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**Micrographics — Rotary camera  
systems — Test target for checking  
performance**

*Micrographie — Systèmes de caméras cinétiques — Cible de contrôle  
pour vérifier la performance*

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 10594 was prepared by Technical Committee ISO/TC 171, *Document management applications*, Subcommittee SC 1, *Quality*.

This second edition cancels and replaces the first edition (ISO 10594:1997), which has been technically revised.

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## Introduction

This International Standard has been prepared to provide a means of checking the quality of output of rotary camera systems. Rotary cameras have certain characteristics that require a different form of test target from that specified for checking planetary cameras in ISO 10550.

The processes of microfilming may result in the production of an image that is in some way inferior to that of the original document. In order to keep such deterioration within acceptable limits, the output of the camera needs to be checked regularly so that faults can be corrected and any necessary adjustments made.

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# Micrographics — Rotary camera systems — Test target for checking performance

## 1 Scope

This International Standard specifies a test target and a method for checking the optical and mechanical performances of rotary cameras used for producing 16 mm microfilm.

This test target and method can be used for

- evaluating the performance of cameras (e.g. before purchase to establish initial reference),
- acceptance tests (e.g. confirming purchase specifications after maintenance), and
- routine checking (e.g. weekly or monthly).

NOTE The characteristics of a rotary camera are indicated in Annex A.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 5-2:2001, *Photography — Density measurements — Part 2: Geometric conditions for transmission density*

ISO 5-3:1995, *Photography — Density measurements — Part 3: Spectral conditions*

ISO 5-4:1995, *Photography — Density measurements — Part 4: Geometric conditions for reflection density*

ISO 446, *Micrographics — ISO character and ISO test chart No. 1 — Description and use*

ISO 2471:1998, *Paper and board — Determination of opacity (paper backing) — Diffuse reflectance method*

ISO 3334, *Micrographics — ISO resolution test chart No. 2 — Description and use*

ISO 6196-1, *Micrographics — Vocabulary — Part 1: General terms*

ISO 6196-2, *Micrographics — Vocabulary — Part 2: Image positions and methods of recording*

ISO 6196-3, *Micrographics — Vocabulary — Part 3: Film processing*

ISO 6196-4, *Micrographics — Vocabulary — Part 4: Materials and packaging*

ISO 6196-5, *Micrographics — Vocabulary — Part 5: Quality of images, legibility, inspection*

ISO 6196-6, *Micrographics — Vocabulary — Part 6: Equipment*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 6196-1, ISO 6196-2, ISO 6196-3, ISO 6196-4, ISO 6196-5 and ISO 6196-6 apply.

### 4 Description of the test target

#### 4.1 Characteristics of the base

The test target shall be made on a white opaque base. Its visual diffuse reflection density, measured as specified in ISO 5-3 and ISO 5-4, shall not be more than 0,08. Its opacity, measured as specified in ISO 2471, shall be over 85 %. This test target shall be positive-appearing.

#### 4.2 Test target layout

The test target shall comprise the following, arranged as shown in Figures 1 and 2 (ISO test chart No. 1 shall comply with ISO 446 and ISO test chart No. 2 shall comply with ISO 3334):

- 3 double columns, one each at the right, centre, and left of the target, consisting of groups either of ISO test chart No. 1 characters, ranging from character 56 to character 280, in a line, or of ISO test chart No. 2 patterns, ranging from 7.1 to 1.4;
- 2 series of lines composed of upper-case and lower-case printed characters arranged in portrait form in the centre of the left side of the target and in landscape form in the centre of the right side;
- 2 series of 2 columns of frequency ladder patterns of 1.8, 2.0 line pairs/millimetre, to the left of centre; and 2.5, 3.2 line pairs/millimetre, to the right of centre;
- at least one reference scale, graduated in millimetres, between 2 frequency ladder patterns;
- an arrow to indicate the direction of feed, large enough to permit measurement of density (see 4.3) and parallel to the columns of frequency ladder patterns;
- 2 perpendicular lines, one 220 mm in length, the other 200 mm in length (parallel to the frequency ladders), that cross within the target. The intersection is marked with a circle to indicate their use as an orthogonality check. The ends of the lines are clearly marked and their lengths shown on the test target, for use in checking effective reduction ratio.

#### 4.3 Contrast

When measured in accordance with ISO 5-3 and ISO 5-4, the minimum difference in visual diffuse density between the base of the target and the printed features, e.g. the arrow (see 4.2), shall be 1,3.

#### 4.4 Identification

The following elements shall appear, as text (excluding quote marks), on the test target:

- “rotary camera test target”;
- “certifying agent /source of issue”.





Figure 1 — Layout for test target with ISO test chart No. 1