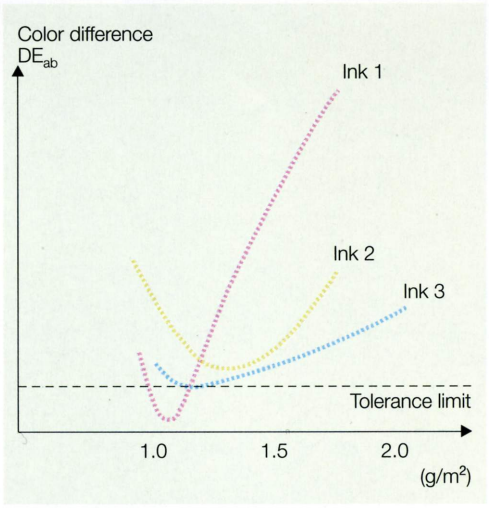

Figure 14. Colorimetric determination of milage

A conversion to percentages also shows the difference very clearly:
- Ink 1 = 100 %
- Ink 2 = ca. 42 % weaker in color
- Ink 3 = ca. 17 % weaker in color

Ink 1 exhibits a very good approximation to the ideal; ink 3 is just within the tolerance limit, and ink 2 is well outside it (see DIN 16539). In every case, it is advisable to inspect the weighed proofs visually as well, prior to instrumental evaluation. A visual comparison of the weighed proofs will provide immediate usable information about milage. In addition, the measurement areas of the proof must be inspected for defects.

Sheet-fed offset printers today work at an inking rate which corresponds to the following ink quantities (in grams per square meter):
- Coated papers 0.7–2.5 g/m²
- Uncoated papers 0.9–3.0 g/m²

Ink consumption calculations must take into account not only milage but also percentage surface coverage, as well as the fact that the inking determined by the motif can greatly affect ink consumption.

Practical requirements will be met in most cases if 1.2 g/m² is selected as the standard for color comparison for coated substrates, and 1.5 g/m² for uncoated stocks.

If milage values deviate by more than 10 %, this must be accounted for.

COLOR COMPARISON CAN THEN BE MADE AT DIFFERENT INK QUANTITIES, BUT AT APPROXIMATELY THE SAME INK DENSITY.

For example: the standard ink is proofed at 1.2 g/m²; if the comparison ink has a milage of, say, 20 % less, it is then proofed accordingly at 1.44 g/m².

Milage must be taken into account in all ink tests in which ink quantity is an important variable. The simpler method of testing with a standard ink quantity is unsuitable, since the press is set to the same optical density and not to the same ink quantity.