
Measuring
Dots on Plate is
Redundant in a
PROCESS-
FREE WORLD
KODAK

Kodak is well-known for creating and marketing products based on disruptive technologies. One of these, SONORA Process Free Plates, entirely removes the need for a plate processor and all of its associated chemicals, not only facilitating the move toward a more sustainable print room operation but also accelerating the time to press make-ready and first saleable copy. This level of automation is certainly market disruptive and is why more than 6,000 printers worldwide have made the move to SONORA. Since Kodak introduced the first process-free plate to the industry in 2004, they have constantly honed and improved this innovative technology.

What holds others back from taking advantage of this technological revolution? Oddly enough, sometimes they are hesitant to give up on their plate processors. Many printers are used to measuring dot sizes on plates before putting them on press. Essentially, this step is a test to see if the processing chemicals in their plate processors are doing their job or if they are not and are beginning to fail.

This measurement step gives the prepress department the confidence to send their plates to the press room with an assurance that those plates will run effectively on press. Yet when you take the processor out of the equation, as happens with a process-free plate, this implied handshake between prepress and press room is lost. In this white paper, we will show why plate measurement stands as an avoidable roadblock that should not keep printers from taking advantage of ground-breaking, disruptive, technology like SONORA.

WHAT IS THE POINT OF MEASURING DOTS ON CONVENTIONAL PLATES?

Measuring dot size or tonal value on a conventional offset printing plate has been integral to printers' quality assurance processes for many years. The main reason for measuring tonal values is to ensure that the printing plates being sent to the press room have the correct values reproduced on them. This helps to guarantee accurate full-color reproduction based on your site's target dot gain values, gray balance, or certified print standards, such as G7 process specifications, TC 130 Graphic Technology Print Production Standards from the International Organization for Standardization (ISO), or Fogra's ProcessStandard Offset Printing (PSO).

There are three factors driving the need to measure dots on a conventional printing plate:

1. To check the consistency of the batch of plates that you are using.
2. To assess the strength of the developer solution.
3. To ensure that the plate processor is in good running condition.

To address why SONORA's process free technology eliminates the need for measuring dots, let's look at each of these factors individually.

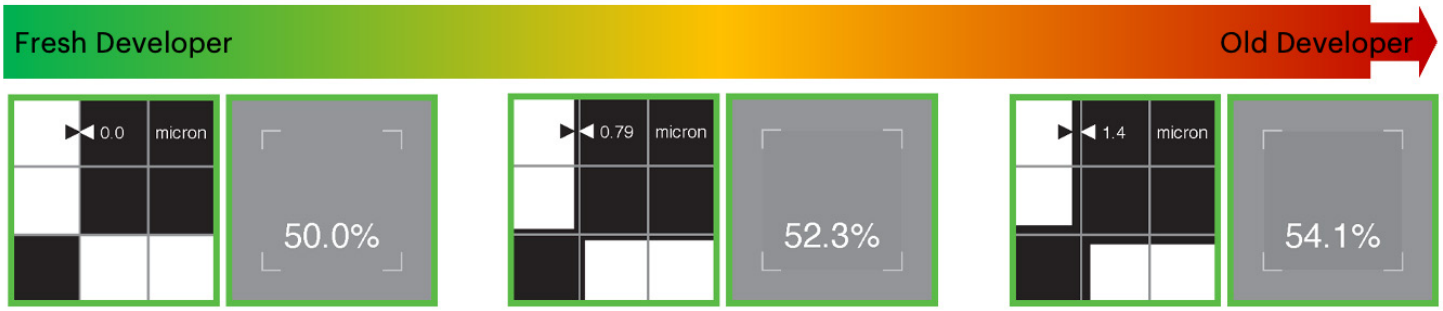
1. Plate consistency from batch to batch: Decades ago, in the early days of CTP plate production, there were occasionally variations in the quality of the plates produced. Today, major printing plate providers have made significant investments in their manufacturing processes. As a result, batch variations for plates coming from major manufacturers like Kodak are extremely rare. The same cannot be said for manufacturers of discount plates whose facilities do not have the production capability, knowledge, or technology to consistently provide stable thermal plates.

2. To assess the strength of the developer solution: For those using a high-quality plate, one remaining factor is being sure that the developer solution is operating as intended. Measuring tonal values on the plate allows you to identify when the developing chemistry is 'spent' and needs replacing. Spent developer solution will cause dot size to shift out of control. Other factors such as pH, conductivity, and temperature also need to be monitored and controlled to make sure development is consistent. These factors are often handled automatically by the processor. This works well provided you keep the processor in good running condition and replace the replenisher bottle before it gets empty.

3. To ensure that the plate processor itself is in good running condition: Other factors can impact the reliability of a plate processor such as the performance of components like the heater, chiller, and pump; clogged filters; blockages of the spray bars, pressure from brushes and rollers; and wear on the processor's bearings and drive system. Ignoring any of these can result in poor performance.

With the adoption of a process-free plate like SONORA, concerns about the strength of the developer solution and the condition of the plate processor are virtually non-existent. If the sole purpose of measuring plates is to assess your processing hardware and developing chemistry, then why not just eliminate that step?

Inconsistent, Variable Dot Size with Processed Plates



Consistent, Stable Dots with SONORA Process Free Plates

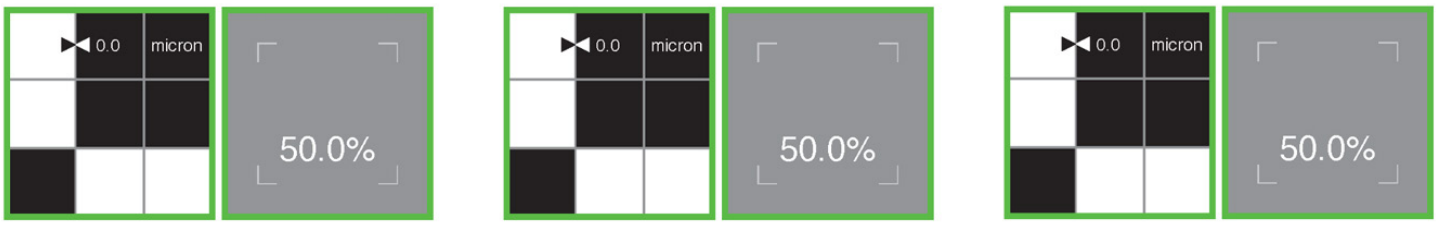


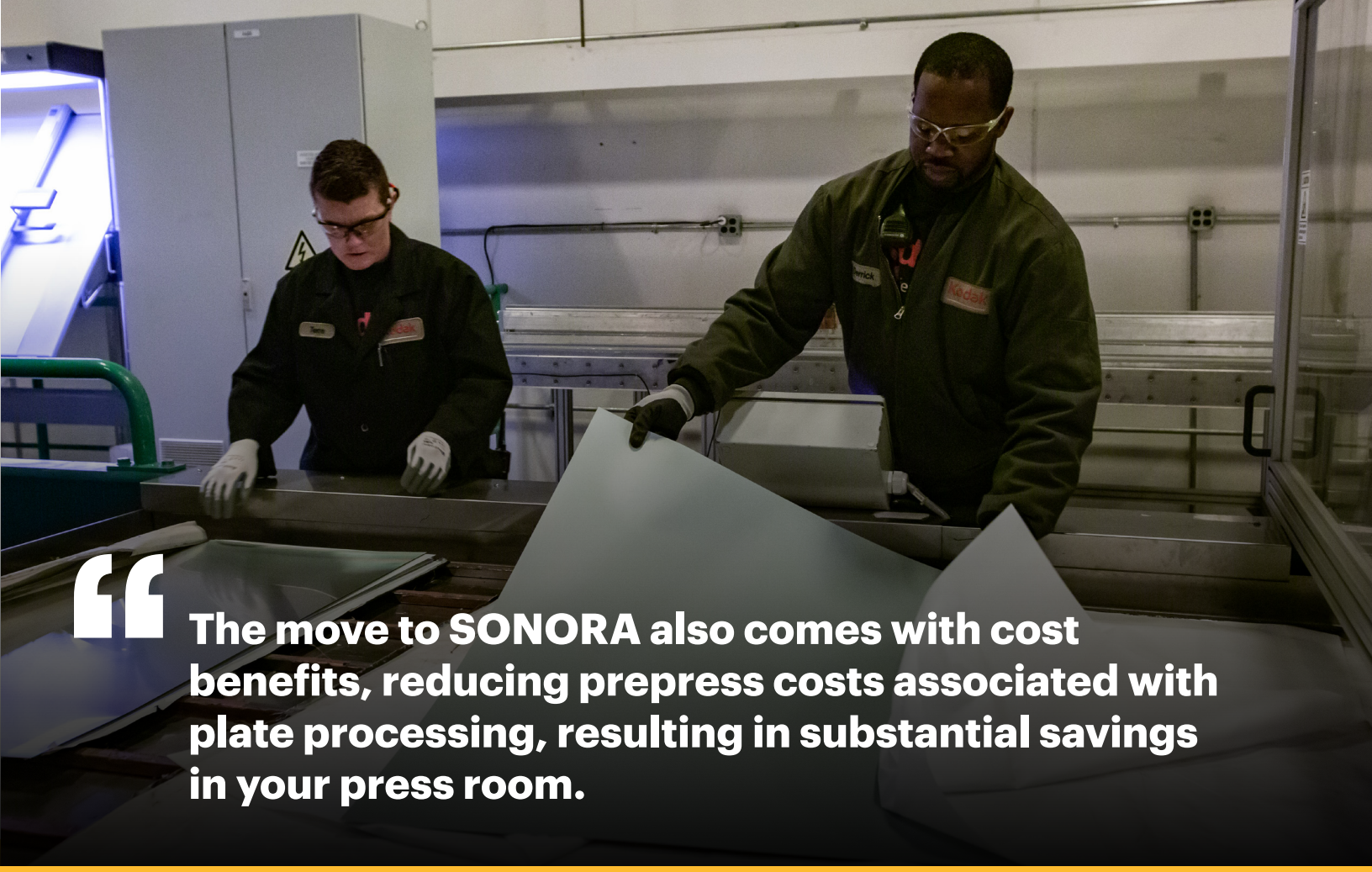
Figure 1: Dots in Processing

WHY DON'T YOU MEASURE DOTS ON PROCESS-FREE PLATES?

While you can see the image on a process-free plate like Kodak's SONORA after exposure, the plate itself does not develop until it comes in contact with the fountain solution and ink on press. (For more on this, see the Kodak white papers entitled Robust Process-Free Plates: What Does It Take? and Process-Free Plates in Your White-Light Print Room Environment.) You could choose to remove the plates from the press, clean the ink off, and measure the dots after make-ready, but to do so would be disruptive and nonsensical since you could simply measure the printed dots on paper instead. You can entirely remove the possible variations inherent in plate processing by moving to a process-free plate like SONORA.

HOW DO YOU ASSURE YOUR PRESS OPERATORS THAT THE PLATES WILL RUN EFFECTIVELY?

Measuring dots on plates is a time-tested method of monitoring the plate processor that has built trust between prepress and press room teams. Assuring press operators that process-free plates will run effectively is crucial, especially for quality-conscious printers aiming for G7, ISO, or PSO levels of operation. One method of building trust is in the adage, "seeing is believing." Once teams see consistent dot measurements over time on printed press sheets, confidence will form.



> **The move to SONORA also comes with cost benefits, reducing prepress costs associated with plate processing, resulting in substantial savings in your press room.**

To further strengthen this trust, it's valuable to refer to expert opinions, such as those from Fogra. In a paper written by Maximilian Ondrusch titled *"Possibilities and Limits of Process Control When Using Low-Process Plates,"* provides additional evidence that while printing plate monitoring is typically done by conventional plate users before the printing process, it is not an absolute requirement.[1] This challenges the misconception that low-process plates are not compatible with PSO standards.

According to Fogra's findings, as noted by Ondrusch, *"plate measurement is not an absolute requirement for PSO compliant printing or its certification."* The emphasis is on the printed sheet as the ultimate measure of success.

Statements like this from Fogra, plus the worldwide experience of over 6,000 SONORA users, give us the confidence to state that the inherent stability of thermal plates and the elimination of plate processors, in combination with SONORA, allows you to eliminate the task of plate measurement altogether. Simply image your SONORA Process-Free Plates and send them to your press room.

COST IMPLICATIONS

Going process free with SONORA allows you to simplify your plate making operation, including the elimination of the plate processing step and all the potential variations that plate processing can introduce. The move to SONORA also comes with cost benefits, reducing prepress costs associated with plate processing, resulting in substantial savings in your press room.

Wondering how SONORA Process Free Plates could bring potential savings to your operation? Kodak has developed an online tool called the SONORA Savings Estimator that helps you calculate the cost implications of moving to a process-free plate like SONORA. Check it out at kodak.com/go/estimatesavings.

[1]Ondrusch, M. (2012). "Possibilities and Limits of Process Control When Using Low-Process Plates." Fogra.

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CONCLUSION

SONORA removes the need for taking dot measurements on plates. Understandably this can seem to stand in opposition to long-standing procedures in prepress and the press room. Yet, through the use of extremely stable plates and imaging, together with the total elimination of processing and its associated variables, there is no need for such measurement. This fact is acknowledged by industry standards experts including Fogra. Thousands of SONORA users have abandoned the practice of measuring plates, and in doing so they have automated their processes and removed key variables. This helps many of them to achieve G7, ISO, or PSO standards cerifications through unmatched consistency, day-to-day, month-to-month, and year-to-year. Consider joining this group of visionaries who understand how important it is to automate their processes, not only for improved profitability, but also to gain the eco-friendly benefits that come from using SONORA Process Free Plates.

You may also be interested in these KODAK white papers:

- *Robust Process-Free Plates: What Does It Take?*
- *Process-Free Plates in Your White-Light Print Room Environment*
- *Unlock Hidden Savings with SONORA Process Free Plates*

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