INTERNATIONAL STANDARD

ISO 15320

Second edition
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Pulp, paper and board — Determination of pentachlorophenol in an aqueous extract

Pâtes, papiers et cartons — Dosage du pentachlorophénol dans un extrait aqueux

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 15320 was prepared by Technical Committee ISO/TC 6, *Paper, board and pulps*.

This second edition cancels and replaces the first edition (ISO 15320:2003), which has been technically revised.

Pulp, paper and board — Determination of pentachlorophenol in an aqueous extract

WARNING — The use of this International Standard may involve hazardous materials, e.g. methanol and pentachlorophenol, which are toxic substances, as well as acetic anhydride, which is corrosive. This International Standard does not address all the safety and environmental problems associated with its use. It is the responsibility of the user of this International Standard to establish appropriate safety, health and environmental practices and determine the applicability of safety regulations prior to use.

1 Scope

This International Standard specifies a test method for the determination of pentachlorophenol (PCP) in an aqueous extract of pulp, paper and board. Although it was developed for paper and board intended to come into contact with foodstuffs, it is applicable to all kinds of pulp, paper and board.

The working range for acetylation is 0,05 mg/kg to 0,5 mg/kg.

NOTE The upper limit of the working range could be increased if the aqueous extract is diluted.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 186, *Paper and board — Sampling to determine average quality*

ISO 536, *Paper and board — Determination of grammage*

ISO 638, *Paper, board and pulps — Determination of dry matter content — Oven-drying method*

ISO 7213, *Pulps — Sampling for testing*

ISO 3696, *Water for analytical laboratory use — Specification and test methods*

3 Principle

A specimen of the material to be tested is extracted with either cold or hot water. The pentachlorophenol extract is concentrated by adsorption onto a phenyl silica column using solid-phase extraction. The pentachlorophenol is then eluted from the phenyl silica column with *n*-hexane and an acetylated derivative formed with acetic anhydride. The amount of pentachlorophenol present is then determined using gas chromatography employing an electron-capture detector (ECD) or mass spectrometer (MS) detector. The result is expressed as milligrams per kilogram of material.