INTERNATIONAL STANDARD

ISO 8036

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Optics and photonics — Microscopes — Immersion liquids for light microscopy

Optique et photonique — Microscopes — Liquides d'immersion pour microscopie optique

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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 8036 was prepared by Technical Committee ISO/TC 172, *Optics and photonics*, Subcommittee SC 5, *Microscopes and endoscopes*.

It cancels and replaces ISO 8036-1:1998, which has been technically revised.

The scope has been extended to include not only immersion oils for general use in light microscopy, but also immersion liquids for use in fluorescence microscopy.

Optics and photonics — Microscopes — Immersion liquids for light microscopy

1 Scope

This International Standard describes the characteristics of immersion liquids used in microscopy. It classifies immersion liquids according to their field of application and specifies requirements and test methods for each type.

This International Standard further specifies a system of designation for immersion liquids, the information to be included on container labels and the information to be supplied in technical data sheets.

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 2592, *Determination of flash and fire points — Cleveland open cup method*

ISO 8255-1, *Optics and optical instruments — Microscopes — Cover glasses — Part 1: Dimensional tolerances, thickness and optical properties*

ISO 8255-2, *Optics and optical instruments — Microscopes — Cover glasses — Part 2: Quality of materials, standards of finish and mode of packaging*

3 Classification

Depending on their field of application, immersion liquids are classified as follows:

— type N: immersion oil for general use in light microscopy;

— type F: immersion oil which meets the requirements of fluorescence microscopy;

— type G: spectrally pure glycerol (commonly known as glycerine) for glycerol immersion.

4 Characteristics of immersion liquids

4.1 Optical properties

The optical properties of immersion liquids are defined by the refractive index at the wavelength $\lambda = 546{,}07$ nm, n_e, at a defined temperature (23 °C) and pressure (1 013,25 hPa), as well as by the Abbe number (reciprocal of the dispersive power), v_e.