

BUREAU OF INDIAN STANDARDS

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भारतीय मानक मसौदा

**कार्बन डाइऑक्साइड कैप्चर, परिवहन और भूवैज्ञानिक भंडारण -
क्रॉस कटिंग मुद्दे - CO₂ स्ट्रीम संरचना**

Draft Indian Standard

**CARBON DIOXIDE CAPTURE, TRANSPORTATION AND
GEOLOGICAL STORAGE – CROSS CUTTING ISSUES – CO₂
STREAM COMPOSITION**

ICS 13.020.40

Environmental Management Sectional Committee, CHD 34

Last date for Comments: 20 June 2024

NATIONAL FOREWORD

(Formal clause shall be added later)

This standard provides up-to-date consideration of CO₂ stream quality issues for operators, regulators and stakeholders based on research results and the experience of various pilot and industrial scale CCS project. The first part of this report summaries existing information related to CO₂ stream composition that generally results from particular capture processes. Then this report describes possible impacts and effects of the various impurities that may occur in the CO₂ stream on various downstream elements of a CCS chain, including operational aspects, potential implications for health, safety and environmental issues, and quantification of greenhouse gas emissions.

Depending among other things on the feedstock and the CO₂ generating and capture processes, CO₂ streams captured from industrial sources or power generation contain various impurities (that is stream components other than CO₂). The impurities differ in their concentrations but also in their physical and chemical properties. Therefore, the composition of the originally captured CO₂ stream is a key starting point in ensuring the safety and reliability of the transport and geological storage of CO₂. Compositional information may assist operators in evaluating the need for treating a CO₂ stream, based on the intended transportation options (including mixing with other CO₂ stream), usage options (EOR or other) or dedicated storage in geologic formations.

The text of ISO Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

a) Wherever the words 'International Standard' appears referring to this standard, they should be read as 'Indian Standard'.

b) Comma (,) has been used as a decimal marker, while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In reporting the result of the test or analysis made in accordance with this standard, if the final value, observed or calculated, is to be rounded off, it shall be done in accordance with IS 2:2022 'Rules for rounding off numerical values (*second revision*).