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## **Microbeam analysis — Electron probe microanalysis — Guidelines for the specification of certified reference materials (CRMs)**

*Analyse par microfaisceaux — Microanalyse par sonde à électrons —  
Lignes directrices pour les spécifications des matériaux de référence  
certifiés (CRM)*



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## Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 202, *Microbeam analysis*, Subcommittee SC 2, *Electron probe microanalysis*.

This second edition cancels and replaces the first edition (ISO 14595:2003), which has been technically revised. It also incorporates Technical Correction ISO 14595:2003/Cor 1:2005.

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## Introduction

For electron probe microanalysis (EPMA), a comparative quantitative analytical method used throughout the world, certified reference materials (CRMs) play a crucial role in the analytical accuracy.

This International Standard has been developed to facilitate international exchange and compatibility of analysis data in EPMA.

It gives guidance on evaluating and selecting reference materials (RMs), on evaluating the extent of heterogeneity and stability of RMs, and it gives recommendations for the determination of the chemical composition of RMs for production as EPMA-certified reference materials.