International Standard ISO 3856/3

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION•МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ•ORGANISATION INTERNATIONALE DE NORMALISATION

Paints and varnishes — Determination of "soluble" metal content — Part 3: Determination of barium content — Flame atomic emission spectrometric method

Peintures et vernis — Détermination de la teneur en métaux «solubles» — Partie 3: Détermination de la teneur en baryum — Méthode par spectrométrie d'émission atomique dans la flamme

Second edition — 1984-11-01

UDC 667.6 : 543.423 : 546.431 **Ref. No. ISO 3856/3-1984 (E)**

Descriptors: paints, varnishes, printing inks, pigments, chemical analysis, determination of content, soluble matter, barium, atomic emission spectrometry.

Price based on 4 pages

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 3856/3 was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*.

ISO 3856/3 was first published in 1980. This second edition cancels and replaces the first edition, of which it constitutes a thorough revision.

Printed in Switzerland

Paints and varnishes — Determination of "soluble" metal content — Part 3: Determination of barium content — Flame atomic emission spectrometric method

0 Introduction

This International Standard is a part of ISO 3856, *Paints and varnishes — Determination of "soluble" metal content.*

1 Scope and field of application

This part of ISO 3856 describes a flame atomic emission spectrometric (AES) method for the determination of the barium content of the test solutions prepared according to ISO 6713 or other suitable International Standards.

The method is applicable to paints having "soluble" barium contents in the range of about 0,05 to 5 % (m/m).

Other methods can be used by agreement between the interested parties but this method is the referee method in cases of dispute.

2 References

ISO 385/1, *Laboratory glassware — Burettes — Part 1: General requirements.*[1)]

ISO 648, *Laboratory glassware — One-mark pipettes.*

ISO 1042, *Laboratory glassware — One-mark volumetric flasks.*

ISO 3696, *Water for laboratory use — Specifications.*[2)]

ISO 6713, *Paints and varnishes — Preparation of acid extracts from paints in liquid or powder form.*

3 Principle

Aspiration of the test solution into a dinitrogen monoxide/acetylene flame. Measurement of the radiation emitted by barium at a wavelength of 553,5 nm. The ionization of barium atoms in the flame is suppressed by addition of potassium chloride.

4 Reagents and materials

During the analysis, use only reagents of recognized analytical grade and only water of at least grade 3 purity according to ISO 3696.

4.1 Potassium chloride, 50 g/l solution.

4.2 Hydrochloric acid, $c(\mathrm{HCl})$ = 0,07 mol/l.

Use the hydrochloric acid, identical to that used for the preparation of the test solutions in accordance with ISO 6713. (See 6.2.)

4.3 Dinitrogen monoxide, commercial grade, in a steel cylinder.

4.4 Acetylene, commercial grade, in a steel cylinder.

1) At present at the stage of draft. (Partial revision of ISO/R 385-1964.)

2) At present at the stage of draft.