

Second edition  
2016-07-01

---

---

## Hard coal and coke — Mechanical sampling —

### Part 3: Coal — Sampling from stationary lots

*Houille et coke — Échantillonnage mécanique —*

*Partie 3: Charbon — Échantillonnage sur lots statiques*



Reference number  
ISO 13909-3:2016(E)

© ISO 2016



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2016, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Ch. de Blandonnet 8 • CP 401  
CH-1214 Vernier, Geneva, Switzerland  
Tel. +41 22 749 01 11  
Fax +41 22 749 09 47  
copyright@iso.org  
www.iso.org

This is a preview of "ISO 13909-3:2016". Click here to purchase the full version from the ANSI store.

## Contents

	Page
<b>Foreword</b> .....	<b>iv</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Establishing a sampling scheme</b> .....	<b>1</b>
4.1 General.....	1
4.2 Design of the sampling scheme.....	2
4.2.1 Material to be sampled.....	2
4.2.2 Division of lots.....	2
4.2.3 Precision of sampling.....	2
4.2.4 Bias of sampling.....	3
4.3 Precision of results.....	3
4.3.1 Precision and total variance.....	3
4.3.2 Primary increment variance.....	4
4.3.3 Preparation and testing variance.....	4
4.3.4 Number of sub-lots and number of increments per sub-lot.....	4
4.4 Minimum mass of sample.....	6
4.5 Mass of primary increment.....	8
4.6 Size analysis.....	9
<b>5 Methods of sampling from wagons, barges and ships</b> .....	<b>10</b>
5.1 General.....	10
5.2 Number of increments and sub-lots.....	10
5.2.1 General analysis and moisture samples.....	10
5.2.2 Common sample.....	10
5.3 Taking the increments.....	11
5.4 Distribution of increments.....	11
5.4.1 Wagons.....	11
5.4.2 Barges.....	11
5.4.3 Ships.....	11
5.4.4 Random selection of increments.....	11
<b>6 Methods of sampling from stockpiles</b> .....	<b>12</b>
<b>7 Sampling equipment — mechanical auger</b> .....	<b>13</b>
<b>8 Handling and storage of samples</b> .....	<b>15</b>
<b>9 Sample preparation</b> .....	<b>16</b>
<b>10 Minimization of bias</b> .....	<b>16</b>
10.1 Causes of bias.....	16
10.2 Checking for precision and bias.....	16
<b>11 Verification</b> .....	<b>17</b>
<b>Bibliography</b> .....	<b>18</b>

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 27, *Solid mineral fuels*, Subcommittee SC 4, *Sampling*.

This second edition cancels and replaces the first edition (ISO 13909-3:2001), which has been technically revised.

ISO 13909 consists of the following parts, under the general title *Hard coal and coke — Mechanical sampling*:

- *Part 1: General introduction*
- *Part 2: Coal — Sampling from moving streams*
- *Part 3: Coal — Sampling from stationary lots*
- *Part 4: Coal — Preparation of test samples*
- *Part 5: Coke — Sampling from moving streams*
- *Part 6: Coke — Preparation of test samples*
- *Part 7: Methods for determining the precision of sampling, sample preparation and testing*
- *Part 8: Methods of testing for bias*