

Output – Input – Output: A loop for relative colour fidelity with the visual rgb^* and LCh^* CIELAB data

Produce a reference test chart with 729 CIELAB colours

or buy one, or use PG4311L of *Colour and Colour Vision*, see <http://standards.iso.org/iso/9241/306/ed-2/ES15.PDF>

Example: Linearized output in offset print

Output linearization produces for $729=9\cdot9\cdot9$ rgb input data the 729 LCh^* CIELAB output colours. Use the file

http://standards.iso.org/iso/9241/306/ed-2/AE49/AE49F0PX_CY8_1.PDF

Use the OLM16 method for output linearization, see

http://farbe.li.tu-berlin.de/OUTLIN16_01.PDF

produce a Table $rgb \rightarrow rgb'$ for $729=9\cdot9\cdot9$ colours apply a method to transfer any value $rgb \rightarrow rgb'$ for 256-256-256 (16 million) colours

Offset rgb^* data input and LCh^* data output

Color	rgb^*	LCh^*
R_e elementary red	1 0 0	47, 74, 26
Y_e elementary yellow	1 1 0	86, 88, 92
G_e elementary green	0 1 0	53, 57, 164
B_e elementary blue	0 0 1	42, 45, 271
N black	0 0 0	18, 0, 0
W white	1 1 1	95, 0, 0

(data according to test chart DIN 33872-2, p. 9-12)

Use reference test chart with 729 CIELAB colours

Colour scanners or cameras produce 729 rgb data.

Transfer the 729 rgb data to the 729 rgb^* data.

After the linearized input the 729 colour data rgb^* may be used again for the linearized output.

