

Activities of the Cambodian Chemical Society (CCS)

From August, 2024- Sept. 2026 to FACS

In This period, the Cambodian Chemical Society (CCS) has conducted the following activities:

A. Annual Symposium:

There were two Annual Symposia in this period:

1) CCS Conducted a symposium on 16-17 October, 2024. There were totally 112 (80 females) participants attended and 16 (11 females) speakers had presented their research results. There were 13 presentations with the topics as following:

- *Colorimetric sensor for detection of formaldehyde in seafood using smartphone as detector, Miss. Van Soknoeun, Graduate School of Science Royal University of Phnom Penh, Phnom Penh, Cambodia,*
- *Ecosystem Metabolism of the Largest Freshwater Lake in Southeast Asia, Miss. Soum Savoeurn, Fishery Department, Royal University of Agriculture, Phnom Penh, Cambodia;*
- *In-situ Bi/isophthalic acid-modified glassy carbon electrode as a sensor platform for detection of Cd (II) and Pb (II) metal ions in cosmetics using square wave anodic stripping voltammetry, Miss. Koun Sreymach, Department of Chemistry, Faculty of Science, Royal University of Phnom Penh,*
- *Bioaccumulation pattern and human health risk assessment of heavy metal (loid)s in fish samples from the Chan Thnal Reservoir, Miss. Lim Theara , Department of Chemistry, Faculty of Science, Royal University of Phnom Penh,*
- *Heavy Metal (loid)s Accumulation in Aquatic Plants and Human Health Risk Assessment from the Chan Thnal Reservoir, Miss. Sal Sienglu , Department of Chemistry, Faculty of Science, Royal University of Phnom Penh,*
- *Mercury contamination in freshwater fish collected from the northern wetlands of Phnom Penh, Cambodia.Miss. Hour Sreyneath, International University (IU)*
- *Ecological Risk Assessment and Source Contribution of Heavy Metal (loid)s in the Sediment of the Chan Thnal Reservoir”Dr. Chheang Lita, Department of Chemistry, Faculty of Science, Royal University of Phnom Penh,*
- *Bioaccumulation pattern and human health risk assessment of heavy metal (loid)s in fish samples from the Chan Thnal Reservoir, Dr. Chheang Lita, Department of Chemistry, Faculty of Science, Royal University of Phnom Penh,*
- *Heavy Metal (loid)s Contamination and Human Health Implication in the Water of the Chan Thnal Reservoir, Miss. Suong Vicheka, Department of Chemistry, Faculty of Science, Royal University of Phnom Penh,*
- *Human Health Risk Assessment of Heavy Metal (loid)s in Aquatic Plants and Accumulation Patterns from the Chan Thnal Reservoir.Miss. Phoem Sreyleak, Department of Chemistry, Faculty of Science, Royal University of Phnom Penh,*
- *Identification and Determination of Iodine in Salt by WYD Iodine Checker Device, Miss. CHHAILY Sreyneang, Department of Chemistry, Faculty of Science, Royal University of Phnom Penh,*
- *Evaluation of nitrate and nitrite contaminations in vegetables, water and soils collected from agricultural farms at S’ang district, Kandal Province, Miss, HOR Laihouy , International University (IU),*
- *Removal of cadmium from groundwater in Bakong Commune using activated clay as an adsorbent, Miss, Leng Kimheang, Department of Chemistry, Faculty of Science, Royal University of Phnom Penh,*
- *Evaluation of Water Treatment for Arsenic and Other Metal Removal Using GDM Filtration Units, Mr.Vorn Sokheang, International University (IU),*

- Development of a natural sunscreen containing extracts from the bark of the Pnha Ya tree, Mr. Seng Oudom, International University (IU),
- Enhancing 8th-Grade Students' Ability to Learn Chemical Symbols Through Project-Based Learning, Mr, Kun Chanvy, Pedagogical Teacher Education Center (PTEC)



Symposium on 16-17 October, 2024

2) CCS Conducted a symposium in 16 October, 2025. There were totally 87 (60 females) participants attended and 10 (7 females) speakers had presented their research results. There were 10 presentations with the topics as following:

- Bioactive Compound Screening via GC-MS Analysis in the Stems of *Passiflora foetida* L, Mr. Seng Oudom, Faculty of Pharmacy, International University, Phnom Penh, Cambodia
- Effect of Steaming and Drying on Physicochemical and Microbiological Properties of Green Mussels”, Miss. Hoeun Seanghai, Faculty of Chemical and Food Engineering, Institute of Technology of Cambodia,
- Human Health Risk Assessment of Sodium Dithionite in Vegetables from Derm Kor Market, PhnomPenh, Miss. Tatt Sreyka, Department of Chemistry, Faculty of Science, Royal University of Phnom Penh,
- Determination of ascorbic acid in fruits using colorimetric method assisted by a smartphone as detector and imageJ, Mr.Kheng Botang, Department of Chemistry, Faculty of Science, Royal University of Phnom Penh,
- Human health risk Assessment of Heavy Metals(loid) in Cambodia’s Popular Street Food Samples, Miss. Soeut Chanthy, Department of Chemistry, Faculty of Science, Royal University of Phnom Penh,
- Enhancing students' understanding of diagrams of elements, compounds, and mixtures utilizing clay modeling in Inquiry-Based Learning, Miss. Loeung Sokunmaren, High school teacher at Kampong Thom Province,

- *Using the Flipped Classroom Method to Improve Learning Outcomes and Enhance Students' Self-Directed Learning Skills in 8th-Grade, Mr. Peung Sopheaktra, Pedagogical Teacher Education Center (PTEC)*
- *Determination of Caffeine Content in Energy Drinks using HPLC, Miss. KHEANG Kosmak , Department of Chemistry, Faculty of Science, Royal University of Phnom Penh*
- *Enhancing Students' Learning Capacity through the Integration of the KWL Strategy into Traditional Teaching Methods in Chemistry, Miss. Thay Oussa, Pedagogical Teacher Education Center (PTEC)*
- *Students' Learning Attitudes Towards Chemistry in Grade 8 A Case Study of Chea Sim Santhormok High School, Mis. Bun Synath, Pedagogical Teacher Education Center (PTEC)*



Symposium on 16 October, 2025

B. Teacher Training.

There were three Teacher Trainings in this period:

- 1) *On 16-17 August, 2024, CCS conducted the teacher trainings at Resource School of Hun Sen Sereypheap High School, Kandal province by cooperate with the Provincial Department of Education Youth and Sports. There were 35 (14 Females) chemistry teachers attended.*
- 2) *On 27-28 June, 2025, CCS conducted the teacher trainings at Resource School of Hun Sen Oddar Meanchey High School, Oddar Meanchey province by cooperate with the Provincial Department of Education Youth and Sports. There were 33 (13 Females) chemistry teachers attended.*

3) On October 27-28, 2025, CCS conducted the teacher trainings at Hun Sen Angsnoul High School, Kandal province by cooperate with the Provincial Department of Education Youth and Sports. There were 26 (13 Females) chemistry teachers attended

The following among 7-12 of these chemistry lessons and experimental topics were introduced to the participants:

- Safety in Laboratory and the basic uses of glassware
- Electrolysis of CuSO_4 (small scale)
- Titration strong acid and strong base (small scale)
- Titration weak acid and strong base (small scale)
- pH indicators (small scale)
- The Law of Conservation of Mass (small scale)
- Property of Oxygen Gas (small scale)
- Decomposition of NaHCO_3 by heating
- Precipitation reactions
- Soap preparation



Activities of teachers 's training at Resource School of Hun Sen Sereypheap High School, Kandal province on August 16-17, 2024



Activities of teachers 's training at Resource School of Hun Sen Oddar Meanchey High School, Oddar Meanchey province, On 27-28 June, 2025



Activities of teachers 's training at At Hun Sen Angsnoul High School Kandal province, October 27-28, 2025

C. Students Training

There were 7 Student trainings on “Mobile lab Project“ were organized by the Cambodian Chemical Society in four Provinces of Cambodia:

1. *On August 24, 2024, CCS conducted the CCS's Mobile Lab project at Hun Sen Takhmao High School, Kandal Province. There were 50 students (30 females) attended.*
2. *On 20 and 21 December, 2024, CCS conducted two student training (Mobile Lab project) at Hun Sen Mondulkiri High School, Mondulkiri Province. There were 98 students (50 females) attended,*
3. *On 29 March, 2025, CCS conducted the CCS's Mobile Lab project at Hun Sen Prey Phnov High School, Prey Veng Province, There were 51 students (29 females) attended.*
4. *On 17 November, 2025, CCS conducted the CCS's Mobile Lab project at Mittapheap Khmer-Japan Samakimeanchey High School Kampong Chhnang, Province. There were 50 students (37 females) attended.*
5. *On 15 May , 2026, CCS conducted the CCS's Mobile Lab project at Hun Sen Kampong Tralach High School, Kampong Chhnang Province. There were 50 students (33 females) attended.*
6. *On 29 May, 2026, CCS conducted the CCS's Mobile Lab project at Hun Sen Chamka Dong High School, Kep Province. There were 59 students (40 females) attended*
7. *On 20 June, 2026, CCS conducted the CCS's Mobile Lab project at Hun Sen Rolea B'ier High School, Kampong Chhnang Province. There were 50 students (39 females) attended*

There were 5-6 chemistry lessons and experimental topics were introduced to the students:

- *Safety in Laboratory and the basic uses of glassware*
- *pH indicators*
- *Titration strong acid and strong base*
- *Water Electrolysis*
- *Precipitation reaction*
- *Conservation law*



Students training at Hun Sen Takhmao High School, Kandal Province on 24 August, 2024,



student training at Hun Sen Mondulkiri High School, Mondulkiri Province, on August 24, 2024



student training at Hun Sen Prey Phnov High School, Prey Veng Province, on 29 March, 2025



student training at Mittapheap Khmer-Japan Samakimeanchey High School, Kampong Chhnang, Province, on 17 November, 2025



student training at Hun Sen Kampong Tralach High School, Kampong Chhnang Province, on 15 May , 2026



student training at Hun Sen Chamka Dong High School, Kep Province, on 29 May, 2026



student training at Hun Sen Rolea B'ier High School, Kampong Chhnang Province, on 20 June, 2026

d) CCS s yearly Bulletin.

CCS has published two volumes (15th and 16th) of bulletin with 500 copies each.



E) International Symposium

On 5-8 December, 2025, The Cambodian Chemical Society had cooperated with MEME Corporation of Japan to organize the International Symposium of the Cambodian Chemical Society (CCSIS 2025) at the Hotel Cambodianna, Phnom Penh city. There were 193 (116 females) participants attended included 76 Japanese presenters (28 from remote presentations) and 10 Cambodian presenters. There were also 25 poster presenters with one from Japan and Cambodian Universities students. This CCSIS 2025 had presided by HE Dr. Oum Romnea, Under Secretary of State of the Ministry of Education Youth and Sports.

