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International Standard

ISO 14594

Microbeam analysis — Electron probe microanalysis — Guidelines for the determination of experimental parameters for wavelength dispersive spectroscopy

Analyse par microfaisceaux — Analyse par microsonde électronique (Microsonde de Castaing) — Lignes directrices pour la détermination des paramètres expérimentaux pour la spectrométrie à dispersion de longueur d'onde

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This document was prepared by Technical Committee ISO/TC 202, *Microbeam analysis*, Subcommittee SC 2, *Electron probe microanalysis*.

This third edition cancels and replaces the second edition (ISO 14594:2014), which has been technically revised.

The main changes are as follows:

— Introduction has been added;

— Terms in Clause 3 have been updated;

— Technical terms in Clause 5 have been updated and the clause has been restructured;

— Content of the Test report in Clause 7 has been revised.

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To ensure reliability and reproducibility during electron probe microanalysis (EPMA), the experimental parameters that include beam current, current density, dead time, wavelength resolution, background, analysis area, analysis depth, and analysis volume should be carefully considered. To reliably consider EPMA results, guidelines standardizing the decision procedure of an experimental parameter are important.

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