

# ColorEye® XTH

**10 frequently  
asked questions  
about color  
control in the  
plastics  
processing  
industry...**

P L A S T I C S



GretagMacbeth™

1

**Q: Why should I use instrumentation to measure color? Isn't my judgement good enough?**

**A:** Visual color evaluation is inherently subjective. It relies on individual eye-brain limitations including color vision defects, age, and eye fatigue. This can be a problem when trying to establish uniform standards for communicating color results to suppliers and customers.

While visual inspection will always be a primary tool for making color decisions, instrumentation provides data to supplement, support, and substantiate subjective judgment. Instruments can detect color differences between a standard and a sample far below the minimum level perceptible to the human eye. And the repeatability of instruments permits creation of — and adherence to — consistent, uniform color standards.

2

**Q: What if I can't find a flat surface on a part? How will that affect the reading?**

**A:** GretagMacbeth's ColorEye XTH spectrophotometer incorporates a unique 3-D Targeting Technology providing precise repeatable color measurement on the most challenging sizes, shapes, and surfaces — curved or flat. Whether incoming inspection, in process check, or final acceptance certification, the ColorEye XTH measures the actual product — not just a flat sample.

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**Q: You say the ColorEye XTH is a spectrophotometer, not a colorimeter. What's the difference?**

**A:** A colorimeter attempts to simulate the eye by measuring only three broad data points. A spectrophotometer measures reflectance across the entire visible spectrum, so it's more precise and accurate. Also, spectrophotometers can detect metamerism, which is the phenomenon of colors matching under one set of viewing conditions but not another.

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**Q: We make a large variety of parts. How many different instruments or attachments will I need to measure all these parts?**

**A:** The ColorEye XTH can measure both large and small samples. In fact, the ColorEye XTH can work with samples much smaller than the minimum sample size required by most other portable color measurement instruments. Optional dual apertures enable a single unit to accommodate the broadest range of part sizes ... eliminating the expense of multiple systems.

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**Q: How can instrumentation help us improve color control throughout our process?**

**A:** Plastics manufacturers can use the ColorEye XTH to measure step chips as well as final product, ensuring consistency throughout processing. Unlike heavier instruments, the hand-held ColorEye XTH can easily be used to measure color at any point in the molding process.

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**Q: What if the color formulator, designer, or customer disputes our measurements?**

**A:** That's not likely. ColorEye XTH generates accurate, repeatable measurements with close agreement to the popular benchtop ColorEye 7000 series and compact ColorEye 2180. We engineer all our color systems for inter-instrument agreement to ensure consistent readings. It's no surprise that so many of the world's largest color formulators rely on the ColorEye 7000 for color control.

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**Q: Will I have to hire or train a technician to operate the color instrument?**

**A:** A unique operator-friendly design, featuring separate buttons for standard and trial measurement, makes the ColorEye XTH as easy to use as turning on a flashlight. No special training is required. Anyone in your plant can use it, from engineers to hourly laborers.

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**Q: Will I need a spare or back-up to prevent processing interruptions?**

**A:** No. The ColorEye XTH can be fully charged in about one-fifth the time of conventional portable instruments, maximizing system availability. And it has to be charged far less often, since each charge lets you operate up to four times longer than most other systems.

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**Q: How can ColorEye XTH increase throughput and productivity in our plant?**

**A:** With new XT5 technology. It consists of a two-dimensional CCD that enables the ColorEye XTH to capture up to five frames of data at a time. This XT5 technology permits dual beam and simultaneous SCE (specular component excluded) and SCI (specular component included) measurements with no mathematical adjustments or multiple readings. Therefore, the ColorEye XTH can measure more samples in less time than conventional portables, which often require multiple readings to be taken per sample.

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**Q: Can we afford ColorEye XTH on a limited budget?**

**A:** *Absolutely.* The handy ColorEye XTH is half the cost of big benchtop units. It has more advanced features than other portables, yet sells for up to 30% less than these other, less-sophisticated models.

*It's a colorful world.  
Let GretagMacbeth help you take control.*

Only one company, GretagMacbeth, provides a comprehensive, integrated, single-source solution for measuring, selecting, matching, formulating, evaluating and communicating color in all phases of plastics processing. With ColorEye XTH, you'll meet customer color requirements with an ease and consistency like never before.

For a free, no-obligation needs analysis — and details on our *FREE Introductory Offer* — contact your GretagMacbeth representative today.



**United States:** 617 Little Britain Road, New Windsor, NY 12553-6148, Tel: 800 622 2384, 914 565 7660 (Outside USA and Canada), Fax: 914 561 0267

**Switzerland:** Althardstrasse 70, CH-8105 Regensdorf, Tel: +41 1 842 24 00, Fax: +41 1 842 22 22

**United Kingdom:** Macbeth House, Pacific Road, Altrincham, Cheshire WA14 5BJ, Tel: +44 161 926 9822, Fax: +44 161 926 9835

**Germany:** Siemenstrasse 11, D-63263 Neu Isenburg, Tel: +49 61 0279 570, Fax: +49 61 0279 5757

**Hong Kong SAR:** 12 Wardley Centre, 9-11 Prat Avenue, Tsimshatsui, Kowloon, Tel: +852 2368 7738, Fax: +852 2368 6717

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