

**Dyestuffs - Determination of solubility in organic solvents - Gravimetric and photometric methods**

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## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 7579:2009 sisaldab Euroopa standardi EN ISO 7579:2009 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 31.12.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 15.10.2009.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN ISO 7579:2009 consists of the English text of the European standard EN ISO 7579:2009.

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English Version

## Dyestuffs - Determination of solubility in organic solvents - Gravimetric and photometric methods (ISO 7579:2009)

Colorants - Détermination de la solubilité dans les solvants  
organiques - Méthodes gravimétrique et photométrique  
(ISO 7579:2009)

Farbstoffe - Bestimmung der Löslichkeit in organischen  
Lösemitteln - Gravimetrisches und photometrisches  
Verfahren (ISO 7579:2009)

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## Foreword

This document (EN ISO 7579:2009) has been prepared by Technical Committee ISO/TC 35 "Paints and varnishes" in collaboration with Technical Committee CEN/TC 298 "Pigments and extenders" the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2010, and conflicting national standards shall be withdrawn at the latest by April 2010.

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

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### Endorsement notice

The text of ISO 7579:2009 has been approved by CEN as a EN ISO 7579:2009 without any modification.

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## Introduction

Many dyestuffs are soluble in a solvent to an extent which is independent of the amount of dyestuff present in the solvent, as long as excess dyestuff is present. This concentration is defined as the saturation concentration and represents the solubility of the dyestuff in the solvent. In some cases, however, there is no fixed saturation concentration and the amount of dyestuff which dissolves increases with the amount of dyestuff added. A gravimetric and a photometric procedure to assess the solubility of these dyes are described in this International Standard.

# Dyestuffs — Determination of solubility in organic solvents — Gravimetric and photometric methods

## 1 Scope

This International Standard specifies two methods for determining the solubility of dyestuffs in organic solvents. They are applicable to dyestuffs that do not change chemically under the influence of the solvent and are stable and non-volatile under the specified drying conditions. For volatile solvents (boiling point < 120 °C), the gravimetric procedure is recommended and, for less volatile solvents (boiling point > 120 °C), the photometric procedure is recommended. The choice of procedure should be made on a case-by-case basis.

The methods are suitable for concentrations between 1 g and 1 000 g of dyestuff per litre of solvent. Higher concentrations can be used provided the viscosity of the solution is such that the procedure can be carried out readily.

The methods are not suitable for the determination of insoluble matter in a dyestuff.

## 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 787-2, *General methods of test for pigments and extenders — Part 2: Determination of matter volatile at 105 °C*

ISO 2811-1, *Paints and varnishes — Determination of density — Part 1: Pycnometer method*

ISO 15528, *Paints, varnishes and raw materials for paints and varnishes — Sampling*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

### 3.1

#### **solubility**

maximum mass of a dyestuff that is soluble in a given volume of a particular solvent under specified conditions

NOTE Solubility is expressed in grams per litre of solvent (see Annex A). No distinction is made between “true” solubility and “colloidal” solubility.

## 4 Principle

Different amounts of the dyestuff are each dispersed in a defined volume of a solvent at 23 °C. After mixing for 3 h, each dispersion is centrifuged and the solids content of the supernatant liquid is determined by either gravimetric or photometric measurements.