Color Communication
Color Management
for the Cosmetics Industry
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Sales manager Xrite Pantone
Italy & Greece
• **Strategic acquisitions:**
  – Amazys (GretagMacbeth, Munsell), July 2006
  – Pantone, October 2007

• **Innovation and vision**
  – Continuous product innovation
  – 167 Patents, 107 applications pending (6 October 2009)

• **Now the largest global color company**
  – $223 million in sales (fiscal year 2010)
  – Substantial improvement in financial health with recapitalization, major debt pay down and solid operating results
  – Approx. 1000 employees worldwide
  – Representation in over 100 countries

• **Market leaders in every industry where color is mission critical or important**
Pantone was founded in 1962 as a small business manufacturer of color cards for cosmetics companies.

The company was bought by Lawrence Herbert, who had been an employee since 1956 changed its direction to developing the first color matching system in 1963.
The Color Challenge and Opportunity in a global supply chain

- Globalization dictates increasingly collaborative environments at different physical locations
- Digitalization is progressively invading all production / supply chains across industries
- Design requirements to reflect brand consistency across varied delivery mechanisms
Color Supply Chain Management

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Cx color exchange format

- Spectro Data
- L*a*b*
- Observer Angle
- Illuminant
- Filters
- Infor of the application
- Recipe
- And .... the Texture

L = 47.5
a = 64.9
b = 43.7
[ΔE50,2*]
Creating a Digital Pallet
Digital Pallet, Harmonies and Export options
Specify, Send, Verify, Approve

Brand Owner

Submit for Approval

CxF Web Exchange

Color Output

Color Provider

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COLOR PERCEPTION

light source → eye → object → brain
Metamerism
Human Eye

- No exact color memory

- Different perception from one person to another

- The eye can perceive up to 7-10 million colours

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Why measure color? ...Poor color memory

Now tell me which one it was...

Look at this color for a few seconds...

If you chose this swatch, you are right!
Alessio Tubbini          Sales Manager Xrite Pantone Italy & Greece
Do the arrows right and left appear to be the same color?
Is the green on the left the same as the green on the right?
Challenges in Cosmetics

- The nature of these products in that they are commonly liquid, paste or powdered form.

- Measuring these products is to place the sample in a cuvette or petri dish and measuring through the glass or plastic using a contact based spectrophotometer.

This process does not provide data that correlates with what the human eye sees, what the consumer sees in the finished product.
Challenges in Cosmetics

• Contacting these samples contaminates the instrument, which can result in costly instrument maintenance and repair.

• Measure the sample through the glass or plastic:

  • The glass or plastic barrier introduces a “depth of field” variable between the instrument and the sample. This becomes an error source that must be addressed.

  • This glass or plastic barrier also introduces a first surface and second surface reflection error (typically 4% per surface) that must be accounted for.

  • The glass or plastic barrier allows unwanted ambient light to “pipe” into the measurement area. This too, is a potential source of error.
Example of color difference of non-dairy creamer
So, measuring through a transparent barrier will not correlate to the eyes natural response to the color in its natural form.

The only way to truly measure a color and get a colorimetric result that correlates to the human eye is to measure the sample in its natural form, without contacting the sample, using 45 degree geometry!
A Revolution in Color Measurement

X-rite is pleased to announce two new products that solve many of the problems related to color measurement for the cosmetics industry!
A Revolution in Color Measurement

- MA98 multi-angle spectrophotometer
- VS450 45/0° non-contact spectrophotometer
Software for Quality Control

X-Color QC
Software Applications Solutions
A Revolution in Color Measurement

These products, when combined with our standard or customized fixtures and sample holders, provide a complete and comprehensive solution for lab analysis and evaluation, and production Quality Control for most cosmetics products including:

- Foundations
- Free powder
- Compact powders
- Lipstick
- Nail polish
- Mascara
- Eye Liner
VS450

- VS450 is a non-contact, 45/0° spectrophotometer designed to measure all kinds of powder, paste and liquid samples in their natural form.
VS450

• VS450 is the ideal product for use in production for Quality Control inspections

• Can detect change in color or surface appearance of the sample, reducing scrap and waste costs, and allowing further evaluation and analysis
VS450

- **PRODUCT FEATURES:**
  - Line of Sight™ targeting
  - Gloss measurement
  - Large and small measurement spot sizes
  - Best in Class color measurement accuracy

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Fixtures and Sample Holders

Standard and Custom sample holders available
Fixtures and Sample Holders

Standard Sample Holders:

- Instrument stand
- Spoon holders for measurement of opaque liquids, pastes and powders
- Petri dish holder for measurement of translucent liquids
Fixtures and Sample Holders

Custom sample holders

- Include but not limited to:

  - Foundations
  - Lipstick
  - Eye Shadow
MA98

• Next generation multi-angle measurement tool designed for consistent, precise color measurement of pearlescent and other complex special effect pigments

• Provides 10 measurement angles and 2 illumination angles

• Measures according to the visual behavior of the Standard and Trial
Without MA98
With MA98

The new MA98 using the second illumination is able to detect all the different color behaviors.
Fixtures and Sample Holders

• Most sample holders are interchangeable with both the MA and VS450 instruments!
Summary

- MA98 and VS450, combined with X-Color QC and custom fixtures and sample holders, provide a comprehensive Lab to Production Line solution for Quality Control and evaluation and analysis, allowing color measurements of samples in their natural state, the way the eye sees them!
I will see u at Stand Q 01

THANKS FOR YOUR ATTENTION

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