
**Iron ores — Determination of loss on
ignition — Gravimetric method**

*Minerais de fer — Détermination de la perte au feu — Méthode
gravimétrique*

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Foreword

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The committee responsible for this document is ISO/TC 102, *Iron ore and direct reduced iron*, Subcommittee SC 2, *Chemical analysis*.

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Introduction

The measurement of loss on ignition (LOI) is a technique widely used in the iron ore industry. Ignition loss is the sum of contributions from the mass loss of volatile compounds water vapour, carbon dioxide and sulfides (due to the decomposition of goethite and carbonaceous materials), and the mass gain due to oxidation [Fe(II) to Fe₂O₃]. Its use is complementary to the determination of elemental or oxide concentrations. It serves to allow for an addition of the oxides, generated at the ignition temperature, and the LOI, to arrive at total (oxide + LOI). The determination of LOI is essential in sinter plant and blast furnace balance calculations, as it is used to calculate calcinated elemental concentrations.

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