## Annex E: <br> Form $E$ for the frame area

This form may be freely copied
For this test the output (reproduction, display) and the ISO/IEC-test chart 1 or 3 (original, reference) is necessary
Please fill out or mark by ( $\mathbf{x}$ ):
Test of achromatic ISO/IEC-test chart 1 ( ) or ISO/IEC-test chart 3 ( ):
ISO/IEC-test chart: e. g. Test chart 3 for colour devices (write text from the frame area of ISO/IEC-test chart)
ISO/IEC-BAM-identification: e. g. 20031201-DE88/10L/
$\begin{array}{ll}\text { ISO/IEC-reference material: e. g. } \mathrm{r}(\mathrm{h} / \mathrm{c}) \mathrm{a} 4(\mathrm{r} / \mathrm{t})(\mathrm{a} / \mathrm{d}) \\ \text { File-name: } & \text { e. g. L88E00NP.PDF }\end{array}$
(write code from top right side)
(write code from bottom right side)
(write code from top side).
Reproduction technique for „halftone (h)" ( ) or „,continuous tone (c)" ( )
NOTE: The usual output technique for printer and copier is (h). For photo, film, monitor and scanner it is (c).
Test of reproduced lines according to lines defining rectangles in the frame region:
NOTE: An ISO/IEC-reference test chart is in accordance with the methods of this Technical Report if there are at least some complete lines for the inner (thicker line) rectangle. For this purpose there are between 4 and 20 lines on an ISO/IEC-test chart.
How many lines are on the ISO/IEC-test chart? of max. 20 lines: .... lines are given
How many lines of the ISO/IEC-test chart are reproduced?
Are the four (inner thicker) lines of the inner rectangle fully reproduced?
If No: How many inner lines are fully reproduced?

| of max. 20 lines: | $\ldots$. lines are given |
| :--- | ---: |
| of given ..... lines: | $\ldots$. lines |
| of given 4 lines: | Yes/No |

Test of agreement of the four 5-step grey scales according to the grey scales in the frame region:
Are there clearly seen differences between the four 5-step grey scales near the four corners? Yes/No If Yes: Indicate by ( $\mathbf{x}$ ) - only one ( $\mathbf{x}$ ) - which grey scale deviates most from the average of the four grey scales and mark if this is darker or lighter.

| top left $\quad$ ( ) | if $(\mathbf{x})$ : Is this darker ( ) or lighter ( ) ? |
| :--- | :--- |
| top right |  |
| bottom left ( ) | if $(\mathbf{x})$ : Is this darker ( ) or lighter ( ) ? |
| bottom right ( ) | if $(\mathbf{x})$ : Is this darker ( ) or lighter ( ) ? |
| if ( $\mathbf{x})$ : Is this darker ( ) or lighter ( )? |  |

Test of the scaling factors using width and height of the inner rectangle in the frame region:
The width and height of the inner rectangle in $x$ - and $y$-direction in mm of the reference test chart ( $\Delta x_{\mathrm{r}}$ and $\Delta y_{\mathrm{r}} ; \mathrm{r}=$ reference) and the reproduction ( $\Delta x_{0}$ and $\Delta y_{0} ; 0=$ output) must be measured. The scaling factors ( $s_{x}$ and $s_{y}$ ) in $x$ - and $y$-direction must be calculated. For this 3 digits in mm and with rounding like the example are used (e. g. $s_{\mathrm{x}}=1,01$ and $\left.s_{y}=0,98\right)$.

$$
s_{\mathrm{x}}=\Delta x_{0} / \Delta x_{\mathrm{r}}=\ldots \mathrm{mm} / \ldots \mathrm{mm}=\ldots, \ldots \quad s_{\mathrm{y}}=\Delta y_{0} / \Delta y_{\mathrm{r}}=\ldots \mathrm{mm} / \ldots \mathrm{mm}=., \ldots
$$

NOTE: The width $\Delta x_{\mathrm{r}}$ and height $\Delta y_{\mathrm{r}}$ of the inner rectangle is defined in PS-file (or equivalent) as 282 mm in $x$ direction and 194 mm in $y$-direction. To get high accuracy of the two scaling factors both the original and the reproduction should be measured with the same ruler (do not use values given for the original).

Test of the shift of the colour lines compared to black according to the lines of inner rectangle of the frame:
Are there colour lines $\boldsymbol{C}, \boldsymbol{M}, \boldsymbol{Y}, \mathbf{O}, \mathbf{L}$ and $\boldsymbol{V}$ on the test chart belonging to the inner rectangles?
Yes/No
If Yes, answer the following questions:
NOTE The lines of the inner rectangle have a linewidth of $0,3 \mathrm{~mm}$. If a shift of more than half of this linewidth $(\geq 0,2 \mathrm{~mm})$ is present, it can be easily seen.
Choose one of the two horizontal lines and mark by ( $\mathbf{x}$ ):
bottom horizontal line chosen ( ) top horizontal line chosen ( )
Is there a clearly seen $(\geq 0,2 \mathrm{~mm})$ shift of a colour line $\boldsymbol{C}, \boldsymbol{M}, \boldsymbol{Y}, \boldsymbol{O}, \boldsymbol{L}$ and $\boldsymbol{V}$ compared to the black line $\boldsymbol{N}$ ?
C Yes/No
$\boldsymbol{Y}$ Yes/No
O Yes/No
L Yes/No
V Yes/No
If Yes: $0, . \mathrm{mm} \quad 0, . \mathrm{mm} \quad 0, . \mathrm{mm}$
0 , . mm
0, . mm
0 , mm

Choose one of the two vertical lines and mark by ( $\mathbf{x}$ ):
left vertical line chosen ( )
right vertical line chosen ( )
Is there a clearly seen $(\geq 0,2 \mathrm{~mm})$ shift of a colour line $\boldsymbol{C}, \boldsymbol{M}, \boldsymbol{Y}, \mathbf{O}, \boldsymbol{L}$ and $\boldsymbol{V}$ compared to the black line $\boldsymbol{N}$ ?

|  | $\boldsymbol{C}$ Yes/No | $\boldsymbol{M}$ Yes/No | $\boldsymbol{Y}$ Yes/No | $\boldsymbol{O}$ Yes/No | $\boldsymbol{L}$ Yes/No |
| :--- | :--- | :--- | :--- | :--- | :--- | $\boldsymbol{\boldsymbol { V } \text { Yes/No }}$| If Yes: | $0, . \mathrm{mm}$ | $0, . \mathrm{mm}$ | $0, . \mathrm{mm}$ |
| :--- | :--- | :--- | :--- |

