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Sommario/riassunto	In May 2019, the new SI definitions for ampere, kilogram, kelvin and mole came into force. For the mole, the SI unit of the amount of substance, the Avogadro constant was newly determined and its value set as the defining constant. But: How did it come about that a comparative number became a natural constant? Embark on a short journey from the beginning to today: from the gas laws of the 17th century to the new SI system of units of the 21st century. Learn about the importance of natural constants in general and the Avogadro constant in particular. Get an overview of the term "mole" and learn which (exemplary) methods can be used to determine the Avogadro constant. Finally, get an overview of the history of the SI system of units and the new definitions of SI units. This Springer essential is a translation of the original German 1st edition essentials, Die Avogadro-Konstante by Torsten Schmiermund, published by Springer-Verlag

GmbH Germany, part of Springer Nature in 2020. The translation was done with the help of artificial intelligence (machine translation by the service DeepL.com). A subsequent human revision was done primarily in terms of content, so that the book will read stylistically differently from a conventional translation. Springer Nature works continuously to further the development of tools for the production of books and on the related technologies to support the authors. The Contents Natural constants and their meaning Physical-chemical laws and the development of the term "mole Examples for the determination of the Avogadro constant The new SI system of units (definitions and constants) Target groups Chemistry majors and minors Teachers and lecturers in the fields of chemistry and history of chemistry The author Torsten Schmiermund has worked as a chemical engineer in the chemical industry for many years. In addition to other books in the essentials series, he has published a chemistry textbook (Das Chemiewissen für die Feuerwehr, Springer, 2019). This book is a translation of an original German edition. The translation was done with the help of artificial intelligence (machine translation by the service DeepL.com). A subsequent human revision was done primarily in terms of content, so that the book will read stylistically differently from a conventional translation.
