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First edition  
2019-06

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## **Gas analysis — Analytical methods for hydrogen fuel — Proton exchange membrane (PEM) fuel cell applications for road vehicles**

*Analyse des gaz — Méthodes analytiques pour carburant hydrogène  
— Applications utilisant des piles à combustible à membrane  
échangeuse de protons (MEP) pour véhicules routiers*



Reference number  
ISO 21087:2019(E)

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ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Fax: +41 22 749 09 47  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
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Published in Switzerland

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## Foreword

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This document was prepared by Technical Committee ISO/TC 158, *Gas analysis* in collaboration with Technical Committee ISO/TC 197, *Hydrogen technologies*.

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## Introduction

The hydrogen supply infrastructure for fuel cell electric vehicles (FCVs) requires specifications and an operational protocol for maintaining the quality of the hydrogen used to fuel the vehicles. To fulfil these requirements, several documents have been written: ISO 14687 which sets forth the quality specifications of hydrogen, and ISO 19880-8 which specifies the quality assurance and control protocol for ensuring them. There was still a need for developing a standard on analytical methods to measure the level of contaminants found in the gaseous hydrogen fuel. The development and validation of these analytical protocols is necessary in order to assure the hydrogen quality required by ISO 14687 for permeating commercialized FCVs and hydrogen infrastructure in the market. This document sets criteria to validate the analytical methods used for the quality control at hydrogen distribution facilities.