

*Materials of Conferences***CHEMISTRY. A POCKET HANDBOOK.
GRADES 9–11**¹Doronkin V.N., ²Berezhnaya A.G.,²Sazhneva T.V., ¹Fevrалеva V.A.¹Rostov State University of Railway Communications,
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The use of pocket handbook will help you prepare for the exam, university entrance and further education. The pocket guide contains a brief background material necessary for operative finding of important information and knowledge systematization. Handbook format allows you to use it in the classroom, at additional lessons in the process of independent preparation for tests and exams.

In an accessible form, the manual systematically provides information on the **general, inorganic and organic chemistry** at a level sufficient to successfully complete tasks of the state certification. The material is presented in the form of **reference notes, drawings, diagrams and equations of the reactions**, including basic principles of chemistry. Explanations are given using basic chemistry knowledge.

The handbook consists of three parts, namely general, inorganic and organic chemistry.

The **first part** – «General Chemistry» – covers the basic concepts of atomic structure and periodic table of chemical elements of Mendeleev, chemical bonding, redox transformations (redox

reactions, electrolysis, corrosion and corrosion protection), electrolytes and their properties (dissociation, ionic equations and hydrolysis), classification of chemical reactions and the general properties of oxides, bases, acids and salts. The **second part** of the book – «Inorganic Chemistry» – deals with the chemical properties of simple and complex substances. There are individual sections for methods for producing of inorganic substances, methods for the determination of certain substances and features that accompany chemical reactions. The material is consistently explained using the concepts of redox transformations and general properties of various classes of substances.

The **third part** – «Organic Chemistry» – presents the fundamentals of the theory of chemical structure, nomenclature and classification of organic substances, the basic information about the electronic structure of molecules and reaction mechanisms, methods of synthesis, as well as chemical properties of some classes of organic substances.

The publication is addressed primarily to students of grades 9–11. The handbook is part of «Chemistry. Preparing for the USE» educational complex.

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