
**Textiles — Quantification of carbon
fibre constituent element — Elemental
analyser method**

*Textiles — Quantification des éléments constitutifs des fibres de
carbone — Méthode de l'analyseur élémentaire*

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Contents

	Page
Foreword.....	iv
Introduction.....	v
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions.....	1
4 Principle.....	1
5 Reagents and materials.....	1
6 Apparatus.....	2
7 Preparation of test specimen.....	3
7.1 General.....	3
7.2 Desizing.....	3
7.3 Drying.....	3
7.4 Cutting.....	3
8 Test procedure.....	3
8.1 Preparation of dosing test specimen.....	3
8.2 Procedure.....	3
9 Calculations and display results.....	4
10 Test report.....	4
Annex A (informative) Examples of elemental analyser condition.....	6

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This document was prepared by Technical Committee ISO/TC 38, *Textiles*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Carbon fibre has drawn much attraction in various industries due to its high stiffness, specific strength and anti-corrosion. These outstanding properties of carbon fibre enable the expansion of its application from textile usage to mechanical parts used in automobile and aircraft industry, if carbon fibre is used as a reinforced component in polymer matrix.

In order to accelerate the trend of productization using carbon fibre, there is a prerequisite that the carbon content in the fibre should be evaluated quantitatively. In addition, it is difficult to issue a test report because even an accredited test organization cannot provide a clear method of quantification.

X-ray photoelectron spectroscopy is one of the measurement method suitable for analysis of chemical components with quality and quantity. However, its detecting area is too small to cover the entire fibre.

This document aims to quantifz carbon content in textiles and textile products including PAN-based carbon fibre using elemental analyser (EA) and gas chromatography (GC), successively. Furthermore, this method can also analyse the contents of H and N, simultaneously.

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