

# Mottling Expert software

## Measure reflectance variations (mottle) as we perceive it

### The software can be used for

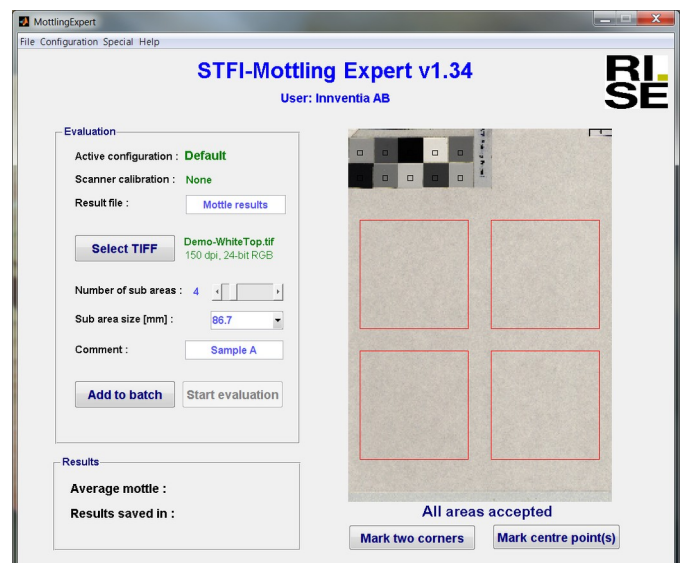
- Measure if the mottle level is acceptable and stable over time
- Benchmark to competitors
- Monitor how new settings in the productions affect the mottle level
- Check if new products are better or not when it comes to mottle

### Description

- Advanced image analysis technique is used to filter the scanned images to simulate the human vision system (eyes and brain). This makes the results very reliable and correlate well to panel tests where a group of people rank the samples
- To increase the reliability, the image from the scanner is calibrated to reflectance using the included reflectance calibration set

### For more information and prices contact

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Mottling Expert software - user interface



Flatbed scanner used to acquire the images

## Fields of application

Measure reflectance variations (mottle) on:

- Unprinted board (white top mottling)
- Mono-coloured full-tone prints
- Mono-coloured screened prints
- Uncovered area (UCA) - totally white spots in fulltone prints
- Coating thickness variations after using a burnout technique on the samples (making the wood fibres black and keeping the coating white)
- Optical formation can be calculated if the samples are thin enough for the scanner transparency unit
- Also other types of reflectance variations can be characterized, such as formation of nonwoven products and orientation of mottle on corrugated board

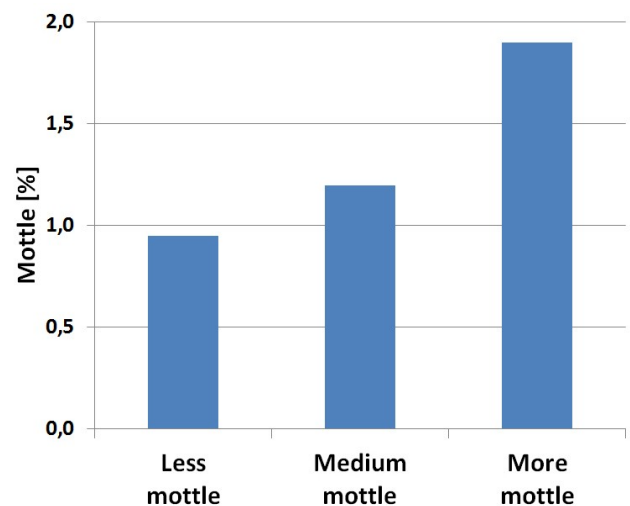
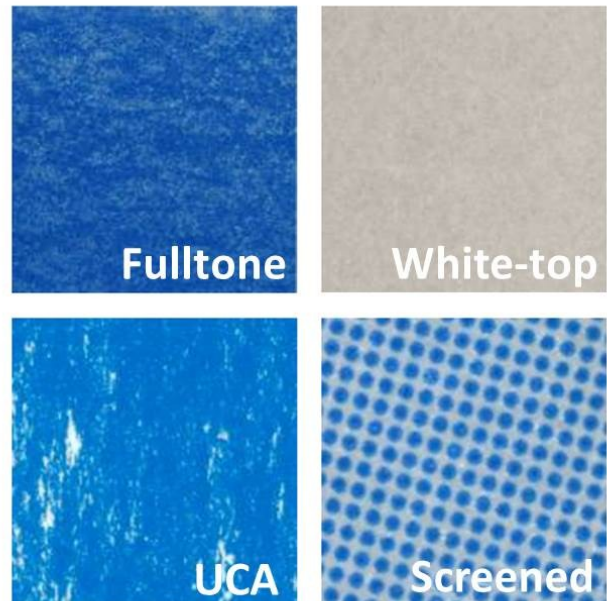
## Calculated results

- The mottle value - Coefficient of Variation in spatial wavelengths 1-8 mm
- Detailed mottle values divided in spatial octave bands, ex 0.25-0.5 mm, 0.5-1 mm, 1-2 mm, 2-4 mm, 4-8 mm, 8-16 mm revealing the mottle in fine scale, medium scale and large scale
- Mottle values filtered as contrast sensitivity and possible to adapt to different viewing distances
- The orientation of the mottle. If the mottle is stripy this will be revealed as mottle with high orientation.
- The results are saved in tab separated ASCII-files making it easy to import the results in spread-sheet software like Excel™

## Other available versions and options

A reduced version of STFI-Mottling Expert, called STFI-Mottling Light. This light version is well suited for production control laboratories.

For users who measure white-top mottle and want to have comparable absolute levels of the mottle values if they use different scanner models (or even a camera system), we regularly make white-top reference sets used for scanner calibration possible to order.



Example of the calculated mottle values from three samples with different mottle

**Required equipment**

Standard PC, Win XP/Vista/7/10, a flatbed scanner, Mottling Expert software and a reflectance calibration set