Understanding Graphic Arts Densitometry

The Equation: Density = $\log_{10}$ 1/T

Where T = Transmittance
Transmission density is a function of the amount of light which passes through the film.

Black and white transmission densitometers are used for film inspection, as well as scanner and imagesetter calibration and linearization. The basic measurements are Density and Dot Area.

Why measure Density?

Measure D-Min of the film in clear area, to assure there is no fogging.
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The Equation: Density = $\log_{10} 1/R$

Where R = Reflectance
Density is a function of the percentage of light reflected.
The table to the right shows the relationship of percent reflectance to Density.

Why measure Density?

The Equations: % Hue Error = $\frac{M - L}{L}$ % Grayness = $\frac{L}{\quad}$

ANSI, American National Standards Institute, Inc.

Transmission Densitometer

No matter which print control strip you use, each one has common elements to help you