THE PREPARATORY PROBLEMS FROM THE INTERNATIONAL CHEMISTRY OLYMPIADS

Series 3

33rd – 37th IChOs
2001 – 2005

P R E F A C E

Edited by Anton Sirota

IChO International Information Centre
IUVENTA, Bratislava, 2018

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P r e f a c e

It is stated in paragraph 10 of the Regulations of the International Chemistry Olympiad that:

“The organizer distributes a set of preparatory tasks written in English to all participating countries in January of the competition year. The preparatory tasks are intended to give students a good idea of the type and difficulty of the competition tasks, including safety aspects. SI units should be used throughout the preparatory tasks.

The total number of theoretical and experimental tasks in the set of preparatory problems cannot be lower than 25 and 5, respectively.”

That is the reason why the organizers must devote sufficient attention to the preparation of the preparatory problems since they give a certain picture about the level of the competition still before its realization.

This publication contains the preparatory problems from the International Chemistry Olympiads (IChOs) organized in the years 2001 – 2005. In the elaboration of this collection the editor had to face certain difficulties because the aim was not only to make use of past recordings but also to give them such a form that they may be used in pedagogical practice and further chemical education.

Not less than 140 theoretical and 33 practical preparatory problems were prepared and published by the organizers of the mentioned IChOs. Consequently, a great number of authors from different countries and universities were involved in their preparation and gave them a final shape and structure. Naturally, it left some traces on the composition and presentation of the text of the tasks and their solutions and it was necessary to make some corrections in order to unify the form of the problems.

First of all, SI quantities and units are used in this publication as it is required by the regulations of the IChO. Only some exceptions have been made when, in an effort to preserve the original text, the quantities and units have been used that are not SI.

Recalculations of the solutions were made in some special cases only when the numeric results in the original solutions showed to be obviously not correct. Although the numbers of significant figures in the results of the problems do not obey sometimes the criteria generally accepted, they were left without changes.

Nevertheless, some small formal corrections made in the text of the original preparatory problems do not concern their contents and language and, therefore, the

responsibility for the scientific content and language of the problems lies exclusively with the authors and organizers of the particular International Chemistry Olympiads.

This review of the preparatory problems should serve to both competitors and their teachers as a source of further ideas in their preparation for the IChO competitions. Moreover, the collection of the problems could serve as an documentary material and will be a part of the archive of the International Chemistry Olympiads. The series of the preparatory problems will continue with its fourth part in which preparatory problems from the International Chemistry Olympiads organized in the years 1996 – 2000, will be collected.

When reading or studying the preparatory problems one must admire the effort and work of many of those authors whose names are accompanied with the presentation of the problems. We wish to all who will organize and attend the future International Chemistry Olympiads, success and happiness.

Bratislava, December 2017

Anton Sirota, editor