



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 17934.1-2021

**Graphic technology - Process control for the production of
half-tone colour separations, proof and production prints - Part
1: Parameters and measurement methods**

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Foreword

GB/T 17934 "Printing Technology, Screen Color Separation, Proofs and Process Control of Production Printed Matter" is divided into 8 parts.

---Part 1.Parameters and measurement methods;

---Part 2.Lithographic offset printing;

---Part 3.Newspaper cold-set offset printing;

---Part 4.Publishing gravure;

---Part 5.Screen printing;

---Part 6.Flexographic printing;

---Part 7.Proofing process using digital data directly;

---Part 8.Direct use of digital data to verify the production process of printed matter.

This part is Part 1 of GB/T 17934.

This section was drafted in accordance with the rules given in GB/T 1.1-2009.

This part replaces GB/T 17934.1-1999 "Printing Technology, Screen Color Separation, Proofs and Process Control of Printed Products"

Part 1.Parameters and Test Methods. Compared with GB/T 17934.1-1999, the main technical changes except for editorial changes are as follows.

a) Deleted "Edge width", "Reflectometer", "Positiveness of the film", "Emulsion direction of the film", "Moiré pattern (moire)", "Yangtu-type net"

Terminology and definitions such as the tone value of the screen tone film, the tone value of the negative screen tone film, and the hard screen dot film (see the.1999 edition

3.3, 3.9, 3.18, 3.19, 3.23, 3.37, 3.38, 3.43);

b) Added terms and definitions such as "CIEDE2000 color difference", "ICC color

management", "verification printed matter" (see 3.4, 3.13, 3.42);

c) The technical requirements for "data files and printing plates" have been added (see 4.2);

d) The technical requirements for "samples or production prints" have been added (see 4.3);

e) Deleted the technical requirements of the "separation film" part (see 4.1 in the 1999 edition);

f) Deleted Appendix B "Backing Material for Measuring Reflectance Density" and Appendix C "Method for Measuring the Quality of Separation Film Online Spots" (see 1999 Version of Appendix B and Appendix C).

The Chinese documents that have a consistent correspondence with the international documents cited in this section are as follows.

---GB/T 11501-2008 Photographic Density Measurement Part 3. Spectral Conditions (ISO 5-3:1995, IDT)

---GB/T 12823.4-2008 Photographic Density Measurement Part 4. Geometric Conditions of Reflection Density (ISO 5-4:1995, IDT)

---GB/T 17934 (all parts) printing technology, mesh color separation plate, sample sheet and process control of production printed matter

[ISO 12647 (all parts)]

The use of the translation method in this part is equivalent to the adoption of ISO 12647-1:2013 "Printing Technology Screen Adjustment of Color Separation Plates, Sample Sheets and Production Printed Matters"

Process Control Part 1. Parameters and Measurement Methods.

This section has made the following editorial changes.

---Corrected the standard drafting specification errors, added ISO 12647 (all parts) in the normative reference documents, and added

Added ISO 12646 and ISO /T S10128, deleted ISO 12647-8;

--In 4.3.1, ISO 12642 was changed to ISO 12642-2;

---Adjusted the order of references.

1 Scope

This part of GB/T 17934 specifies and explains the minimum parameter set required for

four-color printing process control, which is used to uniquely determine the printed matter image visual characteristics and related technical characteristics of printed products, as well as basic process control that has nothing to do with the process under fully characterized printing conditions parameter.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article

Pieces. For undated reference documents, the latest version (including all amendments) is applicable to this document.

ISO 5-3 Photographic Density Measurement Part 3.Spectral Conditions
(Photographyandgraphictechnology-Density
measurements-Part 3.Spectralconditions)

ISO 5-4 Photographic Density Measurement Part 4.Geometric Conditions of Reflection
Density (Photographyandgraphictechnolo-
gy-Densitymeasurements-Part 4.Geometricconditionsforreflectiondensity)

ISO 12647 (all parts) Printing technology, screen adjustment, color separation, proofs and
process control of printed matter (Graphic
technology-Processcontrolfortheproductionofhalftonecolourseparations,proofandproduction
prints)

ISO 13655.Spectral measurement and chromaticity calculation of printed images in printing
technology (Graphictechnology-Spectralmeasure-
mentandcolorimetriccomputationforgraphicartsimages)

3 Terms and definitions

The following terms and definitions apply to this document.

Note. The unit of the quantity is given together in the definition, and the dimensionless unit is 1.

3.1

Achromatic colour

A color that has no sense of hue in vision.

Note 1. Achromatic colors generally refer to black, white, and gray. For transmissive materials, "colourless" and "neutral" are also used to describe.

Note 2. In printing practice, achromatic color can be produced by a single black ink, or it can be produced by a proper balance of three color (and an achromatic) ink.

[CIE17.4,845-02-26]

3.2

Axis of screen

Among the two directions of the halftone pattern, the direction that presents the highest number of image elements (such as the number of points or lines) per unit length.

3.3

Chromatic colour

A color with a sense of hue in vision.

Note. The printing primary colors cyan, magenta and yellow are colored inks.