

Textbook "Technology and calculations algorithms of nitric acid production" for students specialty 161 Chemical and Engineering (branch of knowledge 16 Chemical and Bioengineering, BSc), specialization "Chemical technology of inorganic substances and water purification" of the Faculty of Chemical Technology.

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Annotation

The process of the production of the nitric acid is fairly sophisticated set of chemical reactions that occurs in different phases and with the presence of the catalysts. Physico-chemical basis of the individual stages of the production of the nitric acid briefly discussed in the following sections. Sufficient information for the production of the nitric acid is given in Annex A. The technological scheme of production of the dilute nitric acid has been described. The calculation algorithm of the separate stages, processes and reactors in accordance with the technological scheme – from the ammonia conversion to the dispersion of emissions in the atmosphere – has been proposed. The implementation of algorithms in the programs such as Excel, MathCad or Visual basic for applications is proposed as well. For facilitation of the creation of own program the controlling calculation is given. The manual will be useful for students during the coursework for the credit unit "Chemical technology of inorganic substances 2" and the Bachelor Thesis.