INTERNATIONAL STANDARD ISO 105-J03:1995
TECHNICAL CORRIGENDUM 2

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Textiles — Tests for colour fastness —

Part J03:
Calculation of colour differences

TECHNICAL CORRIGENDUM 2

Textiles — Essais de solidité des teintures —

Partie J03: Calcul des écarts de couleur

RECTIFICATIF TECHNIQUE 2

Technical Corrigendum 2 to ISO 105-J03:1995 was prepared by Technical Committee ISO/TC 38, *Textiles,* Subcommittee SC 1, *Tests for coloured textiles and colorants*.

Page 4

An updated version of 3.3 is provided. It has been split into two subclauses, 3.3.1 and 3.3.2. As the information previously given in Note 2 is normative, it has been moved into 3.3.2.

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3.3 Calculation of the CMC colour difference, ΔE_{cmc} (l:c)

3.3.1 The CMC colour difference is obtained from the following equation:

$$\Delta E_{cmc}(l:c) = \left[\left(\Delta L^* / l S_L \right)^2 + \left(\Delta C^*_{ab} / c S_c \right)^2 + \left(\Delta H^*_{ab} / S_H \right)^2 \right]^{1/2}$$

Calculate the ellipsoid semi-axes from the L^*_R, $C^*_{ab,R}$ and the $h_{ab,R}$ of the reference as follows:

$S_L = 0{,}040\ 975 L^*_R / (1 + 0{,}017\ 65 L^*_R)$ if $L^*_R \geqslant 16$

or

$S_L = 0{,}511$ if $L^*_R < 16$;

$S_c = [0{,}063\ 8 C^*_{ab,R} / (1 + 0{,}013\ 1 C^*_{ab,R})] + 0{,}638$;

$S_H = (FT + 1 - F) S_c$

where

$$F = \left\{ \left(C^*_{ab,R} \right)^4 / \left[\left(C^*_{ab,R} \right)^4 + 1\ 900 \right] \right\}^{1/2};$$

$T = 0{,}36 + |0{,}4 \cos(35 + h_{ab,R})|$ if $h_{ab,R} \geqslant 345°$ or $h_{ab,R} \leqslant 164°$

or

$T = 0{,}56 + |0{,}2 \cos(168 + h_{ab,R})|$ if $164° < h_{ab,R} < 345°$.

3.3.2 The value of l is usually set to 2,0. The value of c shall always remain at 1,0. This fixes the ratio of the three semi-axes to best correlate with visual assessment of typical textile samples. Other values of l may be required in cases where the surface characteristics significantly differ from those of flat textiles.