.14 | -11.42 | 21.11 | | | | | |
| VVAAA2 | | D151 | 59.30 | -11.59 | 21.28 | 0.84 | 0.08 | -0.27 | 0.88 | AJ |
| | | D152 | 60.14 | -11.51 | 21.01 | | | | | |
| VZ7UG7 | | D151 | 59.14 | -11.67 | 21.09 | 0.92 | 0.07 | -0.30 | 0.97 | AJ |
| | | D152 | 60.06 | -11.60 | 20.79 | | | | | |

**Interlaboratory Testing Program for Color & Appearance
Analysis 409**

**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^* | |
| WBX4XC | | D151 | 59.06 | -11.69 | 21.13 | 0.85 | 0.04 | -0.23 | 0.88 | MI |
| | | D152 | 59.90 | -11.65 | 20.90 | | | | | |
| WHEFDX | | D151 | 59.33 | -11.72 | 21.07 | 0.85 | 0.07 | -0.26 | 0.89 | AM |
| | | D152 | 60.18 | -11.65 | 20.81 | | | | | |
| X3ZU6R | | D151 | 59.15 | -11.55 | 21.31 | 0.91 | 0.06 | -0.27 | 0.95 | AQ |
| | | D152 | 60.06 | -11.49 | 21.04 | | | | | |
| XC9299 | | D151 | 59.24 | -11.61 | 21.01 | 0.84 | 0.04 | -0.14 | 0.85 | MM |
| | | D152 | 60.08 | -11.57 | 20.88 | | | | | |
| XF9D69 | | D151 | 59.19 | -11.83 | 21.33 | 0.86 | 0.06 | -0.25 | 0.90 | XI |
| | | D152 | 60.05 | -11.77 | 21.08 | | | | | |
| XLU827 | | D151 | 58.81 | -12.18 | 20.83 | 0.88 | 0.04 | -0.22 | 0.90 | GD |
| | | D152 | 59.69 | -12.15 | 20.62 | | | | | |
| XU9CR6 | | D151 | 59.00 | -11.48 | 21.00 | 0.93 | 0.08 | -0.29 | 0.98 | XI |
| | | D152 | 59.93 | -11.41 | 20.71 | | | | | |
| Z47V4W X | | D151 | 58.93 | -11.83 | 20.73 | 0.92 | 0.08 | -0.31 | 0.97 | GD |
| | | D152 | 59.85 | -11.76 | 20.43 | | | | | |
| Z7AQMYY | | D151 | 58.98 | -11.86 | 21.08 | 0.99 | 0.09 | -0.38 | 1.06 | XI |
| | | D152 | 59.97 | -11.77 | 20.70 | | | | | |
| ZKCVG7 | | D151 | 59.17 | -11.57 | 21.03 | 0.85 | 0.07 | -0.19 | 0.87 | AJ |
| | | D152 | 60.02 | -11.51 | 20.84 | | | | | |
| ZNQXWA X | | D151 | 58.53 | -11.80 | 21.79 | 0.90 | 0.05 | -0.23 | 0.92 | XH |
| | | D152 | 59.42 | -11.75 | 21.57 | | | | | |
| ZR9VQR | | D151 | 59.19 | -11.63 | 21.14 | 0.93 | 0.07 | -0.38 | 1.01 | MM |
| | | D152 | 60.12 | -11.56 | 20.76 | | | | | |
| ZT4DTT | | D151 | 58.82 | -11.78 | 21.06 | 0.90 | 0.05 | -0.27 | 0.94 | MJ |
| | | D152 | 59.72 | -11.74 | 20.79 | | | | | |
| ZW6J8Y | | D151 | 59.01 | -12.03 | 21.36 | 0.93 | 0.08 | -0.34 | 0.99 | XO |
| | | D152 | 59.94 | -11.95 | 21.03 | | | | | |

**Interlaboratory Testing Program for Color & Appearance
Analysis 409**

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

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 | | | | | | | |
| D151 | 59.12 | -11.76 | 21.22 | | | | |
| D152 | 60.05 | -11.70 | 20.94 | 0.92 | 0.06 | -0.28 | 0.97 |
| Std Dev Btwn Labs | | | | | | | |
| D151 | 0.19 | 0.17 | 0.17 | | | | |
| D152 | 0.18 | 0.17 | 0.16 | 0.06 | 0.03 | 0.07 | 0.07 |
| Statistics based on 104 of 112 reporting participants | | | | | | | |

Comments assigned on Data Flags for Test #409

2R6RC8(X) - High L* and b* values. Large Da value.

89UNHH(X) - High L* and Low a* values. Large Da value.

8HMZUY(X) - Low a* values.

BMMHGG(X) - Low a* and b* values. Large Da value.

EM7U9A(X) - Low L* and b* values.

TYZPQD(X) - Low a* values.

Z47V4W(X) - Low b* values.

ZNQXWA(X) - High b* values and low L* values.

Interlaboratory Testing Program for Color & Appearance

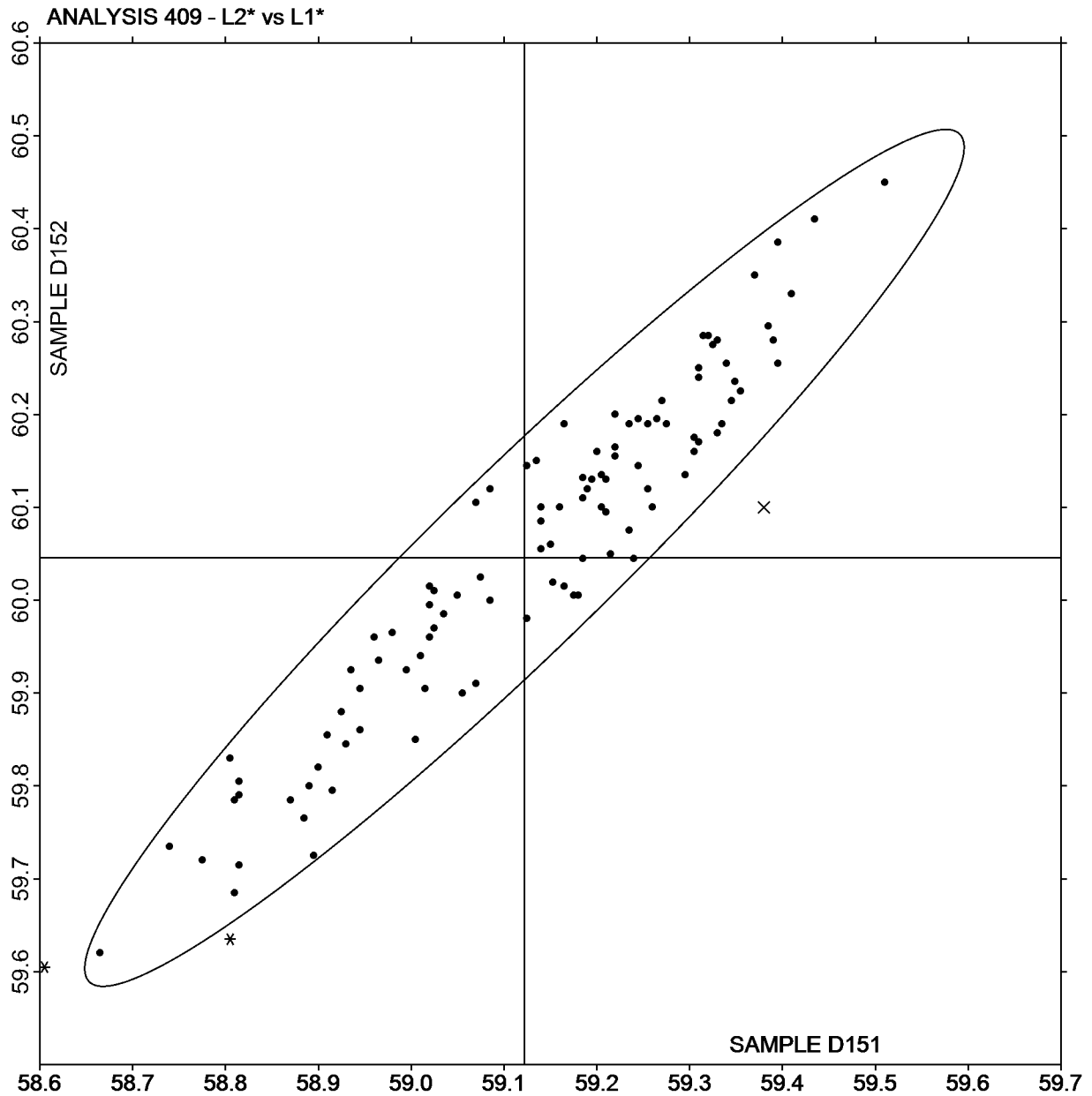
Analysis 409

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

L2* vs L1*

SAMPLE D151 = 59.12

SAMPLE D152 = 60.05



Interlaboratory Testing Program for Color & Appearance

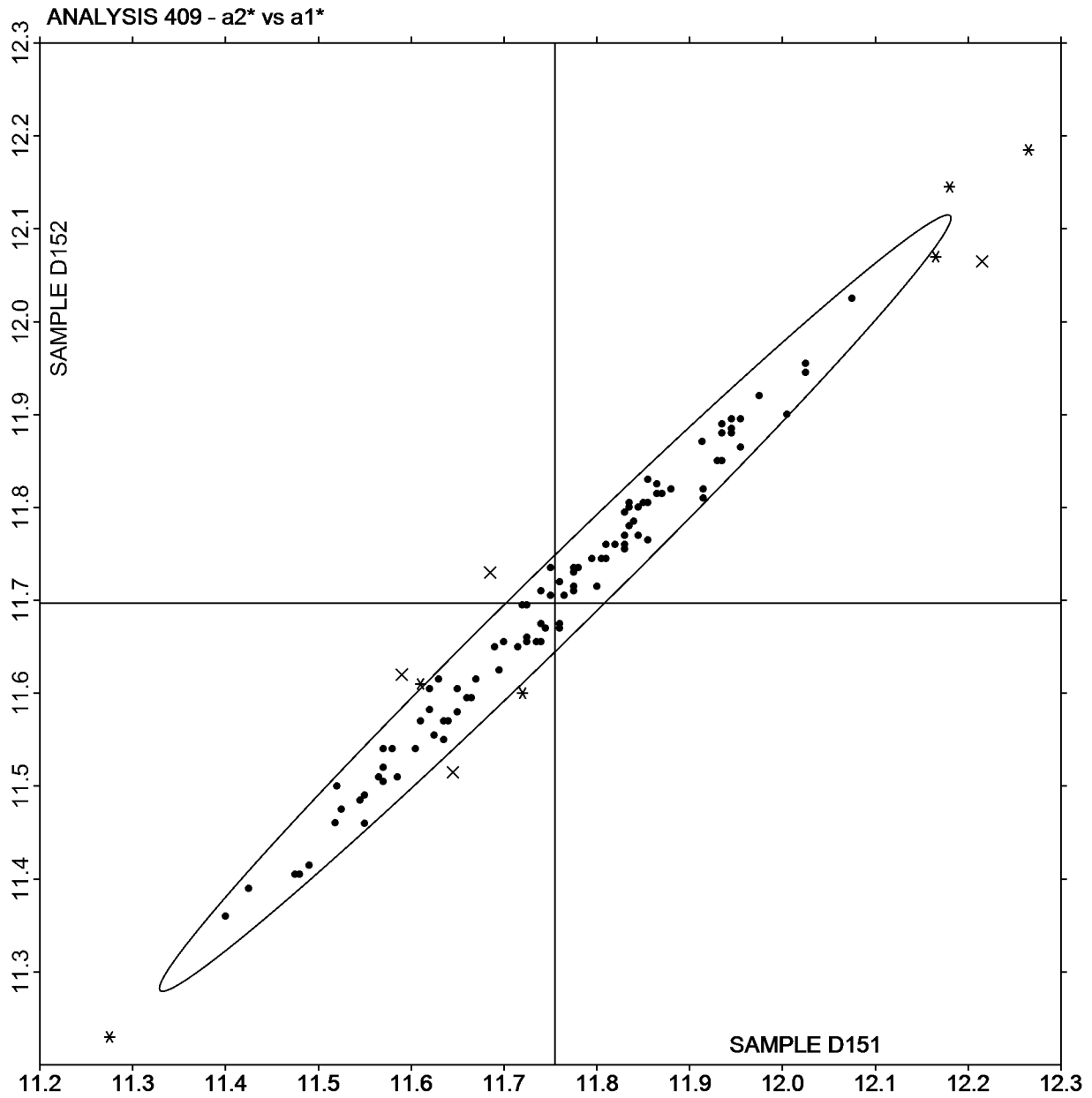
Analysis 409

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

a2* vs a1*

SAMPLE D151 = -11.76

SAMPLE D152 = -11.70



Plot created using absolute values.

Interlaboratory Testing Program for Color & Appearance

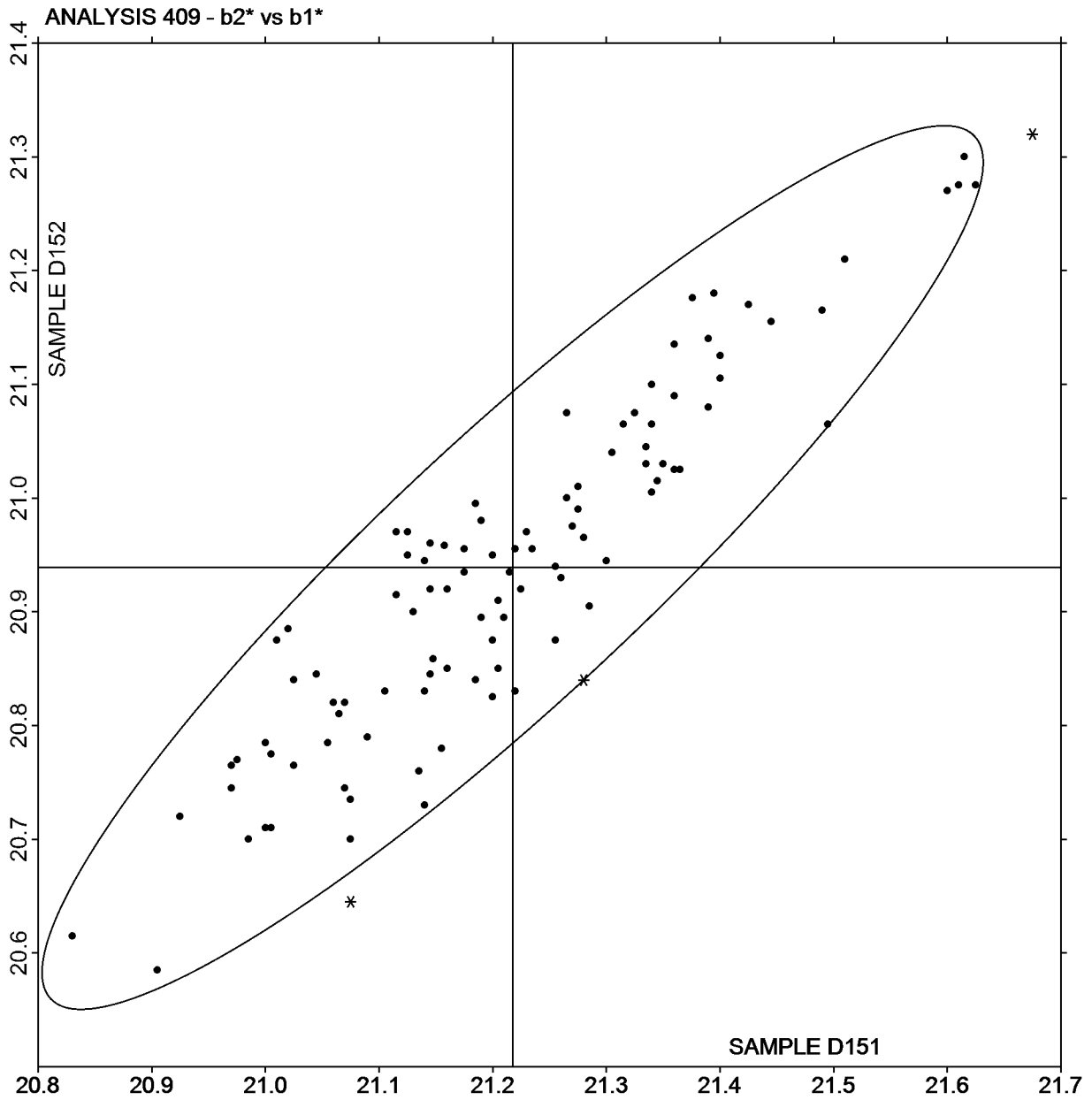
Analysis 409

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

b2* vs b1*

SAMPLE D151 = 21.22

SAMPLE D152 = 20.94



Plot created using absolute values.

Interlaboratory Testing Program for Color & Appearance Analysis 411

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 D151 | | | | | | | | | | | | | | | | | | |
| 23PYBW | | 10.48 | 11.92 | 14.83 | 16.81 | 17.51 | 20.20 | 26.38 | 34.84 | 34.03 | 27.18 | 23.35 | 21.28 | 21.09 | 22.58 | 22.46 | 20.42 | SH |
| 2CWVYZ | | 10.67 | 12.23 | 15.04 | 17.10 | 17.93 | 20.67 | 27.00 | 35.12 | 34.32 | 27.66 | 23.62 | 21.59 | 21.42 | 22.83 | 22.70 | 20.49 | AO |
| 2EFVBA | | 10.59 | 11.99 | 14.88 | 16.86 | 17.67 | 20.48 | 26.68 | 35.00 | 34.10 | 27.48 | 23.47 | 21.32 | 21.04 | 22.47 | 22.33 | 20.20 | HP |
| 2JYQD2 | | 10.41 | 12.12 | 14.99 | 16.88 | 17.71 | 20.50 | 26.96 | 34.84 | 33.81 | 27.43 | 23.45 | 21.42 | 21.30 | 22.59 | 22.41 | 20.47 | AJ |
| 2K8XKZ | | 10.56 | 12.06 | 15.06 | 17.05 | 17.71 | 20.52 | 26.97 | 35.34 | 34.25 | 27.35 | 23.37 | 21.45 | 21.29 | 22.85 | 22.67 | 20.55 | MV |
| 2L3GM3 | | 10.51 | 11.84 | 14.76 | 16.81 | 17.70 | 20.43 | 26.72 | 34.87 | 34.36 | 27.55 | 23.55 | 21.52 | 21.33 | 22.73 | 22.54 | 20.45 | AJ |
| 2R6RC8 | X | 12.88X | 13.91X | 16.92X | 18.96X | 20.01X | 23.06X | 30.57X | 39.01X | 38.06X | 30.89X | 26.27X | 24.31X | 23.47X | 25.70X | 25.29X | 23.35X | HF |
| 2R8HJP | | 10.50 | 11.96 | 14.85 | 16.95 | 17.79 | 20.55 | 26.82 | 35.08 | 34.46 | 27.66 | 23.67 | 21.62 | 21.41 | 22.86 | 22.63 | 20.43 | AM |
| 377LP2 | | 10.13 | 11.94 | 14.86 | 16.77 | 17.49 | 20.45 | 27.09 | 34.84 | 33.36 | 26.97 | 23.01 | 21.07 | 21.05 | 22.34 | 22.13 | 19.98 | XO |
| 3CBH92 | | 10.52 | 12.00 | 14.76 | 16.76 | 17.53 | 20.34 | 26.54 | 34.53 | 33.64 | 27.17 | 23.16 | 21.20 | 21.02 | 22.39 | 22.19 | 20.26 | XI |
| 3JACZ9 | | 10.58 | 12.16 | 14.94 | 16.88 | 17.62 | 20.38 | 26.60 | 34.62 | 33.87 | 27.35 | 23.36 | 21.29 | 21.12 | 22.47 | 22.17 | 19.88 | AJ |
| 3L24EZ | | 10.55 | 12.10 | 15.05 | 17.00 | 17.80 | 20.50 | 26.70 | 34.85 | 34.30 | 27.50 | 23.60 | 21.60 | 21.40 | 22.95 | 22.60 | 20.10 | AO |
| 3UCAB3 | | 10.60 | 12.16 | 15.01 | 16.91 | 17.75 | 20.57 | 26.77 | 34.80 | 33.74 | 27.25 | 23.24 | 21.33 | 21.19 | 22.62 | 22.12 | 20.11 | XI |
| 3YKQKR | | 10.52 | 11.98 | 14.96 | 16.98 | 17.74 | 20.54 | 26.85 | 35.44 | 34.25 | 27.39 | 23.46 | 21.46 | 21.23 | 22.77 | 22.53 | 20.25 | CE |
| 4KFUY4 | | 10.30 | 11.98 | 14.79 | 16.76 | 17.56 | 20.44 | 26.94 | 34.91 | 33.49 | 27.11 | 23.17 | 21.19 | 21.15 | 22.46 | 22.32 | 20.24 | XM |
| 4QPA9R | | 10.48 | 11.99 | 14.93 | 16.92 | 17.75 | 20.52 | 26.78 | 34.96 | 34.31 | 27.47 | 23.54 | 21.50 | 21.28 | 22.76 | 22.48 | 20.09 | AJ |
| 4TECF2 | | 10.57 | 12.06 | 14.98 | 16.91 | 17.74 | 20.52 | 26.80 | 34.97 | 33.89 | 27.32 | 23.36 | 21.41 | 21.28 | 22.73 | 22.42 | 20.40 | MJ |
| 6AWYYV | | 10.58 | 12.06 | 14.81 | 16.81 | 17.59 | 20.35 | 26.53 | 34.37 | 33.51 | 27.15 | 23.17 | 21.19 | 21.03 | 22.42 | 22.10 | 20.04 | XI |
| 6NGGTK | | 10.54 | 11.97 | 14.91 | 16.93 | 17.74 | 20.47 | 26.66 | 34.82 | 34.27 | 27.49 | 23.57 | 21.51 | 21.31 | 22.70 | 22.46 | 20.32 | AM |
| 6XZVU2 | | 10.69 | 12.12 | 15.12 | 16.92 | 17.79 | 20.67 | 27.26 | 34.92 | 33.41 | 27.14 | 23.24 | 21.39 | 21.06 | 22.89 | 22.73 | 20.87 | HW |
| 7JXJY3 | | 10.59 | 12.19 | 15.07 | 17.09 | 17.90 | 20.81 | 27.36 | 35.39 | 33.92 | 27.41 | 23.50 | 21.52 | 21.49 | 22.88 | 22.64 | 20.55 | XO |
| 7PPU9Z | | 10.61 | 12.18 | 15.03 | 17.01 | 17.82 | 20.62 | 26.90 | 34.95 | 34.53 | 27.60 | 23.56 | 21.54 | 21.44 | 22.86 | 22.56 | 20.11 | AO |
| 7XYHLY | | 10.39 | 11.82 | 14.77 | 16.75 | 17.48 | 20.23 | 26.48 | 34.98 | 33.85 | 27.03 | 23.13 | 21.15 | 20.94 | 22.50 | 22.29 | 20.18 | PE |
| 86BUEQ | | 10.30 | 11.86 | 14.64 | 16.65 | 17.40 | 20.15 | 26.25 | 34.21 | 33.42 | 27.00 | 23.05 | 21.09 | 20.84 | 22.38 | 22.33 | 20.42 | MI |
| 88J4BU | | 10.52 | 12.08 | 15.01 | 16.99 | 17.78 | 20.67 | 26.92 | 35.04 | 33.96 | 27.42 | 23.36 | 21.43 | 21.27 | 22.73 | 22.51 | 20.41 | MK |

Interlaboratory Testing Program for Color & Appearance Analysis 411

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 D151 | | | | | | | | | | | | | | | | | | |
| 89UNHH | | 10.50 | 12.05 | 15.00 | 16.90 | 17.55 | 20.45 | 27.20 | 35.50 | 34.10 | 27.30 | 23.30 | 21.40 | 21.20 | 22.60 | 22.50 | 20.70 | MU |
| 8HMZUY | | 13.18X | 11.61 | 14.70 | 16.76 | 17.54 | 20.44 | 27.38 | 35.26 | 33.43 | 27.75 | 23.16 | 19.47X | 21.07 | 22.25 | 22.33 | 20.78 | GD |
| 8YN7JK | | 10.54 | 12.07 | 14.93 | 16.92 | 17.71 | 20.51 | 26.71 | 34.84 | 33.97 | 27.44 | 23.37 | 21.42 | 21.29 | 22.71 | 22.47 | 20.38 | MM |
| 99APGQ | | 10.60 | 12.06 | 14.95 | 16.89 | 17.77 | 20.60 | 26.83 | 35.05 | 34.33 | 27.51 | 23.48 | 21.50 | 21.31 | 22.78 | 22.29 | 20.11 | AJ |
| 9BX7RX | | 10.69 | 12.23 | 15.09 | 17.01 | 17.78 | 20.63 | 26.88 | 34.83 | 33.98 | 27.53 | 23.48 | 21.50 | 21.37 | 22.76 | 22.55 | 20.52 | MM |
| AC8B6M | | 10.40 | 12.16 | 15.06 | 17.05 | 17.85 | 20.70 | 27.01 | 35.18 | 34.18 | 27.60 | 23.50 | 21.57 | 21.40 | 22.85 | 22.60 | 20.48 | MM |
| AF8J9W | | 10.24 | 11.78 | 14.59 | 16.53 | 17.32 | 20.06 | 26.41 | 34.24 | 33.41 | 26.95 | 22.99 | 21.03 | 20.89 | 22.36 | 22.23 | 20.23 | MU |
| APW87K | | 10.75 | 12.16 | 15.04 | 17.04 | 17.78 | 20.60 | 26.86 | 35.09 | 34.37 | 27.55 | 23.50 | 21.34 | 21.07 | 22.70 | 22.37 | 20.41 | HP |
| AQRQ9L | | 10.29 | 11.83 | 14.62 | 16.55 | 17.42 | 20.31 | 26.44 | 34.45 | 33.49 | 27.00 | 23.17 | 21.28 | 21.00 | 22.44 | 22.24 | 20.14 | MI |
| AYYMVP | | 10.35 | 11.84 | 14.76 | 16.75 | 17.56 | 20.34 | 26.53 | 34.50 | 33.55 | 27.07 | 22.99 | 21.13 | 20.99 | 22.37 | 22.04 | 19.91 | XI |
| B49ZDN | | 10.51 | 12.07 | 14.96 | 16.82 | 17.66 | 20.48 | 26.65 | 34.62 | 33.60 | 27.03 | 23.07 | 21.21 | 21.07 | 22.49 | 22.14 | 20.18 | XI |
| BFZRUL | | 10.54 | 12.16 | 15.07 | 16.97 | 17.84 | 20.50 | 26.83 | 35.07 | 34.26 | 27.50 | 23.54 | 21.46 | 21.29 | 22.73 | 22.52 | 20.39 | AO |
| BHQT3U | | 10.37 | 11.94 | 14.74 | 16.76 | 17.56 | 20.26 | 26.45 | 34.77 | 34.01 | 27.34 | 23.37 | 21.35 | 21.16 | 22.51 | 22.39 | 20.42 | AJ |
| BMMHGG | | 10.35 | 11.32X | 14.53 | 16.24X | 17.09X | 19.94 | 26.19 | 33.95 | 32.95 | 26.66 | 22.70 | 20.71 | 20.67 | 22.12 | 21.81 | 19.65 | XO |
| CFG4CQ | | 10.55 | 12.11 | 14.95 | 16.96 | 17.72 | 20.51 | 26.68 | 34.80 | 33.98 | 27.50 | 23.44 | 21.50 | 21.33 | 22.76 | 22.56 | 20.45 | MM |
| CYCVXP | | 10.54 | 11.88 | 14.77 | 16.77 | 17.42 | 20.09 | 26.38 | 34.76 | 33.73 | 26.99 | 23.02 | 21.09 | 20.92 | 22.48 | 22.30 | 20.15 | MV |
| DK76PP | | 10.35 | 11.89 | 14.76 | 16.72 | 17.51 | 20.33 | 26.51 | 34.43 | 33.51 | 27.10 | 23.05 | 21.13 | 21.09 | 22.41 | 22.12 | 20.02 | MI |
| DL2MQQ | | 10.47 | 11.97 | 14.90 | 16.99 | 17.64 | 20.35 | 26.70 | 35.09 | 34.13 | 27.36 | 23.36 | 21.41 | 21.25 | 22.74 | 22.65 | 20.63 | MV |
| DUWPVM | | 10.57 | 12.03 | 14.94 | 16.90 | 17.72 | 20.39 | 26.70 | 34.66 | 33.94 | 27.43 | 23.44 | 21.40 | 21.21 | 22.65 | 22.47 | 20.56 | AM |
| E6PQQN | | 10.38 | 11.92 | 14.78 | 16.77 | 17.60 | 20.41 | 26.70 | 34.82 | 33.99 | 27.42 | 23.39 | 21.35 | 21.14 | 22.60 | 22.47 | 20.30 | AL |
| E8ZBVR | | 10.22 | 11.74 | 14.74 | 16.44 | 17.32 | 20.13 | 26.33 | 34.29 | 33.11 | 26.73 | 22.94 | 21.00 | 21.01 | 22.39 | 22.05 | 20.15 | MG |
| ECBNDQ | | 10.24 | 11.92 | 14.67 | 16.62 | 17.47 | 20.25 | 26.49 | 34.36 | 33.40 | 27.02 | 22.97 | 21.07 | 20.95 | 22.37 | 21.95 | 19.93 | XI |
| EKZAJN | | 10.35 | 12.05 | 14.88 | 16.85 | 17.64 | 20.47 | 26.69 | 34.77 | 33.89 | 27.31 | 23.29 | 21.33 | 21.19 | 22.64 | 22.55 | 20.56 | MM |
| EM7U9A | | 10.82 | 11.99 | 14.94 | 16.56 | 17.29 | 19.92X | 26.03 | 33.96 | 33.01 | 26.27X | 22.42X | 20.66 | 20.40X | 22.22 | 21.92 | 20.07 | HH |
| FLUFE9 | | 10.42 | 12.01 | 14.98 | 17.07 | 17.77 | 20.57 | 27.04 | 35.10 | 34.19 | 27.48 | 23.48 | 21.49 | 21.31 | 22.80 | 22.58 | 20.51 | MT |

Interlaboratory Testing Program for Color & Appearance Analysis 411

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 D151 | | | | | | | | | | | | | | | | | | |
| FVLV8J | | 10.59 | 12.18 | 15.04 | 16.97 | 17.78 | 20.63 | 26.89 | 34.80 | 33.84 | 27.38 | 23.43 | 21.53 | 21.44 | 22.77 | 22.40 | 20.36 | XI |
| GZ932C | | 10.64 | 12.11 | 15.11 | 17.14 | 17.87 | 20.71 | 27.06 | 35.77X | 34.53 | 27.52 | 23.55 | 21.55 | 21.32 | 22.92 | 22.68 | 20.54 | CA |
| H7TKYJ | | 10.53 | 11.99 | 14.75 | 16.73 | 17.52 | 20.30 | 26.35 | 34.32 | 33.46 | 27.05 | 23.17 | 21.23 | 21.15 | 22.51 | 22.17 | 20.16 | XI |
| HCYY3A | X | 10.86 | 12.65X | 15.45X | 17.55X | 18.34X | 21.32X | 27.82X | 35.78X | 35.09X | 28.16X | 23.91 | 21.79 | 21.50 | 23.72X | 22.85 | 20.88 | HW |
| HDWAWR | | 10.74 | 12.15 | 14.90 | 16.92 | 17.72 | 20.39 | 26.61 | 34.74 | 34.16 | 27.61 | 23.61 | 21.50 | 21.32 | 22.77 | 22.54 | 20.72 | AM |
| HRCMTJ | | 10.57 | 12.13 | 14.14X | 16.98 | 17.83 | 20.62 | 27.00 | 35.19 | 34.36 | 27.64 | 23.70 | 21.61 | 21.45 | 22.89 | 22.68 | 20.52 | AM |
| HYEG9K | | 10.21 | 11.84 | 14.57 | 16.55 | 17.37 | 20.22 | 26.51 | 34.44 | 33.41 | 26.90 | 22.90 | 21.06 | 21.00 | 22.31 | 22.05 | 19.94 | XH |
| J3MJA7 | | 10.46 | 11.97 | 14.80 | 16.80 | 17.57 | 20.31 | 26.69 | 34.75 | 33.72 | 27.13 | 23.13 | 21.19 | 21.02 | 22.47 | 22.30 | 20.20 | MU |
| K8HBFH | | 10.53 | 12.10 | 14.91 | 16.89 | 17.72 | 20.56 | 26.74 | 34.73 | 33.86 | 27.46 | 23.39 | 21.43 | 21.27 | 22.64 | 22.45 | 20.45 | MM |
| K9PTDE | | 10.56 | 12.12 | 15.04 | 17.14 | 17.92 | 20.57 | 26.80 | 34.93 | 34.40 | 27.66 | 23.70 | 21.64 | 21.39 | 22.80 | 22.58 | 20.57 | XX |
| KTWX49 | | 10.44 | 11.94 | 14.90 | 16.81 | 17.69 | 20.38 | 26.73 | 34.83 | 33.98 | 27.29 | 23.32 | 21.27 | 21.08 | 22.56 | 22.34 | 20.20 | AR |
| L99WLE | | 10.50 | 12.07 | 14.98 | 16.94 | 17.82 | 20.48 | 26.79 | 35.14 | 34.19 | 27.55 | 23.52 | 21.49 | 21.30 | 22.72 | 22.45 | 20.27 | AJ |
| LGYGRC | | 10.48 | 12.17 | 15.01 | 16.99 | 17.82 | 20.69 | 26.96 | 34.95 | 34.06 | 27.52 | 23.55 | 21.50 | 21.41 | 22.87 | 22.44 | 20.44 | XI |
| LJ7WYH | | 10.53 | 11.99 | 14.76 | 16.75 | 17.53 | 20.24 | 26.37 | 34.16 | 33.61 | 27.19 | 23.22 | 21.30 | 21.21 | 22.53 | 22.29 | 20.25 | XH |
| MHPZ7J | | 9.98 | 11.51X | 14.48 | 16.46 | 17.20 | 19.97 | 26.23 | 34.76 | 33.73 | 26.87 | 22.95 | 20.95 | 20.73 | 22.33 | 22.13 | 20.03 | CA |
| MNDM2N | | 10.48 | 12.07 | 14.93 | 16.83 | 17.68 | 20.49 | 26.77 | 34.69 | 33.59 | 27.07 | 23.11 | 21.24 | 21.06 | 22.51 | 22.12 | 20.00 | XI |
| MUJGVK | | 10.61 | 12.16 | 15.00 | 16.98 | 17.79 | 20.63 | 26.75 | 34.71 | 33.88 | 27.46 | 23.42 | 21.48 | 21.34 | 22.67 | 22.49 | 20.47 | MM |
| NEKQED | | 10.69 | 12.20 | 15.06 | 17.03 | 17.86 | 20.65 | 26.88 | 34.97 | 34.55 | 27.64 | 23.61 | 21.64 | 21.48 | 22.95 | 22.69 | 20.17 | AO |
| NFFC96 | | 10.53 | 12.07 | 14.87 | 16.81 | 17.63 | 20.49 | 26.76 | 34.64 | 33.63 | 27.10 | 23.11 | 21.26 | 21.25 | 22.59 | 22.15 | 20.12 | XI |
| NYB32D | | 10.58 | 12.09 | 14.94 | 16.89 | 17.68 | 20.46 | 26.56 | 34.83 | 34.24 | 27.55 | 23.50 | 21.32 | 20.82 | 22.48 | 22.41 | 20.23 | HP |
| P7PB3E | | 10.68 | 12.00 | 14.94 | 17.06 | 17.75 | 20.42 | 26.95 | 35.11 | 34.17 | 27.36 | 23.39 | 21.43 | 21.30 | 22.76 | 22.67 | 20.51 | MV |
| PD8G28 | | 10.65 | 12.12 | 14.96 | 16.86 | 17.62 | 20.49 | 26.85 | 34.98 | 33.77 | 27.35 | 23.32 | 21.27 | 20.91 | 22.65 | 22.22 | 20.33 | HP |
| Q4GHN7 | | 10.39 | 11.94 | 14.85 | 16.80 | 17.64 | 20.35 | 26.69 | 34.66 | 33.92 | 27.31 | 23.36 | 21.35 | 21.18 | 22.60 | 22.34 | 20.25 | AQ |
| QEEEQ9 | | 10.50 | 12.10 | 14.90 | 16.95 | 17.70 | 20.40 | 26.60 | 34.70 | 34.30 | 27.60 | 23.65 | 21.60 | 21.50 | 23.10 | 22.70 | 20.10 | AO |
| QTYUT8 | | 10.47 | 12.00 | 14.93 | 17.01 | 17.70 | 20.46 | 26.92 | 35.17 | 34.31 | 27.45 | 23.44 | 21.45 | 21.33 | 22.78 | 22.70 | 20.46 | MV |

Interlaboratory Testing Program for Color & Appearance Analysis 411

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 D151 | | | | | | | | | | | | | | | | | | |
| R674U3 | | 10.35 | 11.91 | 14.76 | 16.70 | 17.51 | 20.34 | 26.70 | 34.58 | 33.59 | 27.09 | 23.09 | 21.21 | 21.10 | 22.48 | 22.22 | 20.12 | XH |
| REWPZ2 | | 10.53 | 12.05 | 14.89 | 16.87 | 17.64 | 20.45 | 26.58 | 34.66 | 33.83 | 27.33 | 23.30 | 21.37 | 21.23 | 22.64 | 22.40 | 20.32 | MM |
| RQ83FF | | 10.65 | 12.23 | 15.20 | 17.10 | 17.91 | 20.67 | 26.95 | 35.01 | 34.18 | 27.58 | 23.62 | 21.60 | 21.43 | 22.81 | 22.55 | 20.40 | AM |
| RUK3C8 | | 10.48 | 11.97 | 14.99 | 16.86 | 17.56 | 20.35 | 26.74 | 35.10 | 33.90 | 27.07 | 23.12 | 21.18 | 21.03 | 22.63 | 22.46 | 20.34 | MV |
| T46QLZ | | 10.47 | 12.04 | 14.91 | 16.89 | 17.69 | 20.49 | 26.71 | 34.81 | 33.89 | 27.39 | 23.34 | 21.41 | 21.26 | 22.69 | 22.43 | 20.34 | MM |
| TEN8E8 | | 10.55 | 12.09 | 14.98 | 16.93 | 17.72 | 20.56 | 26.75 | 34.85 | 33.86 | 27.37 | 23.31 | 21.39 | 21.24 | 22.66 | 22.44 | 20.36 | MM |
| TKBUAD | | 10.57 | 12.11 | 14.86 | 16.70 | 17.66 | 20.61 | 26.89 | 34.61 | 33.39 | 26.95 | 23.04 | 21.10 | 21.10 | 22.48 | 22.01 | 19.88 | AQ |
| TYZPQD | | 13.18X | 11.61 | 14.70 | 16.76 | 17.54 | 20.44 | 27.38 | 35.26 | 33.43 | 27.75 | 23.16 | 19.47X | 21.07 | 22.25 | 22.33 | 20.78 | GD |
| UJYDUD | | 10.26 | 11.79 | 14.51 | 16.48 | 17.24 | 20.05 | 26.09 | 34.03 | 33.07 | 26.79 | 22.84 | 21.04 | 20.94 | 22.37 | 21.86 | 19.84 | XH |
| UXYCHB | | 10.49 | 12.03 | 14.81 | 16.76 | 17.59 | 20.39 | 26.66 | 34.68 | 33.68 | 27.10 | 23.14 | 21.28 | 21.14 | 22.52 | 22.20 | 20.04 | XH |
| V6DKJC | | 10.47 | 12.18 | 14.96 | 16.93 | 17.76 | 20.47 | 26.76 | 35.06 | 34.39 | 27.51 | 23.57 | 21.48 | 21.33 | 22.70 | 22.57 | 20.40 | AJ |
| V6W928 | | 10.43 | 11.99 | 14.86 | 16.95 | 17.66 | 20.37 | 26.90 | 35.12 | 34.20 | 27.28 | 23.30 | 21.33 | 21.20 | 22.68 | 22.62 | 20.42 | MV |
| VHL8RA | | 10.74 | 12.30 | 15.21 | 17.12 | 17.98 | 20.82 | 27.11 | 35.03 | 34.00 | 27.54 | 23.51 | 21.56 | 21.39 | 22.76 | 22.54 | 20.50 | MM |
| VK6HK8 | | 10.61 | 11.92 | 14.85 | 16.83 | 17.63 | 20.35 | 26.54 | 34.73 | 34.32 | 27.53 | 23.57 | 21.53 | 21.38 | 22.69 | 22.48 | 20.43 | AJ |
| VVAAA2 | | 10.54 | 12.09 | 14.96 | 16.93 | 17.75 | 20.47 | 26.73 | 34.84 | 34.49 | 27.60 | 23.59 | 21.54 | 21.33 | 22.79 | 22.43 | 20.25 | AJ |
| VZ7UG7 | | 10.49 | 12.05 | 14.99 | 16.92 | 17.73 | 20.49 | 26.72 | 34.76 | 34.15 | 27.31 | 23.40 | 21.37 | 21.20 | 22.64 | 22.20 | 19.89 | AJ |
| WBX4XC | | 10.43 | 12.01 | 14.88 | 16.84 | 17.60 | 20.49 | 26.62 | 34.64 | 33.68 | 27.27 | 23.28 | 21.33 | 21.27 | 22.60 | 22.34 | 20.23 | MI |
| WHEFDX | | 10.80 | 12.24 | 15.03 | 17.04 | 17.87 | 20.56 | 26.87 | 34.85 | 33.94 | 27.51 | 23.51 | 21.45 | 21.24 | 22.30 | 22.31 | 20.35 | AM |
| X3ZU6R | | 11.18 | 12.03 | 14.85 | 16.83 | 17.64 | 20.34 | 26.62 | 34.75 | 34.01 | 27.43 | 23.51 | 21.43 | 21.27 | 22.74 | 22.47 | 20.41 | AQ |
| XC9299 | | 10.68 | 12.21 | 15.07 | 17.04 | 17.84 | 20.67 | 26.86 | 34.90 | 33.95 | 27.49 | 23.44 | 21.54 | 21.40 | 22.80 | 22.55 | 20.46 | MM |
| XF9D69 | | 10.46 | 12.02 | 14.83 | 16.86 | 17.70 | 20.58 | 26.83 | 34.80 | 33.85 | 27.39 | 23.37 | 21.44 | 21.30 | 22.67 | 22.24 | 20.22 | XI |
| XLU827 | | 10.05 | 11.73 | 14.55 | 17.02 | 18.22X | 20.55 | 26.94 | 34.40 | 33.13 | 27.14 | 22.47X | 20.60 | 21.06 | 22.36 | 22.33 | 19.68 | GD |
| XU9CR6 | | 10.50 | 12.09 | 14.87 | 16.86 | 17.64 | 20.45 | 26.60 | 34.49 | 33.59 | 27.20 | 23.33 | 21.41 | 21.32 | 22.68 | 22.26 | 20.31 | XI |
| Z7AQMY | | 10.38 | 12.07 | 14.88 | 16.76 | 17.56 | 20.41 | 26.70 | 34.76 | 33.56 | 27.00 | 23.08 | 21.24 | 21.13 | 22.50 | 22.22 | 20.15 | XI |
| ZKCVG7 | | 10.66 | 12.12 | 15.05 | 16.94 | 17.73 | 20.38 | 26.65 | 34.81 | 34.08 | 27.38 | 23.46 | 21.43 | 21.28 | 22.66 | 22.35 | 20.22 | AJ |

Interlaboratory Testing Program for Color & Appearance Analysis 411

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 D151 | | | | | | | | | | | | | | | | | | |
| ZNQXWA | | 9.72 | 11.33X | 14.10X | 16.21X | 17.03X | 19.83X | 25.99X | 33.91 | 33.23 | 26.87 | 22.73 | 20.79 | 20.68 | 21.98X | 21.82 | 19.81 | XH |
| ZR9VQR | | 10.38 | 12.14 | 14.99 | 16.90 | 17.73 | 20.54 | 26.75 | 34.76 | 33.90 | 27.48 | 23.44 | 21.46 | 21.30 | 22.68 | 22.50 | 20.51 | MM |
| ZT4DTT | | 10.36 | 11.96 | 14.64 | 16.72 | 17.54 | 20.41 | 26.80 | 34.28 | 33.38 | 27.03 | 23.07 | 21.07 | 20.92 | 22.22 | 22.10 | 20.20 | HU |
| ZW6J8Y | | 10.32 | 11.89 | 14.71 | 16.65 | 17.56 | 20.39 | 26.92 | 34.94 | 33.47 | 27.04 | 23.10 | 21.19 | 21.16 | 22.52 | 22.32 | 20.17 | XO |

Summary Statistics

| | | | | | | | | | | | | | | | | | |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Grand Means | | | | | | | | | | | | | | | | | |
| | 10.54 | 12.01 | 14.87 | 16.85 | 17.65 | 20.44 | 26.73 | 34.80 | 33.87 | 27.30 | 23.30 | 21.30 | 21.18 | 22.61 | 22.37 | 20.28 | |
| Std Dev Btwn Labs | | | | | | | | | | | | | | | | | |
| | 0.42 | 0.17 | 0.18 | 0.17 | 0.18 | 0.18 | 0.26 | 0.33 | 0.38 | 0.26 | 0.25 | 0.33 | 0.20 | 0.20 | 0.21 | 0.24 | |

Comments assigned on Data Flags for Test #411

2R6RC8 (X) - High % reflectance data at all wavelengths.

HCYY3A (X) - High % reflectance data at all wavelengths.

Interlaboratory Testing Program for Color & Appearance

Analysis 440

60 Degree Gloss - Paint Chips

ASTM Method D 523

| WebCode | Data Flag | Sample H151 | | | Sample H152 | | | Instr Code |
|---------|-----------|-------------|----------------------------|-------------------------------|-------------|----------------------------|-------------------------------|------------|
| | | Lab Mean | Difference from Grand Mean | Comparative Performance Value | Lab Mean | Difference from Grand Mean | Comparative Performance Value | |
| 2EFVBA | X | 43.55 | 0.09 | 0.21 | 50.25 | -1.27 | -2.05 | GL |
| 2WZGY7 | | 43.28 | -0.18 | -0.42 | 50.95 | -0.57 | -0.92 | GN |
| 377LP2 | | 43.80 | 0.34 | 0.79 | 51.78 | 0.26 | 0.42 | GL |
| 3CBH92 | | 42.68 | -0.78 | -1.80 | 50.48 | -1.04 | -1.69 | GL |
| 3ECMLM | | 43.93 | 0.47 | 1.08 | 52.03 | 0.51 | 0.83 | PC |
| 3VN266 | X | 43.83 | 0.37 | 0.85 | 50.23 | -1.29 | -2.09 | GB |
| 4QPA9R | X | 44.73 | 1.27 | 2.92 | 51.68 | 0.16 | 0.26 | MW |
| 6XZVU2 | | 43.13 | -0.33 | -0.77 | 50.53 | -0.99 | -1.61 | GK |
| 86BUEQ | | 43.83 | 0.37 | 0.85 | 52.50 | 0.99 | 1.60 | GL |
| 8HMZUY | | 43.50 | 0.04 | 0.10 | 51.40 | -0.12 | -0.19 | GB |
| 8Z3D73 | | 44.08 | 0.62 | 1.42 | 52.50 | 0.99 | 1.60 | GL |
| AF8J9W | X | 44.98 | 1.52 | 3.49 | 50.20 | -1.32 | -2.14 | GK |
| AT8HWT | X | 46.40 | 2.94 | 6.78 | 54.68 | 3.16 | 5.13 | GK |
| AYYMVP | | 43.45 | -0.01 | -0.02 | 51.28 | -0.24 | -0.39 | MH |
| BFZRUL | | 42.98 | -0.48 | -1.11 | 51.00 | -0.52 | -0.84 | GQ |
| BMMHGG | | 44.13 | 0.67 | 1.54 | 51.90 | 0.39 | 0.63 | GK |
| CFG4CQ | * | 44.43 | 0.97 | 2.23 | 52.03 | 0.52 | 0.84 | GL |
| CUX43P | | 44.23 | 0.77 | 1.77 | 52.65 | 1.14 | 1.84 | GL |
| CYCVXP | | 43.08 | -0.38 | -0.88 | 51.25 | -0.27 | -0.43 | RA |
| DK76PP | | 43.63 | 0.17 | 0.38 | 51.68 | 0.16 | 0.26 | GL |
| DWYQVK | | 43.93 | 0.47 | 1.08 | 51.65 | 0.14 | 0.22 | GL |
| E6PQQN | | 43.50 | 0.04 | 0.10 | 51.98 | 0.46 | 0.75 | GL |
| EG2YMN | | 43.43 | -0.03 | -0.08 | 50.95 | -0.57 | -0.92 | GK |
| EG3T7U | | 43.40 | -0.06 | -0.13 | 51.40 | -0.12 | -0.19 | GL |
| EVN9AU | | 43.53 | 0.07 | 0.15 | 51.58 | 0.06 | 0.10 | GL |
| F3YPJE | X | 42.00 | -1.46 | -3.36 | 50.40 | -1.12 | -1.81 | RA |
| FVLV8J | X | 45.40 | 1.94 | 4.47 | 50.33 | -1.19 | -1.93 | GL |
| GQ7P6H | | 43.75 | 0.29 | 0.67 | 51.78 | 0.26 | 0.42 | GA |
| H6X3WH | * | 43.90 | 0.44 | 1.02 | 52.95 | 1.44 | 2.33 | GK |
| H7TKYJ | | 43.00 | -0.46 | -1.05 | 50.50 | -1.02 | -1.65 | GL |
| HCYY3A | | 43.63 | 0.17 | 0.38 | 52.00 | 0.49 | 0.79 | GL |
| JHZVYE | | 42.73 | -0.73 | -1.69 | 50.83 | -0.69 | -1.12 | GL |
| K8HBFH | | 43.25 | -0.21 | -0.48 | 51.40 | -0.12 | -0.19 | GL |
| KW2LKJ | | 43.78 | 0.32 | 0.73 | 51.00 | -0.52 | -0.84 | GK |
| LJ7WYH | | 43.68 | 0.22 | 0.50 | 51.68 | 0.16 | 0.26 | GL |
| LYWWR4 | | 43.75 | 0.29 | 0.67 | 51.48 | -0.04 | -0.06 | MW |
| M88HDC | | 42.95 | -0.51 | -1.17 | 51.00 | -0.52 | -0.84 | MW |
| MHPZ7J | | 42.73 | -0.73 | -1.69 | 50.45 | -1.07 | -1.73 | GL |
| MNDM2N | | 43.29 | -0.17 | -0.40 | 51.26 | -0.26 | -0.42 | GL |
| NFFC96 | | 43.25 | -0.21 | -0.48 | 51.00 | -0.52 | -0.84 | GL |
| NYB32D | | 43.50 | 0.04 | 0.10 | 51.55 | 0.04 | 0.06 | XX |
| P7PB3E | | 43.20 | -0.26 | -0.59 | 51.45 | -0.07 | -0.11 | GL |
| QYMGND | | 43.33 | -0.13 | -0.31 | 51.30 | -0.22 | -0.35 | GL |
| R674U3 | | 43.73 | 0.27 | 0.61 | 51.88 | 0.36 | 0.58 | GL |
| REWPZ2 | | 43.18 | -0.28 | -0.65 | 51.40 | -0.12 | -0.19 | GL |

Interlaboratory Testing Program for Color & Appearance

Analysis 440

60 Degree Gloss - Paint Chips

ASTM Method D 523

| WebCode | Data Flag | Sample H151 | | | Sample H152 | | | Instr Code |
|---------|-----------|-------------|----------------------------|-------------------------------|-------------|----------------------------|-------------------------------|------------|
| | | Lab Mean | Difference from Grand Mean | Comparative Performance Value | Lab Mean | Difference from Grand Mean | Comparative Performance Value | |
| RQ83FF | | 44.13 | 0.67 | 1.54 | 52.45 | 0.94 | 1.52 | GK |
| TKBUAD | | 43.33 | -0.13 | -0.31 | 51.23 | -0.29 | -0.47 | GK |
| TYZPQD | | 43.25 | -0.21 | -0.48 | 51.58 | 0.06 | 0.10 | GB |
| UFYAZ7 | X | 44.10 | 0.64 | 1.48 | 48.18 | -3.34 | -5.42 | GL |
| UJYDUD | | 42.50 | -0.96 | -2.21 | 50.78 | -0.74 | -1.20 | GL |
| UXYCHB | | 43.93 | 0.47 | 1.08 | 52.10 | 0.59 | 0.95 | GK |
| V6W928 | | 42.78 | -0.68 | -1.57 | 50.78 | -0.74 | -1.20 | GL |
| VHL8RA | | 43.40 | -0.06 | -0.13 | 51.98 | 0.46 | 0.75 | RA |
| VK6HK8 | | 43.30 | -0.16 | -0.36 | 50.98 | -0.54 | -0.88 | GN |
| VVAAA2 | * | 43.48 | 0.02 | 0.04 | 50.38 | -1.14 | -1.85 | GK |
| VZ7UG7 | | 43.73 | 0.27 | 0.61 | 51.80 | 0.29 | 0.46 | XX |
| WBX4XC | | 43.30 | -0.16 | -0.36 | 51.33 | -0.19 | -0.31 | GL |
| WQAD68 | | 43.48 | 0.02 | 0.04 | 52.05 | 0.54 | 0.87 | GK |
| WVKNW2 | | 43.88 | 0.42 | 0.96 | 51.93 | 0.41 | 0.67 | GL |
| WWZTP8 | | 42.90 | -0.56 | -1.28 | 50.78 | -0.74 | -1.20 | GL |
| XF9D69 | | 42.68 | -0.78 | -1.80 | 50.68 | -0.84 | -1.36 | GN |
| XLU827 | | 43.35 | -0.11 | -0.25 | 51.28 | -0.24 | -0.39 | GN |
| YC3CFV | | 43.88 | 0.42 | 0.96 | 52.05 | 0.54 | 0.87 | GN |
| YDYRP8 | | 43.65 | 0.19 | 0.44 | 51.98 | 0.46 | 0.75 | GL |
| YLNDV6 | | 43.43 | -0.03 | -0.08 | 51.38 | -0.14 | -0.23 | GX |
| YMP9K3 | | 43.78 | 0.32 | 0.73 | 52.55 | 1.04 | 1.68 | GK |
| YQHAKV | | 43.00 | -0.46 | -1.05 | 51.58 | 0.06 | 0.10 | GK |
| YTPRJR | X | 44.70 | 1.24 | 2.86 | 51.63 | 0.11 | 0.18 | GL |
| Z47V4W | X | 44.05 | 0.59 | 1.36 | 49.15 | -2.37 | -3.84 | GB |
| Z7WXB6 | | 44.28 | 0.82 | 1.88 | 52.78 | 1.26 | 2.05 | GK |
| ZW6J8Y | | 43.10 | -0.36 | -0.82 | 51.70 | 0.19 | 0.30 | GN |

Summary Statistics

| | | | | |
|-------------------|-------|-------------|-------|-------------|
| Grand Means | 43.46 | Gloss Units | 51.52 | Gloss Units |
| Std Dev Btwn Labs | 0.43 | Gloss Units | 0.62 | Gloss Units |

Statistics based on 61 of 71 reporting participants

Interlaboratory Testing Program for Color & Appearance**Analysis 440****60 Degree Gloss - Paint Chips****ASTM Method D 523**

Comments on assigned Data Flags for Test #440

2EFVBA(X) - Inconsistent in testing between samples.

3VN266(X) - Inconsistent in testing between samples and inconsistent in testing within both samples.

4QPA9R(X) - High data for Sample H151.

AF8J9W(X) - High data for Sample H151.

AT8HWT(X) - Data for both samples are high.

F3YPJE(X) - Low data for Sample H151.

FVLV8J(X) - High data for Sample H151.

UFYAZ7(X) - Low data for Sample H152.

YTPRJR(X) - High data for Sample H151.

Z47V4W(X) - Low data for Sample H152.

Interlaboratory Testing Program for Color & Appearance

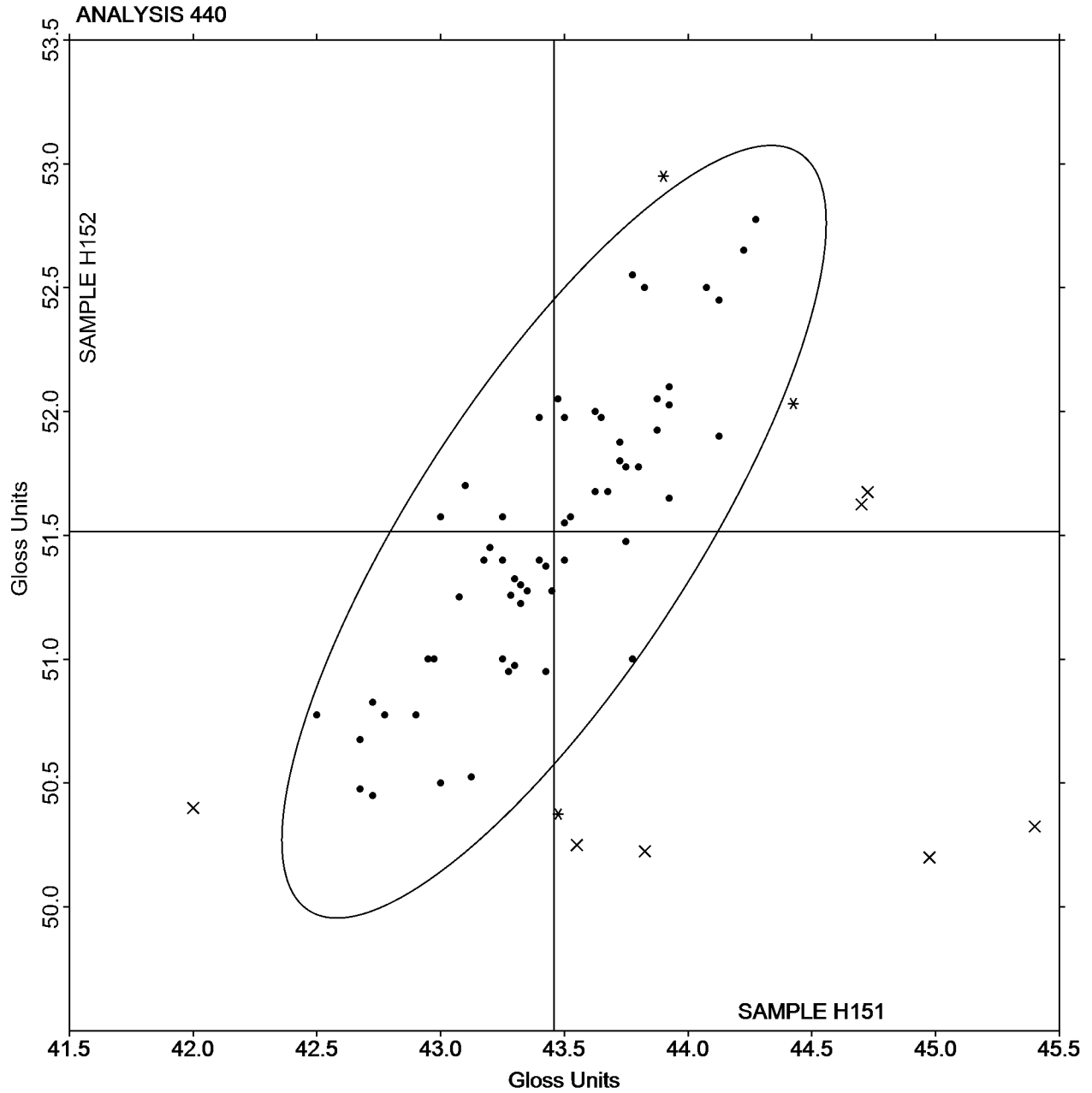
Analysis 440

60 Degree Gloss - Paint Chips

ASTM Method D 523

SAMPLE H151 = 43.46 Gloss Units

SAMPLE H152 = 51.52 Gloss Units



Interlaboratory Testing Program for Color & Appearance

Analysis 442

85 Degree Gloss - Paint Chips

ASTM Method D 523

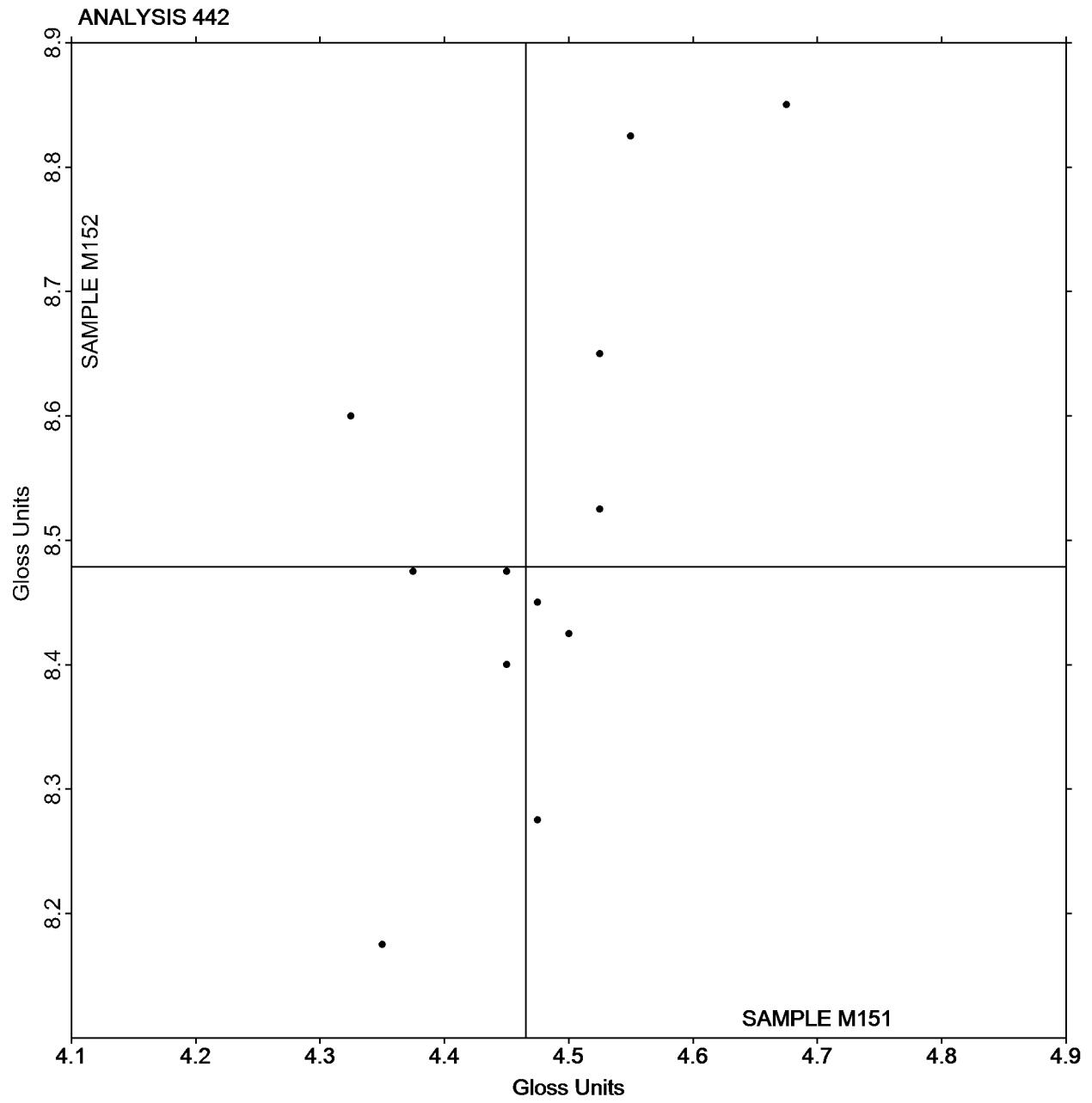
| WebCode | Data Flag | Sample M151 | | | Sample M152 | | | Instr Code |
|---------|-----------|-------------|----------------------------|-------------------------------|-------------|----------------------------|-------------------------------|------------|
| | | Lab Mean | Difference from Grand Mean | Comparative Performance Value | Lab Mean | Difference from Grand Mean | Comparative Performance Value | |
| 3CBH92 | | 4.35 | -0.12 | -1.21 | 8.18 | -0.30 | -1.37 | GL |
| H7TKYJ | | 4.48 | 0.01 | 0.10 | 8.28 | -0.20 | -0.92 | RA |
| K8HBFH | | 4.53 | 0.06 | 0.62 | 8.53 | 0.05 | 0.21 | GN |
| MHPZ7J | | 4.38 | -0.09 | -0.95 | 8.10 | -0.38 | -1.71 | GL |
| NFFC96 | | 4.53 | 0.06 | 0.62 | 8.65 | 0.17 | 0.77 | GL |
| P7PB3E | | 4.38 | -0.09 | -0.95 | 8.48 | 0.00 | -0.02 | GL |
| REWPZ2 | | 4.45 | -0.02 | -0.16 | 8.48 | 0.00 | -0.02 | GL |
| UJYDUD | | 4.45 | -0.02 | -0.16 | 8.40 | -0.08 | -0.36 | GL |
| V6W928 | | 4.55 | 0.08 | 0.89 | 8.83 | 0.35 | 1.56 | GL |
| VK6HK8 | | 4.33 | -0.14 | -1.47 | 8.60 | 0.12 | 0.55 | GN |
| XF9D69 | | 4.68 | 0.21 | 2.20 | 8.85 | 0.37 | 1.67 | GL |
| XLU827 | | 4.48 | 0.01 | 0.10 | 8.45 | -0.03 | -0.13 | GN |
| ZW6J8Y | | 4.50 | 0.03 | 0.36 | 8.43 | -0.05 | -0.24 | GN |

Summary Statistics

| | | | | |
|---|------|-------------|------|-------------|
| Grand Means | 4.47 | Gloss Units | 8.48 | Gloss Units |
| Std Dev Btwn Labs | 0.10 | Gloss Units | 0.22 | Gloss Units |
| Statistics based on 13 of 13 reporting participants | | | | |

SAMPLE M151 = 4.47 Gloss Units

SAMPLE M152 = 8.48 Gloss Units



Instrument Code List - Report# 174

Instrument information as provided by laboratories

| <u>Analysis</u> | <u>Analysis Name</u> |
|-----------------|-------------------------------|
| 440 | Gloss 60 Degree (Paint Chips) |

Instrument code and description

| | |
|----|--|
| GA | BYK Gardner Color - Guide Gloss |
| GB | BYK Gardner Spectro - Guide Sphere Gloss |
| GK | BYK-Gardner micro-gloss (60) |
| GL | BYK-Gardner micro-TRI-gloss |
| GN | BYK-Gardner new micro-TRI-gloss |
| GQ | BYK-Gardner haze-gloss |
| GX | BYK-Gardner (model not specified) |
| MH | X-Rite/Macbeth Color-Eye XTH |
| MW | Minolta Multi-Gloss 268 |
| PC | Picogloss 503 Erichson |
| RA | Rhopoint Novo-Gloss Glossmeter |
| XX | Instrument make/model not specified by lab |

| | |
|-----|-------------------------------|
| 442 | Gloss 85 Degree (Paint Chips) |
|-----|-------------------------------|

Instrument code and description

| | |
|----|---------------------------------|
| GL | BYK-Gardner micro-TRI-gloss |
| GN | BYK-Gardner new micro-TRI-gloss |
| RA | Rhopoint |

Instrument Code List - Report# 174

Instrument information as provided by laboratories

Analysis Analysis Name

408 Color & Color Difference (Paint Chips) - 45-0

Instrument code and description

| | |
|----|--|
| AE | ACS Chroma-Sensor CS-3 |
| FA | BYK Mac |
| GB | BYK-Gardner spectro-guide sphere gloss |
| GE | BYK-Gardner spectro-guide (45/0) |
| GH | BYK-Gardner Color-View |
| HG | Hunter ColorQUEST |
| HK | Hunter MiniScan XE (45/0) |
| HW | Hunter LabScan XE |
| HY | Hunter Color Flex 45/0 |
| MA | Macbeth |
| MG | Macbeth 1500/PLUS or 2025+ Color Eye |
| MU | Minolta |
| TO | Topcon SR-3 Spectroradiometer |
| XD | X-Rite 500 Series SpectroDensitometer |
| XK | X-Rite MA100 Multi-Angle SpectroPhotometer |
| XM | X-Rite MA58 Multi-Angle SpectroPhotometer |
| XN | X-Rite MA68 Multi-Angle SpectroPhotometer |
| XO | X-Rite MA68 II Multi-Angle SpectroPhotometer |
| XR | X-Rite 968 Portable SpectroPhotometer |
| XU | X-Rite 964 Portable SpectroPhotometer |
| XX | Instrument make/model not specified by lab |
| XZ | X-Rite |

409 Color & Color Difference (Paint Chips) Sphere

Instrument code and description

| | | | |
|----|------------------------------------|----|---|
| AJ | ACS-Datacolor 600 | MT | Minolta CM-2600d |
| AL | ACS-Datacolor Intl. Dataflash 100 | MU | Minolta |
| AM | ACS-Datacolor 600 Plus | MV | Minolta CM-3000d Series Spectrophotometer |
| AO | ACS-Datacolor 650X | PE | Perkin Elmer Spectrophotometer |
| AQ | ACS-Datacolor 600X | SH | SIMADZU UV 3101PC |
| AR | Datacolor 400 | XH | X-Rite Color i5 |
| CA | Cary 5000 | XI | X-Rite Color i7 |
| CE | Cary 500 | XM | X-Rite SP62 Portable Sphere Spectrophotometer |
| GD | BYK-Gardner spectro-guide sphere | XO | X-Rite SP64 Portable Sphere Spectrophotometer |
| GF | BYK-Gardner The Color Sphere (TCS) | XX | Instrument make/model not specified by lab |
| HF | Hunter ColorFlex Diffuse | XZ | X-Rite |
| HH | Hunter ColorQUEST XE | | |
| HP | Hunter UltraScan PRO | | |
| HW | Hunter UltraScan XE | | |
| MG | Macbeth 2180 Color Eye | | |
| MI | Macbeth Color i 5 | | |
| MJ | Macbeth Color-Eye 3000 | | |
| MK | Macbeth Color-Eye 7000 | | |
| MM | Macbeth Color-Eye 7000a | | |

Instrument Code List - Report# 174

Instrument information as provided by laboratories

Analysis Analysis Name

411 Spectrophotometric (Paint Chips) - Sphere

Instrument code and description

A J ACS-Datcolor 600
A L ACS-Datcolor Intl. Dataflash 100
A M ACS-Datcolor 600 Plus
A O ACS-Datcolor 650
A Q ACS-Datcolor 600X
A R Datcolor 400
C A Cary 5000
C E Cary 500
G D BYK-Gardner spectro-guide sphere
H F Hunter ColorFlex Diffuse
H H Hunter ColorQUEST XE
H P Hunter UltraScan PRO
H U Hunter UltraScan
H W Hunter UltraScan XE
M G Macbeth 2180 Color Eye
M I Macbeth Color i5
M J Macbeth Color-Eye 3000 Spectrophotometer
M K Macbeth Color-Eye 7000 Spectrophotometer
M M Macbeth Color-Eye 7000a
M T Minolta CM-2600d
M U Minolta
M V Minolta CM-3000d Series Spectrophotometer
P E Perkin Elmer Spectrophotometer
S H SIMADZU UV 3101PC
X H X-Rite Color i5
X I X-Rite Color i7
X M X-Rite SP62
X O X-Rite SP64
X X Instrument make/model not specified by lab