

Rules of the 5th International Chemistry Tournament

Part 1. General Considerations

1. The International Chemistry Tournament (IChTo or Tournament) is a team competition that consists of solving open-ended scientific problems, presenting the solutions to these problems, and defending them in scientific debates.
2. The aims of IChTo are the popularisation of chemistry, teamwork training and the development of presentation skills.
3. The working language of IChTo is English.
4. Each team consists of 4–6 students representing one country.
5. Each country may be represented by 1 or 2 teams. The host country may be represented by 3 teams.
6. If the number of the registered teams exceeds 20, the organising committee may arrange additional rounds of selection.
7. The 5th International Chemistry Tournament is held in Budapest, between the 16th and 21st of August 2022.

Part 2. Definitions

1. Basic definitions:

- 1.1. Section – the entirety of three or four teams, Jury members and a Moderator participating in the tournament together in the same room.
- 1.2. Stage – the sequence of challenges in a Section, where each team take turns as Reporter, Opponent, and Reviewer, and potentially Observer.
- 1.3. Round – the period of time starting with the challenge of the reporter team to present a problem, ending by the announcement of the Grades to the Reporter, the Opponent and the Reviewer, followed by an informal verbal evaluation by the Jury.
- 1.4. Grade – a mark, which is given by the Jury.
- 1.5. Technical Points (TPs) – points serving for more accurate evaluation of the participants. The calculated TPs are rounded to the nearest integer.
- 1.6. Rating Points (RPs) – final score, which is the result of the conversion of TPs, taking into account the relative positions of the teams in their Sections.

- 1.7. Semi-final Stages – Stages which lead to the selection of the top 3 teams.
- 1.8. Final Stage – the last Stage which leads to the selection of the winner team of IChTo.
2. Moderator – a person who:
 - 2.1. Announces every Round in a Section;
 - 2.2. Moderates discussions during all Stages;
 - 2.3. Has the right to decline questions of the Jury and participants in case it is deemed inconvenient or inappropriate;
 - 2.4. Announces the marks given by the jury at the end of a Round.
3. Reporter – a participant who presents a solution to the given problem.
4. Opponent – a participant who finds weaknesses and gaps in the solution presented by the Reporter and criticises them, pointing out possible inaccuracies and errors in the understanding of the problem and in the solution.
5. Reviewer – a participant who presents a short evaluation of both the Reporter and the Opponent, furthermore, draws a conclusion of the debate.
6. Observer – a team that may only participate in the general discussion.
7. Captain – a participant who represents the team, challenges other teams, calls for a time out and performs other actions on behalf of their team.
8. Jury – people who ask questions from the participants during the debate and evaluate the Reporter, the Opponent, and the Reviewer. There must be 3 or more Jury members in each Section.
9. Each participant may take the role of Reporter, Opponent and Reviewer only once for each role during the Semi-finals. During the Final Stage, each team participant may take one active role only. If a team participant breaks this rule, the total number of technical points for additional roles is multiplied by a factor 0.5 as a penalty.

Part 3. Stage regulations

1. The Tournament is held in 4 Semi-final Stages and 1 Final Stage.
2. Before the first Stage, a team contest (draw) is held. As a result of the draw the participating teams are assigned a number from the first to the last, according to their results in the draw. After this, teams are divided into the following Sections:

	Number of teams				
	7	8	9	10	11
1st Section	1, 3, 5, 7	1, 3, 5, 7	1, 4, 7	1, 4, 7, 10	1, 4, 7, 10
2nd Section	2, 4, 6	2, 4, 6, 8	2, 5, 8	2, 5, 8	2, 5, 8, 11
3rd Section	-	-	3, 6, 9	3, 6, 9	3, 6, 9

	Number of teams				
	12	13	14	15	16
1st Section	1, 5, 9	1, 5, 9, 13	1, 5, 9, 13	1, 5, 9, 13	1, 5, 9, 13
2nd Section	2, 6, 10	2, 6, 10	2, 6, 10, 14	2, 6, 10, 14	2, 6, 10, 14
3rd Section	3, 7, 11	3, 7, 11	3, 7, 11	3, 7, 11, 15	3, 7, 11, 15
4th Section	4, 8, 12	4, 8, 12	4, 8, 12	4, 8, 12	4, 8, 12, 16

If the number of teams is different, the distribution of teams takes place in a similar manner.

3. In the first Round of each Section the teams must decide the order in which they will select their roles for the Section. The highest-ranking team deciding first. After the order is established, the teams will choose their roles for the first Round in that order.

4. After the first round the teams change their roles according to the following schemes:

For a Section of 4 teams:

Round number	Team's role			
1	Opponent	Observer	Reviewer	Reporter
2	Observer	Reviewer	Reporter	Opponent
3	Reviewer	Reporter	Opponent	Observer
4	Reporter	Opponent	Observer	Reviewer

For a Section of 3 teams:

Round number	Team's role		
1	Opponent	Reviewer	Reporter
2	Reviewer	Reporter	Opponent
3	Reporter	Opponent	Reviewer

5. The standard course of round follows the scheme below:

Part of the round	Maximum time, minutes
The Captain of the Opponent team announces the number of the problem that they intend to challenge the Reporter team with	1
The Reporter team accepts or declines the challenge	1
Repeating the challenge if necessary (see Part 3/7.)	2
Announcing the Reporter's name	1
Announcing the Opponent's name	1
Report (strictly monologue)	8
Preparation of the Opponent (during this part, the Reporter is not allowed to communicate with their team)	1
Opposition (strictly monologue)	5
Reporter's response (strictly monologue)	4
Academic discussion between the Reporter and the Opponent	5
Announcing the Reviewer's name	1
Review (strictly monologue)	3
Jury's questions	5

General discussion between the active participants and the audience	5
Evaluation by the Jury (writing down the Grades)	2
Announcement of Grades	2
Short verbal evaluation of each participants' performance and areas of improvement, carried out by the Head of the Jury (for educational purposes)	5
Spare time (may be added by the Moderator)	3
TOTAL	55

6. Team Captains (including the Observer team) may announce a 60-second-long time-out once in every Stage but strictly before the Jury's questions. During the time-out the Reporter, the Opponent and the Reviewer are allowed to communicate with their teammates. Time-out applies to all teams in the Section.

7. Procedure for accepting or declining a challenge:

7.1. After the Reporter team is challenged with a problem, the Captain of the Reporter team decides to accept or reject the challenge. In case of accepting the challenge, the Captain of the Reporter team must announce the name of the Reporter. In case of rejecting it, the Captain of the Reporter team announces whether the refusal is 'strategic' or 'tactical'. A tactical refusal applies only to the current Round, while a strategic refusal applies to the rest of the competition as well. If the Captain does not indicate that the refusal is strategic, the refusal is considered to be tactical.

7.2. Strategic refusal is only possible once in a Stage.

7.3. A team can reject three challenges in a Round without any repercussions. If the Reporter team refuses to accept the next challenge after the third rejection in the round, the total number of TPs for the Reporter in the given round is multiplied by a penalty factor according to the following table:

Number of rejections	4	5	6	7	8 or more
Factor	0.8	0.7	0.6	0.5	0.4

8. The Opponent team cannot challenge the Reporter team with the following problems:

8.1. which the Reporter team already rejected in the current Stage;

8.2. which the Reporter team rejected in previous Stages (strategic refusal only)

- 8.3. which was already reported in the current Stage;
- 8.4. which the Reporter team has reported in previous Stages;
- 8.5. which the Opponent team has opposed in previous Stages.

If it turns out that the Opponent team cannot challenge the Reporter team due to the regulations of Part 3/8.1-8.5, then Part 3/8.4 and Part 3/8.5 are temporarily lifted for that Stage.

9. After the first Stage, the teams are ordered according to the RPs they have achieved in the first Stage. If teams have equal RPs, the order between them will be determined by their respective TPs. If teams have the same TPs, the ordering is done according to the number of points earned by them as Reporter. Further grouping and prioritisation in the Sections is defined in the same way as in Part 3/2 - 4.

10. After the second Stage the teams are ordered according to the order obtained after the first Stage. Scheme of grouping after the second Stage:

	Number of teams			
	7	8	9	10
1st Section	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3	1, 2, 3, 4
2nd Section	5, 6, 7	5, 6, 7, 8	4, 5, 6	5, 6, 7
3rd Section	-	-	7, 8, 9	8, 9, 10

	Number of teams			
	13	14	15	16
1st Section	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4
2nd Section	5, 6, 7	5, 6, 7, 8	5, 6, 7, 8	5, 6, 7, 8
3rd Section	8, 9, 10	9, 10, 11	9, 10, 11, 12	9, 10, 11, 12
4th Section	11, 12, 13	12, 13, 14	13, 14, 15	13, 14, 15, 16

If the number of teams is different, the distribution of teams takes place in a similar manner.

11. After the third Stage the teams are ordered from the first to the last, according to the sum of the RPs they have obtained in the first three Stages. If teams have the same RPs, rules similar to part 3/9 are applied. For the fourth Stage teams are distributed according to the scheme in Part 3/2.

12. After the fourth Stage, the three teams with the highest RPs take part in the Final Stage (if teams have the same RPs, see Part 3/9). Unlike the other Stages, in the Final Stage, teams themselves choose which problem they intend to report. The only limitation is that during the Final Stage it is not allowed to report the same problem more than once.

13. During the Stages of the Tournament, participants are not allowed to use electronic devices apart from calculators. Teams are allowed to use one laptop or tablet per team to show their own presentations. Using the Internet is strictly prohibited on each electronic device.

14. Team leaders are strictly prohibited to communicate with their teams during the Rounds. Such cases are penalised with 30% of the team's TPs for that Round.

Part 4. The Rules of Grading

1. The possible Grades are 2, 3-, 3, 3+, 4-, 4, 4+, 5-, 5 and 5+. The highest Grade is 5+, the lowest is 2.

2. The Jury members must write down the Grades before their announcements.

3. The Reporter is graded separately for scientific and presentational parts.

4. Reference points for grading:

Reporter – scientific part:

Grade	Solution model	Correctness of the solution	Originality of the solution
5	Solution model was correct	Solution was correct	Solution was original
4	2 out of 3 criteria fulfilled		
3	1 out of 3 criteria fulfilled		
2	Solution model was absent or does not comply with the problem	Solution was incorrect	Solution was not original

Reporter – presentational part:

Grade	Understandability of the solution	Quality of the presentation	Oratory
5	Solution was understandable	Presentation was readable and presented in a good-looking form	Reporter was interesting to listen to
4	2 out of 3 criteria fulfilled		
3	1 out of 3 criteria fulfilled		
2	Solution was not understandable	Presentation was unreadable	Reporter was not interesting to listen to

Opponent:

Grade	Correctness of the opposition	Scientific nature of the opposition	Credibility of the opposition
5	Opposition was correct	Opposition was scientifically justified	Opposition was convincing
4	2 out of 3 criteria fulfilled		
3	1 out of 3 criteria fulfilled		
2	Opposition was incorrect	Opposition was not scientifically justified	Opposition was not convincing

Reviewer:

Grade	Validity of report reviewing	Validity of opposition reviewing	Validity of conclusion about report and opposition
5	Report reviewing was valid	Opposition reviewing was valid	Conclusion was correct
4	2 out of 3 criteria fulfilled		
3	1 out of 3 criteria fulfilled		
2	Report reviewing was not valid	Opposition reviewing was not valid	Conclusion was incorrect

5. The Grade "5+" is given by the Jury in exceptional cases, when all the conditions are assessed as "great." Other Grades with the signs "+" and "-" can be given by the Jury members based on the guidelines in Part 4/4.

6. The Grades 2 and 5+ are obligatory to be explained by the Jury. The Captain of any team can ask the Jury to explain any other Grade.

7. After each Round Grades are recalculated to TPs according to the following scheme:

Grade	2	3-	3	3+	4-	4	4+	5-	5	5+
TPs	2	5	9	14	20	27	34	42	51	60

8. The points are then averaged across all Jury members in the Section, then rounded to the nearest hundredths. Finally, TPs for the Reporter and the Opponent are multiplied by a factor of 2. Thus, the maximum number of TPs that can be awarded for the Reporter is 240, for the Opponent it is 120, for the Reviewer it is 60.

9. After the end of the Stage RPs of the teams are calculated according to the following scheme:

TPs	Place of the team in the Section after the Stage				
	No. ¹	No. ² , No. ³ or No. ⁴ , if TPs (No. ^X) ≥ [TPs (No. ¹) – 10]	No. ² if TPs (No. ²) < [TPs (No. ¹) – 10]	No. ³ or No. ⁴ if TPs (No. ^X) ≥ [TPs (No. ²) – 10]	No. ³ or No. ⁴ if TPs (No. ^X) < [TPs (No. ²) – 10]
≥300	6	6	5	5	4
230-299	5	5	4	4	3
130-229	4	4	3	3	2
60-129	3	3	2	2	1
<60	2	2	1	1	0

TPs (No.^X) is the number of TPs achieved by the team that took place X in the Section

Part 5. Determination of The Winner and Laureates

1. The teams having the highest sum of RPs are awarded with diplomas of winner and laureates of 1st, 2nd and 3rd class.

2. Diploma of 1st class degree is only given to one team having the most TPs in the Final Stage. If 2 or 3 teams have the same TPs then the final order is determined based on the potential TP differences in the following order: TPs for the report in the Final Stage, TPs for the opposition in the Final Stage, TPs in Semi-final Stages, TPs for reports in Semi-final Stages, TPs for oppositions in Semi-final Stages, the team's rank in the draw.

3. Places from the first to the third are determined by the Final Stage as it is written in Part 5/2. Ranks of the teams (from fourth to the last) are determined by the sum of RPs. If teams have the same RPs then the final order is determined based on the potential TP differences in the following order: TPs in Semi-final Stages, TPs for reports, TPs for oppositions, the team's rank in the draw.

4. The maximum number of laureates cannot exceed 45% of the teams (rounded to the nearest integer) but should not be less than 3.

5. Individual participants can be awarded with personal diplomas based on their total achieved TPs. Individual participants can also be awarded with special prizes.

Part 6. Final Statements

1. Any questions and suggestions should be sent to info@ichto.org.

2. The organising committee can change any part of these rules before August 16th, 2022. After that day, some changes may still apply but only with the agreement of the majority of the team leaders.

3. The result of the Tournament must be published on the official site of the Tournament – ichto.org – no longer than 3 days after the Tournament.