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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

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**Natural gas - Format for data from gas chromatograph
analysers for natural gas - XML file format**

天然气 气相色谱分析仪数据格式 XML文件格式

(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is equivalent to ISO 23219:2022 "Natural gas chromatograph data format XML file format".

Introduction

There are many manufacturers of gas chromatographs for natural gas composition determination. When the instrument is properly set up, it can provide accurate data. However, different manufacturers' gas chromatographs report data in different ways, which may cause problems when using these data offline.

Causes confusion when calculating physical properties or evaluating instrument performance.

This document provides a method for standardizing the data format of gas chromatographs, regardless of the source of the gas chromatograph.

Natural gas chromatograph data format XML file format

1 Scope

This document specifies the text file format of natural gas analysis result report and other natural gas related data - XML file format.

The extension of the format file is ".XML" (not case sensitive).

The XML file format is suitable for the output data format of ISO 6974-1 composition analysis and ISO 6974-2 uncertainty calculation, and also the input data format is suitable for ISO 6976 physical property calculation and ISO 10723 performance evaluation. Generally speaking, this format is used to standardize natural the gas composition analysis results are reported as data, or used as performance evaluation result data to facilitate reading into Excel tables for subsequent data processing.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document.

ISO 8601-1 Date and time information exchange representation method Part 1: Basic principles Note. GB/T 7408.1-2023 Date and time information interchange representation Part 1: Basic principles (ISO 8601-1:2019, IDT)

3 Terms and Definitions

There are no terms or definitions that require definition in this document.

4 Basic Instructions

Follow the steps below to correctly represent the XML file format.

a) Clear, concise, and non-proprietary. Since the chemical formula is part of the International Chemical Compound Identifier (InChI), it can be clearly expressed using InChI.

A component of natural gas; the Chemical Substance Registration Number (CAS-RN) is proprietary and difficult to understand using CAS-RN.

b) Avoid using attributes in markup. For example, instead of using 1,2, use 1,2mol%.

c) XML should have some checksum (at the end). For example, the CRC-16 checksum

(hexadecimal) displayed by the ZIP program is XML comments are placed at the end of the file, for example . Adding a checksum at the end is not for security purposes, only Serves as a verification check that the file contents have not been corrupted.

d) The date and time are marked as and use the rules specified in ISO 8601-1, such as 2018-07-10T13.59.00 01.

The data can be used to.

- Date and time of sample registration;
- Date and time when the result is generated;
- Date and time of verification of results; or
- Date and time when the report is issued.