The Ministry of Preschool and School Education

AGENCY FOR SPECIALIZED EDUCATIONAL INSTITUTIONS

SCIENCE OLYMPIAD CENTER

ABU RAYHAN BIRUNI INTERNATIONAL CHEMISTRY OLYMPIAD

Uniting Molecules, Bridging Cultures

May 28 - June 4, 2025

For Hosting the 2nd Abu Rayhan Biruni International Chemistry Olympiad

Tashkent, Uzbekistan

Tashkent
Uzbekistan

ARBICHO 2025

ABU RAYHAN BIRUNI
INTERNATIONAL
CHEMISTRY OLYMPIAD

KHILOLA UMAROVA

Minister of Preschool and School Education'

Distinguished guests, esteemed participants of today's Olympiad,

Assalamu alaykum!

Welcome to Uzbekistan!

Today, we have gathered on this sacred land for the closing ceremony of the **Abu Rayhan Biruni International Chemistry Olympiad**, named after one of the greatest scholars who left a timeless scientific legacy for all generations.

This event is not only a celebration of science but also a platform for promoting friendship, cooperation, and peace among talented youth from various countries — a true ambassador of scientific unity.

Abu Rayhan Biruni is a son of our nation who made an immense contribution to the civilization of all humanity. His works are rich in scientific discoveries and profound conclusions in chemistry, astronomy, geography, mathematics, and philosophy. Biruni was a scholar who did not merely approach science, but brought science closer to humanity. He is recognized as a great thinker who demonstrated the boundless potential of the human mind.

That is why naming this Olympiad after Biruni is a significant initiative — aimed at honoring his legacy, demonstrating devotion to science, and embodying the idea of serving the future of humanity.

In recent years, systematic efforts have been undertaken in our country to support the field of education, particularly in nurturing talented youth and ensuring their participation in international science Olympiads. Thanks to important resolutions and decrees issued by our President, all necessary conditions are being created for this purpose.

In particular, on **September 30, 2024,** the Presidential Decree No. **346** titled "On Further Improvement of the System of Working with Gifted Youth" established the **Science Olympiad Center.** This center now plays a key role in systematically identifying, training, and supporting talented students across the country.

It is worth noting that in 2022, students from our country won 46 medals in international Olympiads, in 2023 — **91 medals,** and in 2024 — **128 medals.** Remarkably, in the first five months of **2025,** they have already earned **132 medals.** These achievements are a clear testament to the effectiveness of our ongoing efforts.

Dear participants,

This Olympiad is not just a competition. It is an opportunity — a chance to gain knowledge, strive for excellence, and build strong bonds of international friendship. A total of 115 gifted students from 14 countries — including Turkey, India, Georgia, Vietnam, Saudi Arabia, Tajikistan, Kazakhstan, Kyrgyzstan, Turkmenistan, Azerbaijan, Russia, Belarus, Mongolia, and Uzbekistan — demonstrated their skills and knowledge throughout this event.

This is a source of immense pride and inspiration for us all.

Throughout the Olympiad, we witnessed a beautiful contest of intellect and science. Regardless of who emerged as winners, all participants took courageous steps on the path of knowledge and are, therefore, achievers in their own right. Your level of preparation, your fresh approaches to solving challenging problems, and your passion for success are true victories.

Dear students,

This year's Olympiad was not only a test of knowledge but also an opportunity to explore the rich history and culture of Uzbekistan and to build new bridges of friendship and cooperation. Participants visited landmarks such as the Victory Park and Amir Temur Museum in Tashkent, and the Gur-e-Amir Mausoleum, Registan Square, Ulugbek Observatory, and the Eternal City Complex in Samarkand.

Respected participants,

I sincerely hope that this Olympiad has not only brought you successful results but also inspired new scientific ideas, strengthened international friendship, and opened doors for future collaboration.

Thank you for your attention.

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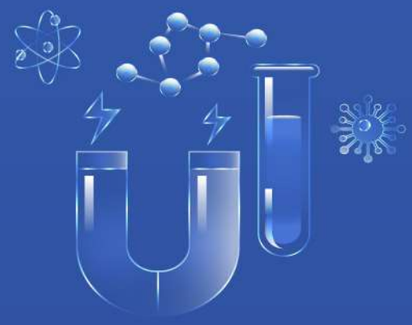


IChO Glossary

The following terms were used throughout this document.

International Steering Committee

The highest entity responsible for making decisions within the Olympiad organization. It consists of project leaders from various countries and meets at least once monthly in preparation for the event.

Scientific Committee

The committee prepares and reviews the scientific content related to the ARBICHO, ensuring that the scientific challenges and materials align with international standards.

Organizing Committee

The committee is responsible for preparing and managing all organizational aspects of ARBICHO.

Delegation

Each national delegation consists of at most four students selected on a national level, plus up to two team leaders.

Contestants

The ARBICHO competitors were secondary school students or recent graduates who have not started university education.

Team Leaders

Specialists in chemistry, such as chemistry teachers, may serve as mentors, with up to two accompanying individuals and responsible for all tasks related to their delegation.

Observers

Delegations may include an observer alongside the team leaders. Observers could attend all Jury meetings, assist with translation, and contribute to the correction process.

International Steering Committee

Committee Tasks

The International Steering Committee plays an important role in overseeing the long-term organization of the International Chemistry Olympiad. The Committee consists of members elected by the International Jury, as well as former and future organizers of the Olympiad.

Committee Members

JL Kiappes, UK-USA (2023) chairman
Yunus Emre Türkmen, Türkiye (2022)
Badr Al-Majrathi, Saudi Arabia (2024)
Turaboy Shermatov, Uzbekistan (2026)

Organizing Committee

Committee Tasks

The committee's role centers on overseeing all organizational aspects and unifying the efforts of the organizing teams to meet all hosting requirements and ensure the success of the event.

Committee Members

Turaboy Shermatov, Director of Science Olympiad Center and Chairman of the Organizing Committee

Sevara Shakirova, Vice Director of the Agency of Specialized Educational Institutions and Committee member

Akromkhuja Umarkhodjaev, Head of the event organization Department

Jurabek Jangirov, Head of the Web & Social Networks and Content Department

Inom Khujamov, Head of IT and technical Department

Oybek Usmonov, Head of the transport and logistics Department

Davron Tukhtaev, Exam preparation and supporting track

Murotjon Islamov, Head of the Events and public relations track

Tamanno Turaeva, Media track

Scientific Committee

Committee Tasks

The Scientific Committee plays a crucial role in the Olympiad, being responsible for drafting preparatory questions for both theoretical and practical exams. Additionally, it reviews all scientific content to ensure compliance with the established international standards.

Committee Members
Core Committee and exam authors

Prof. J. L. Kiappes - University College London, UK

Prof. Alexander Kirillovich Gladilin - Lomonosov Moscow State University, Russia

Prof. Vadim Vladimirovich Eremin- Lomonosov Moscow State University, Russia

Andrei Shved - PhD student at ETH Zurich, Switzerland

Alexander Koronatov - PhD student at Technion - Israel Institute of Technology, Israel

Prof. Yunus Emre Türkmen - Bilkent University, Turkiye

Badr Al-Majrathi, Mawhiba, Saudi Arabia

Dr. Khamidulla Tukhtaev - King Abdullah University of Science and Technology

Bekhzodbek Boltaev - Surgeon of the medical clinic Shifo-Nur

Boburbek Boltaev - Surgeon of Bekobod medical clinic in Tashkent

Islomjon Karimov - Bilkent University in Ankara, Turkiye

Mirumid Mirakbarov - Higher School of Economics in Moscow

Mohira Boltaeva - Tashkent Pharmaceutical Institute, Uzbekistan

Maftuna Badalova - Nanyang Technological University in Singapore

Azimjon Jamolov - Nanyang Technological University in Singapore

Azizbek Nazarov - Tashkent Medical Academy, Uzbekistan

Saida Abdullaeva - Tashkent Medical Academy, Uzbekistan

Vision and Mission

Our Mission

The mission of the Abu Rayhan Biruni International Chemistry Olympiad (ARBICHO) is to promote excellence in chemistry education and inspire a deep, lasting interest in science among high school students across the globe. By organizing a fair and challenging international competition, we aim to create an enriching environment where young minds can explore the beauty and power of chemistry. Through this Olympiad, we encourage not only academic growth but also intercultural understanding, teamwork, and global friendship. Rooted in the scientific spirit of Abu Rayhan Biruni, we are committed to fostering curiosity, integrity, and collaboration among the next generation of scientists.

Our Vision

Our vision is to establish ARBICHO as a leading international platform for scientific talent, where students from diverse backgrounds come together to celebrate knowledge, innovation, and unity. We aspire to build a global community of young chemists who are not only academically skilled but also passionate about using science to address real-world challenges. Inspired by the legacy of Abu Rayhan Biruni — an exceptional thinker who valued truth, dialogue, and discovery — we envision a future where scientific exchange transcends borders and contributes to a more informed, connected, and peaceful world.

About Abu Rayhan Biruni

Abu Rayhan Muhammad ibn Ahmad al-Biruni (973 – after 1050) was one of the most remarkable polymaths of the Islamic Golden Age. Renowned for his immense contributions to fields such as astronomy, physics, mathematics, geography, and pharmacology, al-Biruni laid foundational stones for the modern sciences, including what would later become the discipline of **chemistry.**

Al-Biruni approached science with an empirical mindset far ahead of his time. His **systematic experimentation, use of instruments,** and **quantitative analysis** set the stage for modern scientific methods. While the term "chemistry" was not yet formalized in his era, many of his studies align closely with what we now consider part of chemical science.

One of al-Biruni's most influential works related to chemistry is his **Kitab al-Saydala fi al-Tibb** ("Book on the Pharmacopoeia of Medicine"). In this pharmacological encyclopedia, he documented hundreds of substances — metals, minerals, plants — classifying them according to their properties such as **density, solubility, and purity.** This methodical study of substances and their effects is one of the earliest examples of systematic chemical investigation.

Perhaps most notably, al-Biruni applied **experimental techniques** such as the use of the **hydrostatic balance** to **determine the density and purity of materials** — a method that resembles modern-day analytical chemistry. His precise measurements of the specific gravities of gems, metals, and liquids showcased a deep understanding of material properties, allowing him to distinguish substances based on quantitative evidence rather than speculation or tradition.

Al-Biruni's commitment to **objective observation, data-driven analysis,** and **cross-disciplinary thinking** aligns perfectly with the values of today's scientific Olympiads. In the spirit of global academic exchange, he also studied the languages and sciences of other cultures — including Indian and Greek — reflecting an openness to knowledge that transcended borders and ideologies.

As participants of the **Abu Rayhan Biruni International Chemistry Olympiad,** young chemists follow in his footsteps — not only in mastering complex scientific concepts but also in embodying curiosity, integrity, and innovation in science.

Al-Biruni once wrote:

> "The extreme self-evident truth is that science is the result of a collective and continuous effort. We are all bricks in the wall of knowledge."

Through this Olympiad, we honor his legacy by continuing to build that wall — one question, one experiment, and one discovery at a time.

History and Growth (ARBICHO 2023)

The 1st **Abu Rayhan Biruni International Chemistry Olympiad** was successfully held in Khiva, Uzbekistan, from June 11 to June 17, 2023. This prestigious competition brought together **112 participants** from **16 countries,** including **Germany, Türkiye, Azerbaijan, India, Vietnam, Algeria, Brazil, Belarus, Russia, Kazakhstan, the Sultanate of Oman, Georgia, Turkmenistan, Kyrgyzstan, Tajikistan, and Uzbekistan.**

Competition Format and Events

The Olympiad provided an opportunity for talented students to showcase their knowledge in chemistry through challenging theoretical and practical problems. Alongside the competition, honorary guests and esteemed professors conducted masterclasses for young scholars, enriching their understanding of the subject.

Medal Results

A total of **56 medals** were awarded to the best-performing students:

Gold Medals (8) – Uzbekistan (3), Vietnam (4), Russia (1)

Silver Medals (20) – Uzbekistan (4), Vietnam (4), Belarus (3), Kazakhstan (3), Russia (2)

Bronze Medals (28) – Azerbaijan (4), Belarus (3), Kazakhstan (5), Brazil (3), Turkmenistan (6), Russia (3), Uzbekistan (1), Tajikistan (1)

Cultural and Educational Experience in Khiva

Beyond the competition, participants had the chance to immerse themselves in the rich cultural heritage of **Khiva, a UNESCO World Heritage Site and one of the most well-preserved ancient cities in Central Asia.**

Khiva, once a key city along the Great **Silk Road,** is known for its stunning **Islamic architecture, grand madrasahs, intricate tilework, and historical fortresses.** Participants explored **Ichan Kala,** the walled inner city, which houses remarkable sites such as:

- The **Kalta Minor Minaret,** a striking unfinished minaret covered in turquoise tiles.
- The **Kunya-Ark Citadel,** the former residence of Khivan khans.
- The **Juma Mosque,** unique for its **213 carved wooden pillars** dating back to the 10th century.

Walking throug UZBEKISTAN ARBICHO 2025 h the narrow streets of Khiva, Olympiad participants experienced a journey back in time, witnessing the fusion of **Persian, Turkic, and Islamic influences** in the city's architecture and traditions. The excursion provided a unique opportunity for international students **to learn about Uzbekistan's rich history, traditional crafts, and hospitality.**

Growth and Success of the 2nd Abu Rayhan Biruni International Chemistry Olympiad (ARBICHO 2025)

The 2nd Abu Rayhan Biruni International Chemistry Olympiad was held with great success in Uzbekistan from **May 28 to June 4, 2025.** Building on the momentum of its inaugural edition in 2023, the event reaffirmed Uzbekistan's growing role as a hub for international scientific collaboration and youth excellence in chemistry.

Global Participation and Format

This year's Olympiad welcomed **115 participants from 14 countries,** including Türkiye, India, Georgia, Vietnam, Saudi Arabia, Tajikistan, Kazakhstan, Kyrgyzstan, Turkmenistan, Azerbaijan, Russia, Belarus, Mongolia, and Uzbekistan.

Each country was represented by a delegation of five members — four students and one team leader — contributing to a total of **40 team leaders** in attendance.

The competition took place over **two intensive days.** On the first day, students tackled complex **laboratory experiments,** while the second day was dedicated to a rigorous **theoretical examination,** with five hours allocated for solving advanced chemistry problems.

Scientific Oversight and Prestigious Guests

To ensure high standards and fairness, the Olympiad was guided by a distinguished panel of 25 jury members, including 10 international and 15 national experts in the field of chemistry education and Olympiad organization.

Notably, ARBICHO 2025 was honored by the presence of two globally respected figures in the chemistry Olympiad community:

Alexander Gladilin, Chair of the International Mendeleev Chemistry Olympiad Scientific Committee (Russia)

Badr Al-Majrathi, Chair of the IChO 2024 Scientific Committee (Saudi Arabia)

These esteemed guests reviewed the examination materials and observed the organizational process, contributing valuable insights as Uzbekistan continues preparations to host the **International Chemistry Olympiad (IChO) in 2026.**

Educational and Cultural Experiences

Beyond academic rigor, ARBICHO 2025 provided a rich cultural experience for all participants. In Tashkent, delegations visited iconic landmarks such as the **Victory Park Complex** and **the Amir Temur Museum**, offering a glimpse into Uzbekistan's modern spirit and historical pride.

On **June 1,** a full-day excursion to **Samarkand** — one of the most celebrated cities of the Silk Road — was organized. Participants explored architectural masterpieces like:

The **Gur-e-Amir Mausoleum,** resting place of Amir Temur

The majestic **Registan Square,** with its dazzling blue mosaics

The **Ulugbek Observatory,** a symbol of medieval scientific advancement

The newly developed **"Eternal City" complex,** showcasing traditional art and design

These visits offered participants a chance to discover Uzbekistan's **rich cultural heritage, architectural wonders,** and the enduring legacy of historical figures like **Ulugbek and Amir Temur.**

The Goals Behind Hosting ARBICHO 2025

- **Developing** a culture of scientific excellence and international collaboration in the field of chemistry.
- **Encouraging** young talents across the globe to engage in high-level academic challenges.
- **Strengthening** Uzbekistan's position as a rising hub for scientific Olympiads and educational innovation.
- **Showcasing** the cultural richness, hospitality, and historical heritage of Uzbekistan to international guests.
- **Promoting** the development of chemistry education through collaboration between national universities, research institutions, and international experts.

The Expected Impact of ARBICHO 2025

- **Building** strong international bonds among the next generation of chemists, educators, and Olympiad organizers.
- **Raising** awareness of STEM education among Uzbek students and motivating them to aim for global excellence.
- **Enhancing** Uzbekistan's visibility in the international scientific community and encouraging future partnerships.
- **Providing** international participants with meaningful exposure to Uzbekistan's historical landmarks and cultural treasures.
- **Reinforcing** the importance of chemistry in addressing real-world challenges and driving innovation across industries.

Opening Ceremony

The 2nd Abu Rayhan Biruni International Chemistry Olympiad (ARBICHO 2025) officially began under the sponsorship of the Ministry of Preschool and School Education of the Republic of Uzbekistan, represented by Her Excellency Minister Khilola Umarova. The opening ceremony was a proud and momentous occasion that brought together leaders in science, education, and innovation.

Distinguished guests included Professor A. Gladilin from Lomonosov Moscow State University, Academician Sh. Sagdullaev — Director of the S.Y. Yunusov Institute of the Chemistry of Plant Substances, A. Ubbiev — Director of the Agency for Specialized Educational Institutions, and T. Shermatov — Director of the Science Olympiad Center. Alongside them were participating teams, respected educators, and members of the wider public who gathered to celebrate the spirit of international scientific collaboration.

To mark the beginning of a fair and inspiring competition, all participants joined in taking an oath to compete with honesty, integrity, and mutual respect. This solemn moment emphasized the core values of ARBICHO: fairness, excellence, and friendship through science.

A dedicated organizational team ensured the event ran smoothly, with careful attention to details such as seating arrangements and delegation protocols. The ceremony not only celebrated the kickoff of an exciting week of scientific challenges but also highlighted Uzbekistan's growing commitment to international cooperation in education and chemistry.

The 2nd ARBICHO Identity

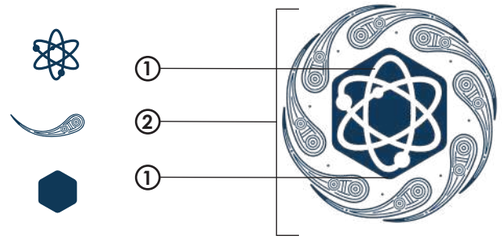
Verbal Identity

The slogan of ARBICHO 2025, "Uniting Molecules, Bridging Cultures," captures the true essence of the Olympiad. It reflects how science – especially chemistry – goes beyond textbooks and laboratories, connecting young minds across borders. By uniting students through scientific challenges, ARBICHO fosters mutual understanding, collaboration, and a shared excitement for discovery. Each molecule formed symbolizes the bonds created between cultures, traditions, and ideas.

Visual Identity

The ARBICHO 2025 logo blends the universal language of science with the rich cultural heritage of Uzbekistan. Inspired by the traditional "Qalampirmunchoq" pattern – a symbol often used in Uzbek decorative arts - the design gracefully incorporates a stylized atom, representing the heart of chemistry. This fusion highlights ARBICHO's unique identity: rooted in local tradition, yet open to the world. The atom's orbitals echo the interwoven threads of culture and knowledge, reflecting our aim to bring people together through chemistry. The deep blue palette adds a sense of trust, intellect, and unity - mirroring the values at the core of the Olympiad.

2ND ABU RAYHAN BIRUNI INTERNATIONAL CHEMISTRY OLYMPIAD



2ND ABU RAYHAN BIRUNI INTERNATIONAL CHEMISTRY OLYMPIAD

The logo consists of three key elements

The ARBICHO 2025 logo is a thoughtful blend of science and culture, featuring three core elements that define its unique identity:

1. Chemistry Symbol (Atom Structure)

At the heart of the logo lies a stylized atom, representing the field of chemistry and the power of scientific collaboration. Just like in molecular bonds, the logo emphasizes unity, interaction, and shared progress — core values of ARBICHO.

2. Uzbek "Qalampirmunchoq" Motif

Surrounding the atom is a circular pattern inspired by the traditional Uzbek **"Qalampirmunchoq",** a decorative design symbolizing protection, beauty, and connection in Uzbek heritage. This artistic element celebrates the host country's cultural depth and bridges local identity with global science.

3. Hexagon Base

The atom is set within a hexagon, subtly referencing the molecular structures common in organic chemistry. It stands for stability, precision, and the strong foundation ARBICHO provides for young scientific minds.

Together, these elements visually express the slogan **"Uniting Molecules, Bridging Cultures"** - highlighting ARBICHO's mission to merge scientific discovery with cultural exchange in an inspiring and meaningful way.

ARBIChO Delegations

Participating Teams

Azerbaijan
Belarus
Georgia
India
Kazakhstan
Kyrgyzstan
Mongolia
Russia
Saudi Arabia
Tajikistan
Turkmenistan
Türkiye
Uzbekistan
Vietnam

Executive Summary of the the 2nd International Chemistry Olympiad

115 competitors from **14 countries** worldwide.

40 mentors, observers, and visitors.

6 cultural and touristic events.

27 student volunteers from the Science Olympiad Center.

25 members of the Scientific Committee.

Exams translated into **7 languages.**

28 organizers dedicated to support participants from their arrival in Uzbekistan until their departure.

A total of **69** awards were distributed among the participants, categorized as follows: **10.5%** of participants received **12 gold medals.**

21% won **24 silver medals.**

28.9% earned **33 bronze medals.**

2. Overview of Organizing International Competition in The Field of Chemistry in Uzbekistan

Invitations & Registration

The invitation process for ARBICHO 2025 followed a simple two-step registration system to make things easy for participating countries. The official invitation was shared with all interested nations in early 2025.

Step 1 – Initial Registration

The first step of registration was open until **March 31, 2025 (00:00 UTC+5)** through the following link:

https://arbicho-reg.vercel.app/

In this stage, we asked delegations to provide basic information such as the name of the country or team, the team leader's contact information, and the number of students planning to participate. This helped us estimate the overall number of participants early and begin preparing accordingly.

Step 2 – Detailed Registration

The second and more detailed registration step remained open until May 5, 2025.

https://beruni-reg2.vercel.app/

At this stage, delegations were asked to upload all the necessary documents and details, including:

- Passport information and a clear passport photocopy
- Personal photo
- Media appearance consent form
- Contact details confirmation
- Clothing sizes, health information, and any special needs

This information helped us make the necessary arrangements, such as accommodation, meal preferences, and ceremony preparations, with care and attention.

PROGRAM OF ABU RAYHAN BIRUNI INTERNATIONAL CHEMISTRY OLYMPIAD

(May 28 - June 4, Tashkent, Uzbekistan)

Day	Students	Team leaders
1	Arrival and registration (hotel A and B) Breakfast (hotel A) Lunch (hotel A) Dinner (hotel A)	Arrival and registration (hotel A and B) Breakfast (hotel B) Lunch (hotel B) Dinner (hotel B)
2	Breakfast (hotel A) Transfer to CAU Opening ceremony Transfer to hotel A Lunch (hotel A) Excursion Dinner (hotel A) Free time	Breakfast (hotel B) Transfer to CAU Opening ceremony Transfer to hotel B Lunch (hotel B) Translation of Practical Exam (hotel B) Dinner (hotel B) Translation of Practical Exam (hotel B)
3	Breakfast (hotel A) Transfer to CAU Practical Exam Transfer to hotel A Lunch (hotel A) Excursion Dinner (hotel A) Free time	Breakfast (hotel B) Translation of Theoretical Exam Lunch (hotel B) Translation of Theoretical Exam Dinner (hotel B) Translation of Theoretical Exam (hotel B)
4	Breakfast (hotel A) Transfer to CAU Theoretical Exam Transfer to hotel A lunch (hotel A) Excursion Re-Union Party Free time	Breakfast (hotel B) Excursion lunch (hotel B) Excursion Re-Union Party Free time
5	Breakfast (hotel A) Transfer to Samarkand Excursion Lunch (Samarkand) Excursion Transfer to Tashkent Dinner (hotel B) Free time	Breakfast (hotel B) Transfer to Samarkand Excursion Lunch (Samarkand) Excursion Transfer to Tashkent Dinner (hotel B) Free time
6	Breakfast (hotel A) Excursion Lunch (hotel A) Excursion Dinner (hotel A) Free time	Breakfast (hotel B) Arbitration Lunch (hotel B) Arbitration Dinner (hotel B) Jury Meeting
7	Breakfast (hotel A) Excursion Lunch (hotel A) Free time Transfer to CAU Closing ceremony Forewell Dinner Free time	Breakfast (hotel B) Excursion Lunch (hotel B) Free time Transfer to CAU Closing ceremony Forewell Dinner Free time
8	Check out (hotel A and B) breakfast (hotel A) Lunch (hotel A) Dinner (hotel A)	Jury meeting Breakfast (hotel B) Lunch (hotel B) Dinner (hotel B)

Arriving to Uzbekistan

Delegations began arriving in Tashkent starting **May 27, 2025,** ahead of the official start of ARBICHO 2025. From the moment they landed, participants were warmly welcomed by the organizing team at Tashkent International Airport. Transportation was arranged to take teams directly to their hotels, and the process went smoothly thanks to advance planning and constant support from volunteers.

Students were accommodated at **The Tower Hotel,** while team leaders, mentors, and jury members stayed at **Al Anvar Hotel.** Both hotels are highly rated and located in central Tashkent, providing comfort and convenience for all guests.

All transportation during the Olympiad was arranged according to a clear schedule, ensuring that participants could move between venues, hotels, and activities with ease.

Challenges & Solutions

Challenges:

- Some teams faced delays due to visa processing, especially from countries without a nearby Uzbek consulate or embassy.
- A few team members did not yet have international passports, which slowed down the registration and confirmation process.
- Coordinating arrivals, hotel placements, and transportation for participants from multiple countries required constant communication and flexibility.

Solutions:

- The Organizing Committee worked closely with the Ministry of Foreign Affairs of Uzbekistan and Uzbek visa centers abroad to speed up the visa process.
- Teams were given additional time and support to complete their registrations while waiting for missing documents, including passports.
- A dedicated logistics team monitored all arrivals and hotel check-ins to ensure nothing was missed and that every delegation felt supported from day one.

Empowered Organizational Efforts

Successfully organizing ARBICHO 2025 required a strong and well-coordinated team effort. Below are the main teams and their key contributions:

Registration and Reception Team

- Warmly welcomed delegations at Tashkent International Airport, with hospitality that reflected Uzbek culture.
- Coordinated closely with airport authorities to arrange smooth arrival procedures and special conveniences.
- Managed the full registration process and ensured all essential documents and participant information were collected accurately.

Public Relations Team

- Planned and ran the opening and closing ceremonies, handling seating plans, cultural elements, and protocol for VIP guests.
- Prepared a detailed participant guidebook covering the schedule, contact details, meals, exams, excursions, and dress code.
- Promoted the Olympiad through printed materials and social media channels, helping participants stay informed and engaged.

Government Affairs Team

- Worked actively with the **Ministry of Foreign Affairs** and **Uzbek embassies/ visa centers** to support visa processing for all delegations.
- Provided assistance to teams facing issues with missing passports or delayed documentation.
- Coordinated with emergency services to ensure medical and security coverage at every venue.
- Ensured overall governmental support for the smooth and safe execution of the Olympiad.

Security and Safety Team

- Assigned security personnel for all event venues and transport routes to ensure the safety of all participants and staff.
- Appointed security guardians for each transportation route between hotels and venues.
- Ensured doctors were stationed at every competition and event location, ready to provide medical help if needed.

Media and Communications Team

- Documented all key moments of the Olympiad through photos and videos.
- Managed official media coverage and prepared social media posts, updates, and event highlights.
- Helped share the excitement of ARBICHO 2025 with a wider audience, both in Uzbekistan and internationally.

Technology and Technical Support Team

- Provided the technical tools needed at all venues, including computers, printers, internet, and projection equipment.
- Maintained information boards at hotels and venues with schedules, announcements, and updates.
- Supported all teams and organizers with on-site troubleshooting and assistance.

Accommodation and Transportation Team

- Coordinated the accommodation of students at **The Tower Hotel** and team leaders with VIP guests at **Al Anvar Hotel.**
- Scheduled and managed all transportation between venues, hotels, and the airport.
- Assigned Uzbek-speaking leaders to help each student group, making sure they woke up on time and got to all events.
- Ensured every movement was safe, comfortable, and on schedule.

Special Organizational Features

In addition to the core teams, ARBICHO 2025 featured:

Volunteering System

We had three types of volunteers who played a major role in making the Olympiad run smoothly:

- **Core Volunteers:** Managed all volunteer operations and team coordination.
- **Delegation Volunteers:** One volunteer was assigned to each team and supported them throughout — including guiding them to meals, venues, and even accompanying them on market visits.
- **Event Coordination Volunteers:** Focused on helping students enjoy their free time with activities like sports, quizzes, and fun games to build friendship and make the experience memorable.

Excursion & Cultural Program Team

- Designed and led excursions around Tashkent, ensuring each group had guides and safe, enjoyable experiences.
- Created an engaging cultural experience to show Uzbekistan's hospitality and heritage.

Visual Identity: Badge & Shirt Color System

To support clear communication, efficient coordination, and a strong sense of identity throughout ARBICHO 2025, we used a consistent color-coded system for both lanyards (badges) and official shirts. Each group involved in the Olympiad was assigned a specific color, applied to both their identification badge and their official clothing.

Each shirt was designed to be comfortable and easily recognizable, featuring the ARBICHO 2025 logo. The visual consistency between badges and shirts helped:

- Ensure security and role clarity at all venues;
- Improve interaction between delegations and the local team;
- Maintain a unified and organized atmosphere throughout the event.

This simple yet effective system became one of the most practical tools for day-to-day management and helped foster a strong community spirit among all participants and staff.

Fast Arrival and Dedicated Buses

To ensure smooth transportation, Science Olympiad Center prepared 3 buses for Contestants and 1 bus for Team Leaders and Observers, each with a capacity of 50 passengers, ensuring safe and efficient transit to all Olympiad events.

Thorough Organizing and Guidance Efforts

12 - Educational Supervisors

Meeting participants' needs during the Olympiad.

27 - Volunteers From Science Olympiad Center

Fully organizing the Olympiad, divided into three groups:

- 2 core volunteers coordinating all tasks and management of other volunteers.
- 1 volunteer managing students' leisure time effectively.
- 24 volunteers assisting students.

High Standards for Skilled Volunteers

Science Olympiad Center applied the following criteria for selecting volunteers:

- **Age:** Between 18–24.
- **Priority:** Given to those who know the Olympiad system and know additional languages.
- **Language Proficiency:** Fluency in English (spoken and written).

Key Roles and Reliable Support Science Olympiad Center assigned its Abu Rayhan Biruni International Chemistry Olympiad volunteers with various tasks focused mostly on guiding and assisting students during all events. Technically skilled volunteers were assigned to support the scientific committee, ensuring flawless coordination. All volunteers were required to have overall knowledge of the Olympiad program and respond promptly to any issues or emergencies by notifying their supervisors immediately.

Integrated Experience for All

Accommodation for leaders, visitors, organizers, and the scientific committee:

Double Rooms
21
Single Rooms
8

Volunteers Team

- Managing all aspects of volunteer coordination and support during the Olympiad.
- Ensuring a suitable number of volunteers to guarantee the event's success.
- Ensures the Olympiad runs smoothly and that all participants receive the necessary support.

Exam Support Team

- Overseeing the preparation of exam papers, monitoring the marking process, and ensuring overall safety while performing the experiments.
- Managing the Olympiad exam system, translation arrangements, and preparation of exams venues.
- Coordinating practical exam items and instructing the students how to use tools properly.

Accommodation for students:

Student Double Rooms
9
Student Triple Rooms
19
Student Quadro Rooms
10

Branded Merchandise for Promotion and Memorability

To spread awareness of the Olympiad and leave a lasting impression, Science Olympiad Center prepared and distributed special branded merchandise gifts to all participants, guests, and team leaders of ARBICHO 2025. These items, adorned with the official Olympiad logo, served both as functional tools during the event and as memorable keepsakes that proudly represented the identity and values of the Abu Rayhan Biruni International Chemistry Olympiad.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Merjan Aitullah

3. Academic View

Academic Structure

Scientific Committee Selection Process

To ensure the academic excellence and integrity of ARBICHO 2025, the **Science Olympiad** Center established clear standards for forming the Scientific Committee. The selection process prioritized members with profound expertise in chemistry and substantial experience in Olympiad-style competitions, both at the national and international levels.

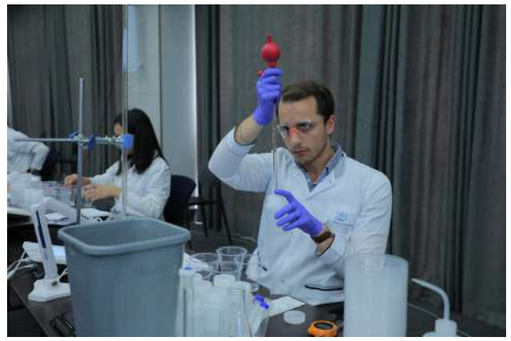
The committee brought together a diverse group of professionals, including:

1. **Academic professors and researchers** from leading universities and research institutions in Uzbekistan and beyond.
2. **Medalists of past International Chemistry Olympiads (IChO),** who contributed valuable insights from their personal Olympiad experiences.
3. **Experts with experience in Olympiad training and mentoring,** particularly those who had served as coaches or jury members in past competitions.
4. **Specialists in applied chemistry fields,** representing both academic and industrial sectors.
5. **Selected international advisors,** invited in limited numbers to provide external perspectives and review.

This carefully curated team of experts was tasked with the following responsibilities:

- **Designing theoretical and practical exam tasks,** in alignment with international standards.
- **Developing preparatory materials and sample problems,** aimed at helping participants become familiar with the scope and structure of ARBICHO examinations.
- **Ensuring fairness, academic rigor, and logistical coherence** throughout all stages of exam preparation and implementation.

Through the efforts of this dedicated committee, ARBICHO 2025 upheld high academic standards and delivered a challenging yet rewarding experience for all participants.



Committee Organizational Structure

Recognizing the essential role of the Scientific Committee in ensuring the success of the Olympiad, the Science Olympiad Center established a well-defined and collaborative organizational structure for ARBICHO 2025. The structure was designed to streamline academic preparation, ensure high-quality exam content, and maintain smooth coordination throughout the event.

Core Committee

The Core Committee was composed of several highly qualified members, including senior professors, researchers, and experienced Olympiad mentors. These individuals brought extensive experience from academic institutions, laboratories, and previous national and international Olympiad engagements.
Key responsibilities included:

- Overseeing the design, development, and validation of theoretical and practical exam tasks.
- Coordinating the overall academic strategy of the Olympiad.
- Conducting regular meetings — initially bi-weekly, and later weekly — to finalize problem sets and ensure alignment with international standards.
- Integrating feedback loops for problem review and revision.

Question Authors

This group included selected subject-matter experts, including IChO medalists and university-level chemistry instructors.

Their contributions were vital in:

- Drafting and peer-reviewing preparatory and official Olympiad questions.
- Leading discussions during grading and moderation sessions.
- Volunteering in trial/mock exam stages to refine question quality and ensure balanced difficulty levels.

Committee Members Participating in the Olympiad

Several committee members, including advanced undergraduate students and recent graduates of the Chemistry Olympiad program, played key roles during the Olympiad itself.

They were involved in:

- Conducting and evaluating mock exams during the preparation phase.
- Supporting the logistics of the exam administration process.
- Assisting with coordination and communication between the academic and operational teams during the event.

Practical Exam

Practical Exam Tools

To ensure safety, efficiency, and accessibility for all participants, the Science Olympiad Center prepared and distributed identical laboratory equipment kits for the practical exam. Exam hall was equipped with standardized tools for a smooth and fair assessment process.

Key measures included:

- **Use of single-use plastic tools:** To minimize risks and simplify logistics, disposable plastic items such as pipettes, test tubes, droppers, and spatulas were used in place of fragile glassware.
- **Avoidance of heating devices and hazardous setups:** In line with safety regulations, experiments were designed to avoid the need for Bunsen burners or heating plates.
- **Instructional support materials:** Students received comprehensive lab instructions in advance, detailing the correct use of pipettes (with three-way bulbs), thermometers, pH meters, and stopwatches.
- **Technician support:** There were 15 lab technicians along with scientific committee members to ensure full material support and safety.

Mock Exam Summary

One mock practical exam was held prior to the Olympiad on May 25, 2025, involving 10 local high school students. The purpose was to test the experiment procedures, instructions, and timing under real exam conditions.

Key observations and outcomes:

- **Validation of experiment design:** Both practical tasks were successfully completed within the 5-hour time limit.
- **Student interaction feedback:** Observations helped identify points in the instructions that required clarification, especially regarding pipette usage and pH measurement procedures.
- **Improved translation clarity:** The mock exam allowed the scientific committee to refine terminology for more accurate multilingual translations.
- No major procedural changes were necessary, confirming the experiments were robust and executable using the provided tools and materials.

During exam 5 experts and scientific committee members were working along with students to ensure data clarity and obtaining master values in exam conditions.

Exam Day Implementation

The practical exam was held across a big exam hall with fully equipped laboratory working places for each student, each accommodating a subset of the 115 student participants. Each lab was outfitted with:

- Pre-distributed experiment kits and reagents for two distinct experimental tasks.
- A team of 15 lab assistants was present throughout the session to address technical issues and provide additional materials if necessary.

Before the official start:

- Students received hands-on orientation on the lab equipment following distributed lab instruction manuals, including guidance on pipetting, thermometer use, pH meter handling, and safety procedures.
- A supervised practice session was held, allowing students to familiarize themselves with the setup and tools before the actual assessment began.

During the exam:

- The practical exam consisted of two separate experimental tasks, each allocated 2 hours and 20 minutes. To ensure an efficient workflow, the students were divided into two groups: one half began with Task 1, and the other with Task 2. After a 20-minute break, the groups switched tasks. Each student completed both experiments independently, recording data and drawing conclusions based on their results.
- After the session, scientific committee members re-conducted the experiments to establish benchmark values for marking and ensure standardization across all laboratories.

Theoretical Exam

Development of the Theoretical Exam

The preparation for the theoretical exam at ARBICHO 2025 was guided by principles of inclusivity, balance, and clarity. The Scientific Committee launched the development process with a diverse pool of initial problem ideas, which were progressively refined and reviewed through multiple stages.

Key criteria in problem selection included:

- Coverage of a broad range of topics aligned with the ARBICHO and IChO-approved syllabus.
- Inclusion of problems that tested both conceptual understanding and quantitative problem-solving skills.
- Attention to language clarity to facilitate accurate translations into the native languages of participating countries.

All problem drafts were reviewed by subject-specific experts within the committee, and preparatory problems were finalized and distributed to participating countries in April 2025.




Editing and Review Phase

Following the release of the preparatory problems, the Scientific Committee initiated a focused editing phase. A subgroup of 3–4 committee members was assigned to each theoretical problem to ensure consistency and precision.

This phase included:

- Reviewing and improving problem clarity, especially for smooth multilingual translation.
- Finalizing official solutions and preparing initial marking schemes.
- Streamlining layout formatting using collaborative platforms to maintain version control and peer review documentation.

Special care was taken to simplify chemical names and expressions where possible to support understanding and reduce translation ambiguity.

Final Exam Structure

The final version of the theoretical exam consisted of eight questions, carefully designed to reflect the format and level of difficulty expected in international Olympiads.

Further integrative advancements were implemented through the inclusion of comprehensive, system-oriented problems modeled after contemporary international Olympiad standards. These tasks effectively integrated key areas of chemistry — including organic, inorganic, analytical, physical, and biochemistry — thereby enabling participants to demonstrate precision, depth of knowledge, and problem-solving efficiency across multiple disciplines.

Innovative Answer Sheet Format

To support efficient marking and translation workflows, ARBICHO 2025 adopted an innovative answer sheet format inspired by the practices used in IChO 2024. The answer sheets were completely free of any language-specific content, eliminating the need for translation and allowing all teams to use the same standardized format.

- Answer sheets were separated from the question booklets, which significantly reduced photocopying and scanning efforts.
- This method allowed for easier text updates and better translation handling.
- The consistent layout of answer sheets enabled more structured comparison and partially anonymous marking where possible.

This innovation contributed to maintaining fairness and logistical efficiency in marking procedures.

Theoretical Mock Exam Summary

A combined mock exam session for the theoretical part of the Olympiad was conducted on May 26, 2025, with the participation of 10 local high school students. This trial aimed to evaluate the feasibility, clarity, and structure of the exam. The students successfully completed the full paper within the allotted time, validating the exam's length and difficulty level. Their performance and feedback provided critical input for final adjustments.

The mock exam identified areas where wording in multi-step problems could cause confusion. These sections were revised for greater clarity, and diagrams and data presentations were simplified. In addition, the session highlighted terminology that could hinder accurate translation into multiple languages, enabling the Scientific Committee to improve translation readiness.

On the actual exam day, the theoretical test was administered in a large exam hall with designated seating for each participant. The 5-hour exam included eight tasks designed to challenge students across various topics. Time meters were displayed on screens, and the entire session was conducted under strict supervision by the Organizing Board and Scientific Committee to ensure fairness and academic integrity.

Marking and Arbitration

A transparent and collaborative approach was employed during the marking and arbitration process at ARBICHO 2025, ensuring fairness and accuracy in evaluating participant performance.

Marking Procedures

- Dual Evaluation: All exam papers — both theoretical and practical — were marked independently by the problem authors and independently by mentors from each participating country.
- Use of Marking Schemes: Authors used pre-approved marking schemes developed during the problem preparation stage. These schemes outlined grading criteria for partial and full credit, ensuring consistency across evaluators.
- Mentor Involvement: Mentors reviewed the student scripts from their teams and applied the same official criteria, allowing for an unbiased comparison of interpretations and evaluations.
- Students' answers were distributed to the team leaders one day before the arbitration to ensure there was enough time to evaluate their students' scores and compare arbitration with the Scientific Committee grading.

Arbitration Process

- Collaborative Score Reconciliation: After initial grading, marking results were compared between authors and mentors. In cases where discrepancies occurred, both parties engaged in structured discussions to reach an agreement on the final scores.
- Fair Resolution of Disputes: If disagreements could not be resolved during initial comparisons, they were escalated to the Scientific Committee for final arbitration. This ensured that all participants were graded according to a consistent and equitable standard.

Efficiency and Accuracy

Although no digital marking platforms like Gradescope or OlyExams were used in ARBICHO 2025, the manual process was supported by a dedicated team responsible for organizing scripts, recording results, and tracking score adjustments during arbitration.

Thanks to the professionalism of the marking team and the clear communication between mentors and problem authors, the process ran smoothly, with most delegations accepting the final results without the need for appeals.

Summary

The marking process for ARBICHO 2025 was structured to ensure fairness, consistency, and transparency, reflecting international standards. The total score for the Olympiad was 100 points, divided as follows:

- 60 points for the theoretical exam
- 40 points for the practical exam

A multi-step marking journey was followed for each participant:

Independent Evaluation by Authors: Problem authors reviewed and marked the student answer sheets independently, applying the official marking schemes created during exam development.

- **Mentor Review:** At the same time, mentors from each participating delegation independently assessed the scripts of their own students using the same criteria.
- **Comparison of Marks:** Marks from both authors and mentors were compared systematically to identify discrepancies.
- **Discussion and Arbitration:** Any differences were addressed through focused discussions between the mentors and problem authors. These sessions ensured alignment of interpretation and fair evaluation of student answers.
- **Final Score Agreement:** Once consensus was reached, both parties agreed on the final scores for each student.
- **Oversight by Jury:** The International Jury - composed of scientific and organizational leaders - reviewed all final scores, confirming accuracy and resolving any remaining uncertainties.
- **Mentor Confirmation:** Final results were shared with all mentors for final approval prior to the official announcement during the closing ceremony.

This rigorous process guaranteed that each participant's efforts were accurately reflected in their scores and that all delegations had confidence in the integrity rrounding the atom is a circular pattern inspired by the traditional Uzbek

Did you know: For printing exam materials, almost 10,500 pages were used.
Answer Sheet: 5016 pages
Question Booklet: 5130 pages
Lab Instructions: 342 pages

Results

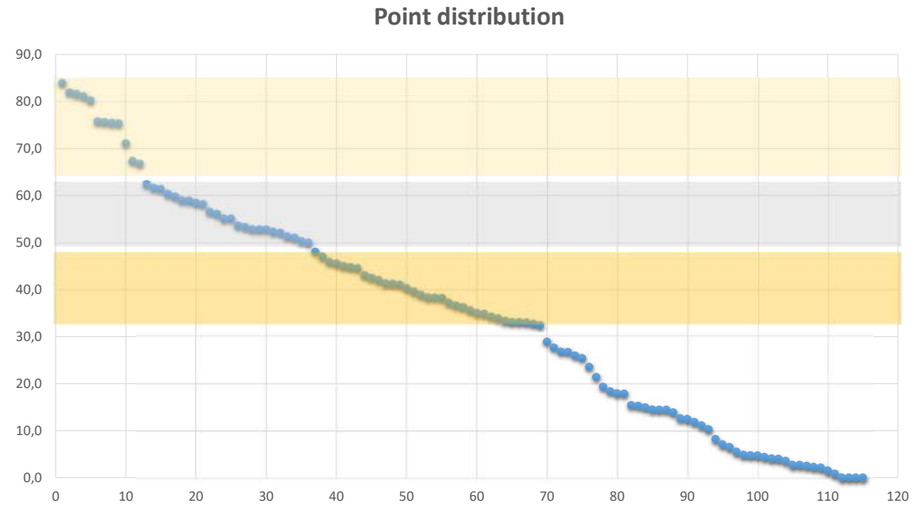
The final results, statistics, and analytical charts were presented at the final jury meeting held before the closing ceremony to ensure fairness and compliance with international standards in the distribution of medals. At this meeting, all authors and members of the scientific committee were awarded certificates. Also, team leaders and observers were awarded certificates by the members of the Scientific Committee as a token of gratitude for their work.

Following the conclusion of the arbitration process, final scores were officially confirmed and accepted by all team leaders. The ARBICHO 2025 marking team prepared a comprehensive summary of results in digital format.

To provide deeper insight into participant performance, the organizing team conducted a statistical analysis of all results. This analysis included:

- Score distribution across theoretical and practical exams, highlighting trends and overall difficulty.
- Comparison of performance in individual questions to assess which concepts were well-understood or particularly challenging.

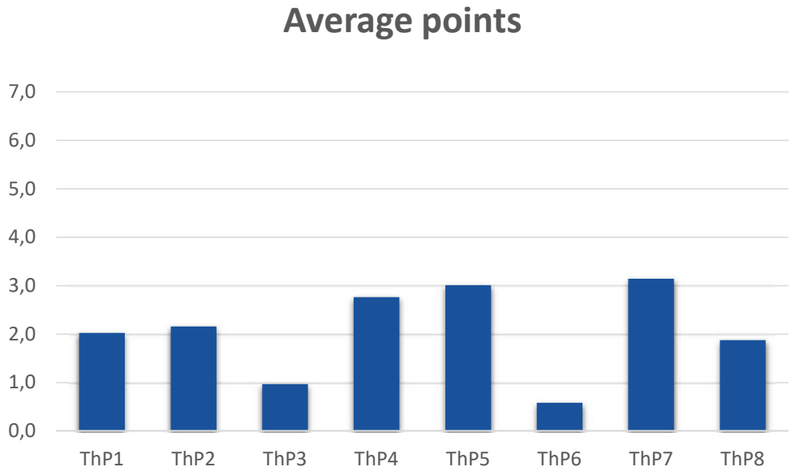
In the following section, a series of analytical charts illustrates this data visually — offering a clear and informative picture of the students' achievements at ARBICHO 2025.

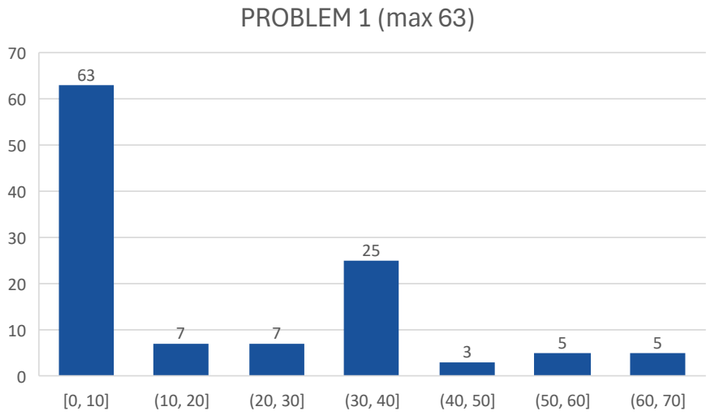


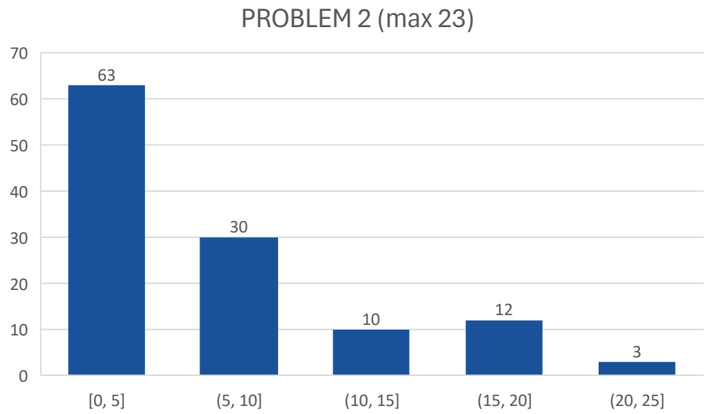
For detailed results, visit the Olympiad's results page.

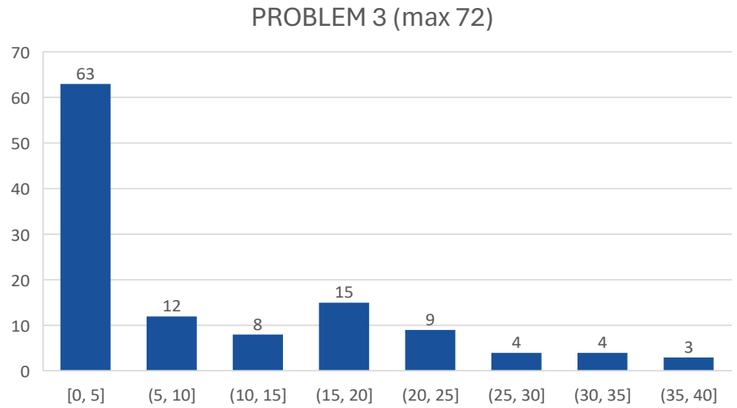
Analytical charts of the Theoretical Exam

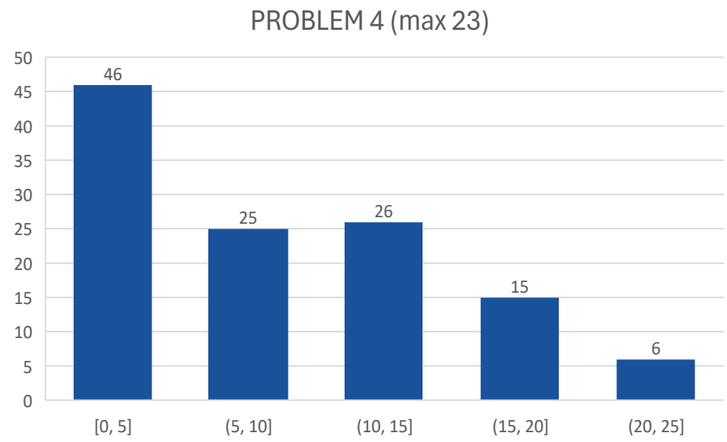
Note: Each theoretical task weights 7.5% of the final score, and each practical task weights 20% of the final score.

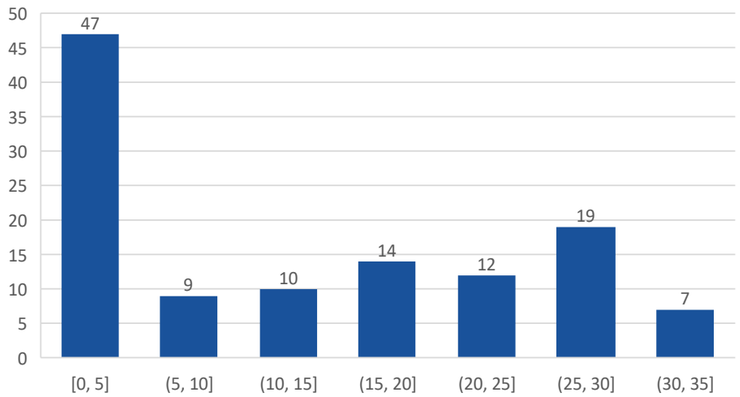


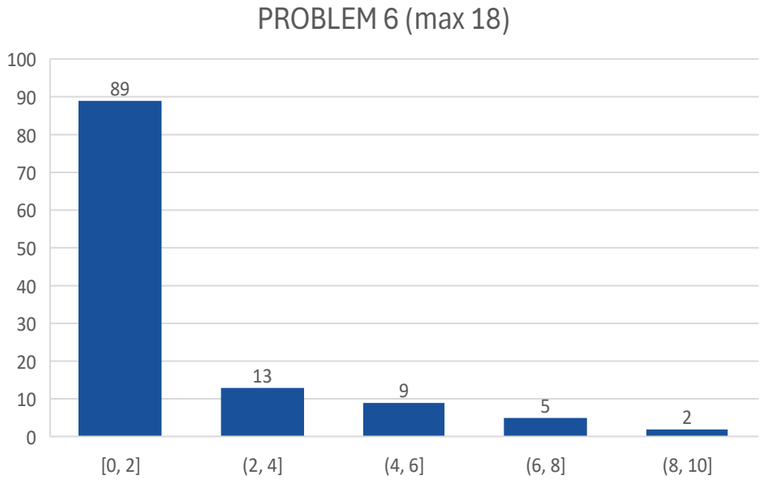


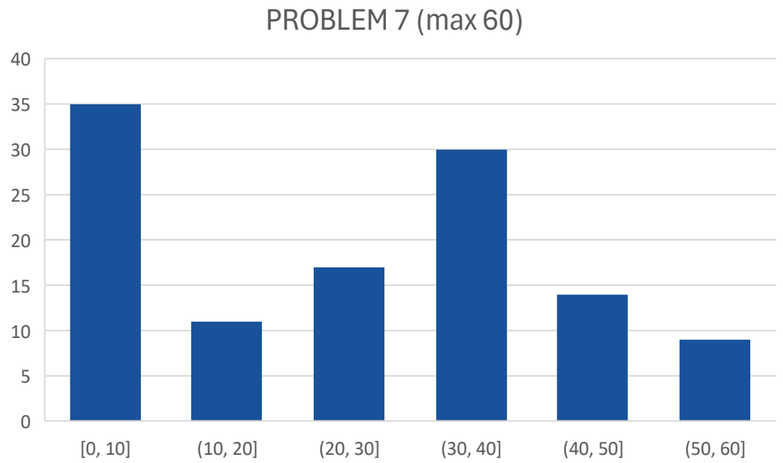


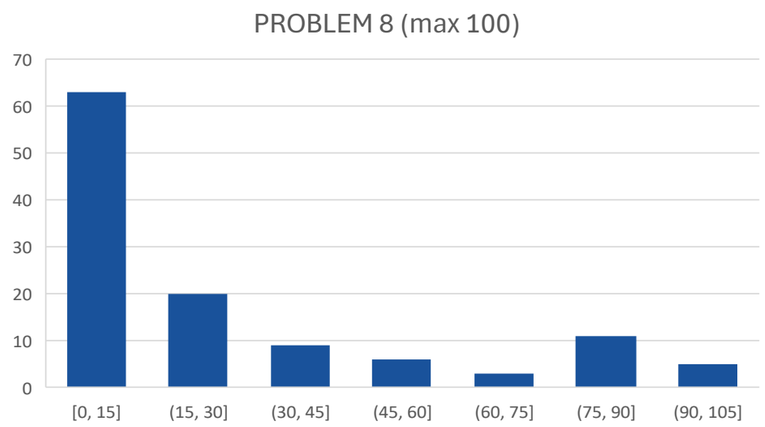




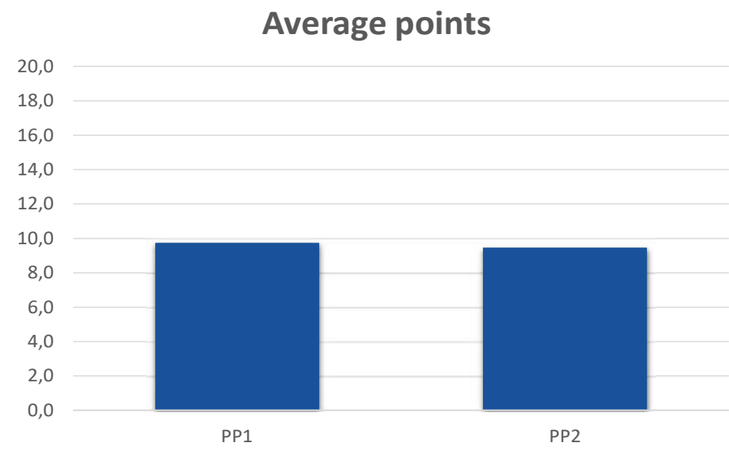


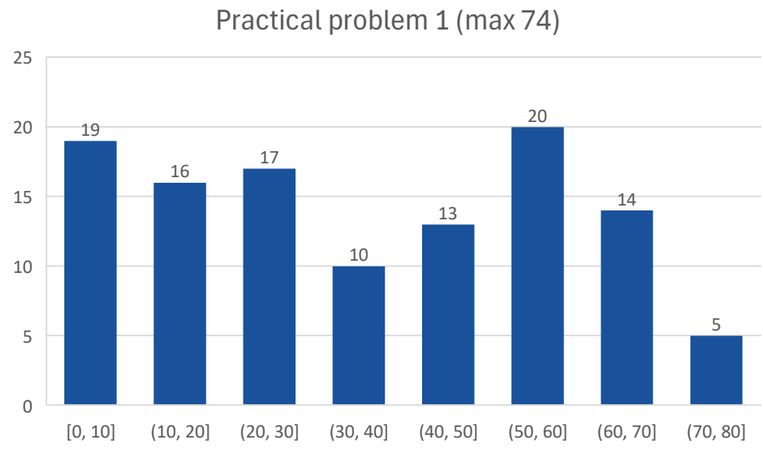


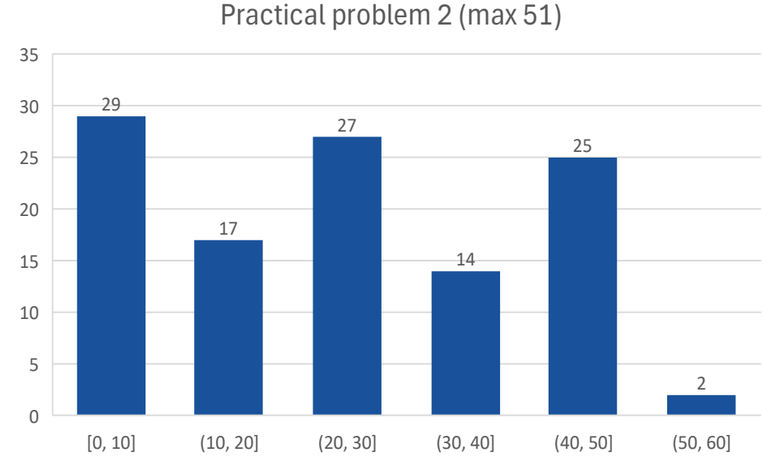




Analytical charts of the Practical Exam







4. Scientific, Cultural, and Touristic Journey

Cultural and Historical Immersion in Uzbekistan

As part of ARBICHO 2025, participants were invited on a journey that combined rich cultural heritage with moments of relaxation and team bonding. The excursion program offered a unique opportunity to discover the historical and architectural marvels of Uzbekistan — an ancient land at the crossroads of civilizations.

Discovering the Capital: Tashkent

Park of Victory

The excursion began in Tashkent, the vibrant capital of Uzbekistan. Participants first visited the **Park of Victory**, where they were greeted by a large-scale exhibition organized by the **Ministry of Defense of the Republic of Uzbekistan**. The display featured World Wars-era tanks, aircraft, and military artifacts, sparking the curiosity of participants and offering insight into Uzbekistan's contributions during the war.

Amir Temur Museum

Another highlight in Tashkent was the **Amir Temur Museum,** dedicated to one of Central Asia's greatest historical figures. With the help of professional guides, students explored artifacts, manuscripts, and historical displays detailing the life, leadership, and **legacy of Amir Temur (Tamerlane)** — a 14th century conqueror who played a major role in shaping the history of the region. of participants and offering insight into Uzbekistan's contributions during the war.

Magic City

To balance historical exploration with lighthearted enjoyment, participants also visited **Magic City**, a modern entertainment complex in Tashkent often described as the city's own version of **Disneyland**. With its fairytale-like architecture, themed streets, vibrant fountains, and colorful design, Magic City offered a dreamlike atmosphere that delighted students and mentors alike. As they strolled through the whimsical lanes, enjoyed street performances, and captured fun moments in this fantasy-inspired space, participants were able to unwind and create joyful memories with friends from around the world.

Friendly Competition and Team Spirit

Beyond the scientific and cultural adventures, ARBICHO 2025 created space for fun and meaningful connections through a friendly football tournament. Teams made up of participants from different countries competed with enthusiasm and sportsmanship. For instance, Tajikistan and Kazakhstan faced off in one match — not as rivals, but as peers sharing laughter, teamwork, and respect.

The outcome of the game wasn't the focus; rather, the event symbolized how sports can transcend borders and foster unity among young minds from different cultures. Cheering each other on, playing side by side, and celebrating effort over victory, participants forged friendships that often start with a handshake on the field and last far beyond the Olympiad. This lighthearted yet powerful activity became a highlight of ARBICHO 2025, reinforcing the values of cooperation, respect, and international harmony.

Timeless Wonders of Samarkand

Participants also traveled to the iconic and ancient city of Samarkand, one of the oldest inhabited cities in Central Asia and a UNESCO World Heritage Site. Known for its majestic architecture and historical significance, Samarkand offered a captivating window into Uzbekistan's past.

Gur-i Amir Mausoleum (Amir Temur Mausoleum Complex)

This architectural masterpiece is the final resting place of Amir Temur. With its soaring blue dome, intricate mosaics, and richly decorated interior, the mausoleum reflects the grandeur of the Timurid dynasty and left a lasting impression on the visitors.

Ulugbek Observatory

Participants explored the scientific legacy of Ulugbek, the 15th century astronomer and ruler. At the observatory, they learned about Ulugbek's groundbreaking work in astronomy and mathematics and viewed one of the largest sextants ever built during medieval times. What astonished many participants was the sheer scale and precision of the observatory's main instrument — a massive marble sextant with a radius of about 40 meters, built into a trench beneath the ground.

Without telescopes, Ulugbek and his team were able to calculate the length of the solar year with an error margin of only 25 seconds, a result that remained unmatched for centuries. The observatory, built in the early 15th century, stands as a powerful testament to how advanced science and mathematics were in Central Asia long before modern scientific tools existed, leaving participants both amazed and inspired.

Registan Square

Regarded as the heart of Samarkand, this iconic square is surrounded by three grand madrasahs.

Ulugbek Madrasah (1417–1420)

Commissioned by the famous astronomer and mathematician Ulugbek, this madrasah is the oldest structure in Registan Square and served as a major educational center during the Timurid era. It once hosted scholars in mathematics, astronomy, and theology, becoming one of the most prominent institutions of higher learning in Central Asia. Its elegant architecture features geometric patterns and Kufic calligraphy that reflect both intellectual purpose and spiritual devotion.

Sher-Dor Madrasah (1619–1636)

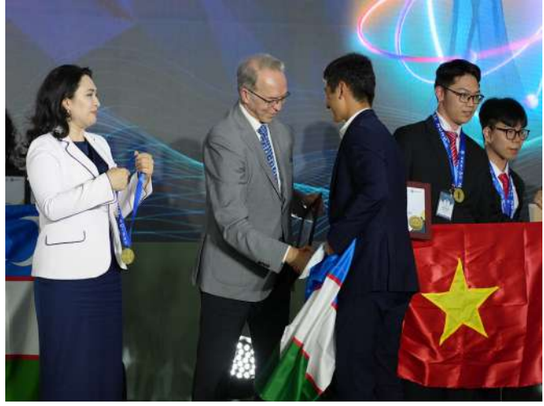
Built across from the Ulugbek Madrasah, the Sher-Dor (meaning “with lions”) Madrasah is distinguished by the rare and bold depiction of tigers with rising suns on its facade — an unusual artistic expression in Islamic architecture, symbolizing strength and prosperity. It is adorned with colorful mosaics, intricate tilework, and majestic arches, harmonizing artistry with spiritual design. Despite mirroring Ulugbek’s structure, it brings its own dynamic energy with vibrant ornamentation and symbolic meaning. The madrasah served not only as a center of education but also as a visual statement of power and ambition during the Bukhara Khanate, reflecting a shift toward more expressive and decorative architectural styles.

Tilya-Kori Madrasah (1646–1660)

The most visually opulent of the three, Tilya-Kori (meaning “gilded”) Madrasah functioned both as a theological school and a grand mosque. Its central prayer hall dazzles with walls and a massive dome richly decorated in gold leaf, leaving visitors awestruck by its luminous beauty. The facade is equally captivating, with lush blue and gold tilework that emphasizes the splendor and cultural wealth of the Timurid architectural legacy.

Participants were deeply inspired by the architectural harmony, grand scale, and intricate craftsmanship of Registan Square, which stands as one of the most iconic symbols of Islamic and Central Asian architecture. Walking through the square felt like stepping into a living museum, where every tile, arch, and dome tells a story of knowledge, power, and artistry from centuries past. The site left a profound impression on all visitors, highlighting Uzbekistan’s vital role in the scientific, cultural, and architectural achievements of the medieval Islamic world.

5. Closing Ceremony



Efforts Lead Up To a Grand Ceremony of Recognition

The 2nd International Abu Rayhan Biruni Chemistry Olympiad (ARBICHO 2025) officially concluded with a grand Closing and Awarding Ceremony, held in Tashkent on June 3. The event marked the end of a week filled with scientific spirit, cultural exchange, and inspiring achievements. This year's edition brought together 115 talented students from 14 countries, representing 28 teams. With challenging theoretical and practical exams covering diverse branches of chemistry, the Olympiad tested not only participants' knowledge but also their analytical thinking and resilience.

As per international standards, the medal distribution followed a 1:2:3 ratio — awarding:

Gold Medals
12
Silver Medals
24
Bronze Medals
33

The ceremony began with reflections from distinguished guests, including Prof. Aleksandr Gladilin, who emphasized that "Olympiads are not only about following instructions, but about thinking deeply and understanding your own results." His words perfectly captured the spirit of ARBICHO 2025.

The most remarkable moment came when students were called one by one to the stage and awarded for their achievements. Let us honor all 69 medal winners:

Gold Medalists

1. Elyorbek Adkhamov – Uzbekistan
2. Arseniy Sysoev – Russia
3. Azamat Sharafiev – Russia
4. Do Trung Kien – Vietnam
5. Mirjahon Muhammadov – Uzbekistan
6. Nguyen The Minh – Vietnam
7. Daler Rahimov – Uzbekistan
8. Said Nurgaianov – Russia
9. Ibrohim Temurov – Uzbekistan
10. Rayhona Toymurodova – Uzbekistan
11. Trinh Duc Anh – Vietnam
12. Biloliddin Zukhriddinov – Uzbekistan

Silver Medalists

1. Nurseiit Seitkaziyev – Kazakhstan
2. Haidar Yasser Aldubaisy – Saudi Arabia
3. E'zoza Ilkhomova – Uzbekistan
4. Ismoil Samiev – Tajikistan
5. Xulkar Orifova – Uzbekistan
6. Abdul-aziz Abdurashidov – Uzbekistan
7. Maksatbek Kakhramanov – Kyrgyzstan
8. Fotima Saidova – Uzbekistan
9. Ali Ahmed Bawazeer – Saudi Arabia
10. Jeren Akmyradova – Turkmenistan
11. Zarnigor Tohirova – Uzbekistan
12. Amin Kasimov – Russia
13. Aliaksei Stsiapanau – Belarus
14. Ammar Mohammad Alturkistani – Saudi Arabia
15. Jasur Mustafoev – Uzbekistan
16. Abdurashid Kamolov – Uzbekistan
17. Dzmitry Anishkevich – Belarus
18. Rayhona Uskanboyeva – Uzbekistan
19. Rustem Jumayev – Turkmenistan
20. Trinh Viet Hoang – Vietnam
21. Palvan Ilmammedov – Turkmenistan
22. Diyar Dovletov – Turkmenistan
23. Dinis Gizatullin – Russia
24. Vladimir Rurenko – Russia

Bronze Medalists

1. Eugene Sudarykova – Belarus
2. Ilias Kazyxanov – Russia
3. Ermek Samatov – Kyrgyzstan
4. Shakhzoda Razakova – Tajikistan
5. Ilia Dokadze – Georgia
6. Munkh-Uchral Bat-Erdene – Mongolia
7. Mirjalol Khomidjonov – Uzbekistan
8. Nuriddin Abdirahimov – Uzbekistan
9. Rand Alhassan – Saudi Arabia
10. Havin Turkormaz – Türkiye
11. Azizbek Erkinov – Uzbekistan
12. Rassul Orynbassar – Kazakhstan
13. Shodiyona Abdulmahmudova – Uzbekistan
14. Miras Baisbek – Kazakhstan
15. Hakan Annanyyazov – Turkmenistan
16. Daryn Turdykul – Kazakhstan
17. Omer Tuna Turbarutku – Türkiye
18. Xulan Munkhbayar – Mongolia
19. Aylar Orunova – Turkmenistan
20. Erzhan Zhaparov – Kyrgyzstan
21. Sumru Saba – Türkiye
22. Alikhan Iskendir – Kazakhstan
23. Nazli Serdarova – Turkmenistan
24. Denis Filippov – Russia
25. Artur Bekpolatov – Turkmenistan
26. Defne Turdamir – Türkiye
27. Valeryia Kazlova – Belarus
28. Ariungoo Nyambayar – Mongolia
29. Munx-Eneral Batjargal – Mongolia
30. Muxammad Syzdykov – Kazakhstan
31. Alimjan Karash – Kazakhstan
32. Aisha Ibragimova – Kazakhstan
33. Zulaykho Ergashboyeva – Uzbekistan

6. Succes Partners

Main Organizer:

SCIENCE OLYMPIAD CENTER

Science Olympiad Center

As the primary organizing body under the Agency for Specialized Educational Institutions, the Center was responsible for the full operational management of ARBICHO 2025. This included developing exam content in line with international standards, overseeing logistics, coordinating with international delegations, and managing the smooth execution of all Olympiad stages. The Center also supervised volunteer mobilization, branding, translation services, and digital infrastructure.

Strategic Sponsor and State Facilitator:

The Ministry of Preschool and School Education

Ministry of Preschool and School Education

The Ministry ensured comprehensive support for the Olympiad through budget planning, coordination of national mentors, and engagement of key educational stakeholders. It facilitated high-level approvals and mobilized resources across government sectors, ensuring the event's alignment with Uzbekistan's broader educational goals.

Co-Organizer:

AGENCY FOR SPECIALIZED EDUCATIONAL INSTITUTIONS

Agency for Specialized Educational Institutions

The Agency provided policy-level coordination and institutional backing. It supported the recruitment of academic and technical staff, ensured quality standards for scientific assessments, and fostered collaboration among partner institutions. The Agency also played a key role in overseeing ceremonial arrangements and national team readiness.

Academic Partner and Venue Host for Opening & Exams:

CAU | CENTRAL ASIAN UNIVERSITY

Central Asian University (CAU)

CAU generously hosted the Opening Ceremony and served as the main exam venue for both the theoretical and practical rounds. The university provided high-tech laboratories, modern classrooms, and essential facilities that allowed for smooth conduct of scientific assessments. CAU's hospitality and academic support greatly enriched the academic experience of participants.

Academic Partner and Venue Host for Closing Ceremony:

New Uzbekistan University

New Uzbekistan University (Presidential University)

This prominent institution hosted the Closing and Awarding Ceremony in its state-of-the-art auditorium, offering an inspiring setting to celebrate the achievements of young chemists. Its involvement demonstrated a commitment to promoting international science events and youth excellence.

Supporting Partners:

- Uzbekistan's **Ministry of Foreign Affairs**, for facilitating visa procedures and communication with foreign delegations.
- **Local traffic and transportation authorities**, for ensuring safe and timely transfers for participants.
- **Media partner**s, for covering the event widely and amplifying the impact of ARBICHO 2025 both nationally and internationally.

7. Media Coverage

Inspiring Visibility Through Strategic Media Coverage

The 2nd Abu Rayhan Biruni International Chemistry Olympiad (ARBICHO 2025) was not only a scientific competition — it was a globally visible celebration of intellect, culture, and youth innovation. From its inception to the closing ceremony, the Olympiad captured widespread media attention, significantly amplifying Uzbekistan's image as a capable and welcoming host of major international academic events.

Unprecedented National and International Media Presence

To ensure broad and impactful visibility, ARBICHO 2025 attracted extensive media coverage from across the country and abroad. In total, **18 television channels** — including **major national platforms** like Sevimli TV, MY5, Milliy TV, Yoshlar TV, Dunyo bo'ylab, Zo'r TV, UzReport TV, O'zbekiston24, Mahalla, Madaniyat va Ma'rifat, Toshkent, Renessans TV, O'zbekiston tarixi, Nurafshon TV, as well as i**nternational broadcasters** such as TRT Avaz, KZ24, Telekanal KZ, and Turk24 TV — reported on the Olympiad. These outlets covered key moments of the event, including opening and closing ceremonies, theoretical and practical exams, and cultural excursions.

In addition, **8 leading digital news platforms**, such as kun.uz, daryo.uz, Xabar.uz, Darakchi.uz, Yuz.uz, UzA, marifatziyo.uz, darakchilive.uz, published articles and multimedia reports highlighting the significance of the Olympiad and the participation of global young chemists.

Coverage was further supported by **3 major national newspapers** — Xalq so'zi, Yangi O'zbekiston, and Kelajak ovozi — ensuring that written media also captured the scope and prestige of the competition.

Multi-Platform Live Broadcasting

Every stage of ARBICHO 2025 was streamed online in real time, allowing global audiences, mentors, and families to witness the academic excellence and vibrant exchange unfolding in Uzbekistan. This included full coverage of ceremonies, examinations, and special activities, thus broadening engagement beyond physical borders.

Radio Coverage for Wider Reach

To further engage local audiences, **5 national radio stations** — including O‘zbekiston, Radio24.uz, Yoshlar, Toshkent and Oriat Dono — delivered updates and features on the Olympiad. These broadcasts played a vital role in bringing the event closer to communities across the country.

Empowering Journalistic Access

ARBICHO 2025 welcomed media representatives with an open and inclusive approach. Journalists were given access to information, spokespeople, and event locations to ensure accurate, timely, and diverse reporting. Media teams were present at all key venues, working closely with the organizing committee for coordinated communication and smooth coverage.

Goals of the Media Strategy

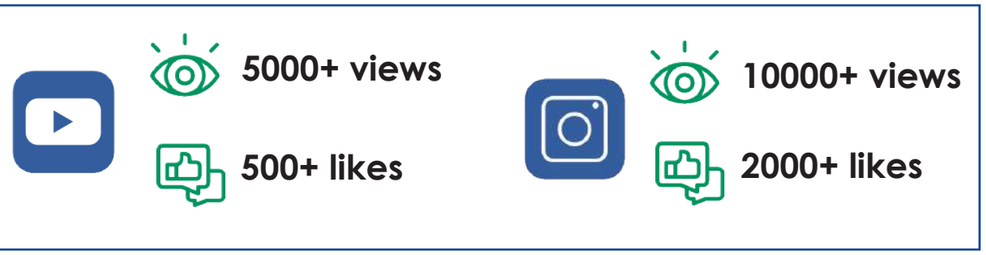
The media strategy behind ARBICHO 2025 was built around three central objectives:

- Expanding public access to scientific excellence through real-time and wide-ranging media distribution.
- Ensuring accuracy and credibility by fostering transparent collaboration with journalists and media platforms.
- Promoting Uzbekistan’s capacity to host global academic events and serve as a bridge between cultures and nations.

Resonance and Recognition

The media impact of ARBICHO 2025 resonated well beyond national borders. With the participation of both local and international media houses, the Olympiad demonstrated how science can unite countries and inspire the next generation. The extensive coverage and enthusiastic audience engagement have laid a strong foundation for future editions of the Olympiad and Uzbekistan’s standing in the international academic community.

Statistics in Media Coverage



Achievements and Figures For Media Center

50+ employees

720+ working hours

5+ media professionals

85+ interviews

35+ videos

700+ Uzbek and English content and designs

8. Conclusion

UNITING MOLECULES, BRIDGING CULTURES

The 2nd International Abu Rayhan Biruni Chemistry Olympiad (ARBICHO 2025) was far more than a scientific competition. It became a symbol of academic unity, cultural exchange, and the limitless potential of youth. Over the course of one unforgettable and amazing week, Uzbekistan welcomed young chemists from 14 countries, creating an environment where knowledge met inspiration, and diversity became strength. The event honored the legacy of Abu Rayhan Biruni — a pioneer of science and intellect — while igniting the curiosity and ambition of the next generation of global innovators.

Hosted in the heart of Tashkent, ARBICHO 2025 transformed Central Asian University into a scientific hub during the exam days and culminated in a celebratory closing ceremony at New Uzbekistan University, an institution symbolizing progress and future leadership. These esteemed academic venues offered not only world-class infrastructure but also a platform for international collaboration and friendship. With Uzbekistan's national team emerging as the leading delegation — winning 19 medals — the event also reaffirmed the country's growing stature in global science education.

The Olympiad's success was driven by the united efforts of national institutions. The Science Olympiad Center led the organizational vision, ensuring each detail — from exam design to logistics — met international standards. The Ministry of Preschool and School Education provided strategic oversight, while the Agency for Specialized Educational Institutions facilitated academic excellence and inter-institutional coordination. Together, they demonstrated Uzbekistan's capability to host world-class events rooted in both scientific rigor and cultural warmth.

ARBICHO 2025 is a proud chapter in Uzbekistan's scientific journey — one that not only showcased organizational excellence but also built bridges across borders. It deepened the global dialogue in chemistry, empowered youth with a platform to shine, and reinforced the nation's commitment to advancing education and innovation. With eyes now set on future editions and the upcoming International Chemistry Olympiad 2026 in Tashkent, Uzbekistan continues its path as a rising leader in global academic collaboration and scientific celebration.

ABU RAYHAN BIRUNI INTERNATIONAL CHEMISTRY OLYMPIAD


Liquid
waste