Laboratory glassware — Disposable micropipettes

Verrerie de laboratoire — Micropipettes à usage unique

First edition — 1985-05-01

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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 7550 was prepared by Technical Committee ISO/TC 48, *Laboratory glassware and related apparatus.*

Laboratory glassware — Disposable micropipettes

1 Scope and field of application

This International Standard specifies requirements for disposable glass micropipettes adjusted to contain, suitable for general laboratory purposes. The details specified are in conformity with ISO 8417.

2 References

ISO 719, *Glass — Hydrolytic resistance of glass grains at 98 °C — Method of test and classification.*

ISO 1769, *Laboratory glassware — Pipettes — Colour coding.*

ISO 3534, *Statistics — Vocabulary and symbols.*

ISO 8417, *Laboratory volumetric instruments — Disposable volumetric articles — Principles of design and construction.* [1]

3 Definitions

For the purpose of this International Standard, the following definitions apply.

3.1 disposable micropipette: A micropipette intended to be used once only and then discarded.

NOTE — Such pipettes will only be expected to provide their specified performance during the original operation.

3.2 accuracy (of a micropipette) : The closeness of agreement between the nominal volume and the mean volume, obtained by applying the test procedure specified in clause 9. It is quantified by the inaccuracy of the mean.

3.3 repeatability (of a micropipette) : The closeness of agreement between the individual volumes obtained by applying the test procedure specified in clause 9. It is quantified by the imprecision.

NOTE — The definitions for "accuracy" and "reliability" apply only in the cases where the distributions are Gaussian.

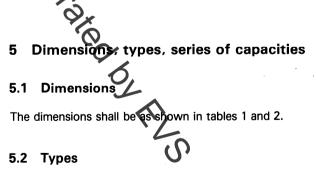## 4 Basis of adjustment

4.1 Unit of volume

The unit of volume is the cubic millimetre (mm^3), for which the name microlitre (μl) may be used.

NOTE — The term microlitre (μl) is commonly used as a special name for the cubic millimetre (mm^3), in accordance with the International System of Units (SI).

4.2 Reference temperature

The reference temperature, i.e. the temperature at which the pipette is intended to contain its nominal volume (nominal capacity), is 20 °C.

NOTE — If the pipette is required for use in a country which has adopted a reference temperature of 27 °C (the alternative specified in ISO 8417 for tropical use), this value shall be substituted for 20 °C.

5 Dimensions, types, series of capacities

5.1 Dimensions

The dimensions shall be as shown in tables 1 and 2.

5.2 Types

This International Standard specifies two types of pipettes.

— Type I: Disposable glass micropipettes with graduation line and colour code (see figure 1) which contain their volume when filled to the graduation line from the end away from the colour code.

— Type II: Disposable glass micropipettes without markings (see figure 2) which contain their volume when filled completely.

---

1) At present at the stage of draft.