

2023 Annual Report of the Board Committee

December 2023 The President of BCOJ Nakamura, Yuichi

BCOJ Board Members in 2023

President

Nakamura, Yuichi (ASAHI BREWERIWS, LTD.)

Directors

Ishida, Fumito (SAPPORO BREWERIES LTD.) until March Kiyosaki, Toshihiro (SAPPORO BREWERIES LTD.) from April (Kirin Holdings Company, Limited.) Katayama, Takahito

Maruhashi, Taichi (Suntory Spirits Ltd.)

Taruoka, Makoto (ORION BREWERIES, LTD.)

Chair of Analytical Committee

Inui, Takako (Suntory Spirits Ltd.)

Chair of Program Committee

Asada, Kei (SAPPORO BREWERIES LTD.) from April

BAJ, official members

Kishino, Hiroyuki Kawanowa, Takashi Mizutani, Masanori

Kanai, Hideki

Ito, Toshiya from September

Secretariat Okada, Keisuke (ASAHI BREWERIWS, LTD.)

In 2023, we held the International Technical Committee meeting four times, the Analysis Committee meeting seven times, and the Program Committee meeting ten times to realize the objectives of BCOJ activities. In June, we attended the ASBC Meeting as part of our overseas academic conference participation. Additionally, in October, we participated in the EBC Symposium to update our collaborative declaration with the EBC, "THE DECLARATION BETWEEN EBC AND BCOJ," and strengthened our relationship with the EBC.

<The Objectives of the BCOJ>

- 1. To standardize analytical methods for the evaluation of materials and products adopted in beer brewing and other related industries.
- 2. To facilitate scientific and technological research through mutual communication among beer brewing industry specialists.
- 3. To work in collaboration with other foreign and domestic organizations having the

same objectives.

1. Science and Technology Exchange with the European Brewery Convention (EBC) and American Society of Brewing Chemists (ASBC)

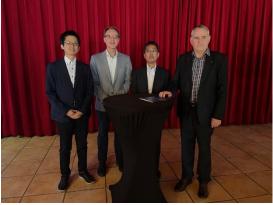
(1) Participation in 2023 ASBC Meeting

We participated on site in the 2023 ASBC Meeting, interacted with ASBC Board Members, and invited them to the BCOJ Annual Meeting.



(2) Participation in EBC Symposium and update of "THE DECLARATION BETWEEN EBC AND BCOJ"

We had planned to update "THE DECLARATION BETWEEN EBC AND BCOJ" at the 38th EBC Congress that was held last year, but due to the spread of the pandemic in Europe in April, we had to delay the dispatch of committee members to this congress. Due to the worsening situation, we have decided to cancel and postpone the renewal of the declaration until 2023. BCOJ does not normally send members to the EBC Symposium, but in October 2023, the chair and secretary general participated in the symposium to update the



declaration. A signing ceremony was held on stage during the symposium between BCOJ President Mr. Nakamura and EBC President Mr. Benet Fite. "THE DECLARATION BETWEEN EBC AND BCOJ" was signed for the first time between the EBC and his BCOJ in 2001, with the aim of standardizing experimental and analytical methods in brewing science and cooperating in the organization of events, and since then it has been updated every six years. With this renewal, the cooperative relationship between BCOJ and EBC will continue until 2029.

(3) BCOJ Annual Meeting





The 32nd BCOJ Annual Meeting was held on November 9-10, 2023. For the first time, TKP

Premium Kyobashi was chosen as the venue, with the intention of providing easy access for participants and more active interaction among them. It was the first fully face-to-face event since 2019. Through presentations at the annual convention, which was attended by a total of 260 people from members of beer companies, related government agencies, and other companies, etc., we actively exchanged technical reports and opinions, leading to the improvement of technical knowledge related to the development of attractive products, the achievement of deliciousness, and quality assurance.

From overseas, we welcomed ASBC President Dr. Sylvie Van Zandycke, Vice President of MBAA Dr. Molly Browning and ASBC Asia Liaison Officer Dr. Xing Yin. Dr. Van Zandycke gave her keynote address on "Brewing Yeasts and the Future".

In addition, Dr. Hiroyuki Yoshimoto from Kirin Holdings received the BCOJ Contribution Award this year.

Furthermore, Professor Ai Hisano from The University of Tokyo and Mr. Gentaro Tamura, the President of the Japan Brewers Association, gave an invited lecture.

2. Board Meetings

- (1) 1st Meeting (March: at Hokkaido Brewery of SAPPORO BEER)
- ①Election of the 2023 BCOJ Contribution Award recipient. ②Planning of the BCOJ Annual Meeting ③We have decided to revise the book "Basic Beer Technology" published by the Brewing Society of Japan.
- (2) 2nd Meeting (July: at Kyushu-Kumamoto Brewery of Suntory Spirits) ①Confirmation of the details of the BCOJ Annual Meeting ②Business trip report for the 2023 ASBC Meeting.
- (4) 3rd Meeting (November : at TKP Premium Kyobashi)
- 1 BCOJ activities and budget for 2023 and 2024 2 Business trip report for the EBC Symposium 3 Discussions on the activities of 2024
- (5) 4th Meeting (December : at BAJ office)
 - ① Review of activities in 2023 and activity plans for 2024 ② Discussion of BCOJ activities at the 2024 World Brewing Congress

(Completed by Okada, Keisuke)

2023 Annual Report of BCOJ Analysis Committee

December 2023

Chairperson: Takako Inui

Vice-Chairperson: Masahito Muro

The term for the annual activities of BCOJ Analysis Committee in 2023 was from January to December. The committee had seven regular meetings. Four ad-hoc meetings were also held to proceed with the revision of the BCOJ Beer Analysis Method by the end of November. Committee members are as follows.

Chairperson

Takako Inui (Suntory Spirits Ltd.)

Vice-Chairperson

Masahito Muro (Kirin Holdings Company, Ltd.)

Members

Kaori Kikuchi (Asahi Breweries, Ltd.)

Kayo Shiraishi (Kirin Holdings Company, Ltd.)

Wataru Nakamura (Orion Breweries, Ltd.) (-Sep. 2023)

Nozomi Tokuzato (Orion Breweries, Ltd.) (Oct. 2023-)

Takayuki Watanabe (Sapporo Breweries Ltd.)

Yuto Hata (Suntory Spirits Ltd.) (-Sep. 2023)

Takuya Hashimoto (Suntory Spirits Ltd.) (Oct. 2023—)

Hideki Kanai (BAJ, official member)

Toshiya Ito (BAJ, official member) (Oct. 2023-)

Takashi Kawanowa (BAJ, official member) (-Aug. 2022)

Masanori Mizutani (BAJ, official member)

1. The BCOJ Collaborative Work

A research project was initiated on a 'quantitative analysis method for arabinoxylan in beer' using LC-MS/MS. Arabinoxylan is thought to influence filtration. The managing company of the study is Suntory Spirits Ltd..

2. Applying Alcolyzer for Alcohol Analysis to RTD

"Measurement of alcohol content by BCOJ beer analysis method RTD-1 and RTD-2 Alcolyzer method" were posted on the NTA website as the measurement method No. 12 in October 2021.

Filter paper filtration or centrifugation operation of turbid samples is not permitted for this method. The possibility of filter paper filtration or centrifugation of turbid samples was examined.

The results showed that the alcohol content was close to that of the distillation method by filter paper filtration and centrifugation operations, but the extract could be 0.1 degree or more lower than the distillation method when calculated using these treatments. Using the sample density that was treated only degassing, it was found the deviation between the Alcolyzer and the distillation method be within 0.1 degree. The results will be reported to the NTA.

3. The revision of the BCOJ beer analysis method

The CD-ROM version of the beer analysis method is the latest in 2013, and it has not been updated since then. For ease of use, rapid updating of analytical methods and convenience, it was decided to make the BCOJ analytical methods available in electronic format. In 2022, the analysis committee decided that eight BCOJ original analytical methods would be added, and 75 methods would be revised and added in conjunction with the revision of the ASBC and EBC analytical methods. By November 2022, the checking of eight additional BCOJ original analytical methods, other revisions, and 13 additional methods were completed. In 2023, we checked each of the analysis methods in detail, and as of November, 118 methods were listed. The entire manuscript will be completed once in December and submit it to the Brewing Society of Japan.

4. BCOJ Technical Seminar

BCOJ Technical Seminar was held online from 15:30 to 17:00 on September 22, 2023, with fifty participants.

Title 1: Quality monitoring using various sensor information in the sake production process

Instructor: Dr. Haruo Tomita, Chief researcher, Sensing Systems Team, Energy Technology Laboratories, Osaka Gas Co. Ltd.

Title 2: D-Fire, an IoT service using Daigas Group technology

Instructor: Mr. Hiromu Sakaguchi, Assistant Manger, Business Development Department, Engineering Team, Daigas Energy Co. Ltd.

We discussed the contents of the seminar with the instructor in advance. In addition to the basic contents, there were also practical contents related to the joint experiment, so it was a very meaningful.

5. International Activities

(1) EBC Analysis Group conference

The online EBC Analysis Committee meetings were held on March 7th and September 20th, 2023.

Vice chairperson and Chairperson participated in each meeting.

(2) ASBC Technical Committee meeting

The meeting was held on June 6th, 2023 in Pittsburgh. Chairperson, vice chairperson and two general managers of BAJ participated, and Chairman Inui reported on BCOJ activities.

(3) EBC Collaborative Work

Four BCOJ companies participated in the ring analysis of the DNTB analysis method for SO2 in beer in 2022. The result was reported to each participant in November 2023 and the analysis method will be registered as an International Method.

(4) Agreement between ASBC, EBC and BCOJ on copyright.

In line with the electronic version of the BCOJ Analytical Methods, the Copyright Agreement was revised, including changes regarding copyright payments to the ASBC and EBC, and signed between the ASBC and EBC and the BCOJ Chairperson. It is valid from 1 January 2024 to 30 December 2029.

6. Information disclosure activities

The results of two collaborative trials conducted in 2019-2021 were submitted to the Journal of the ASBC, accepted and published electronically.

(1) Takashi Kamiya, et al., Determination of Hop Aroma Compounds in Beer Using Headspace-Solid Phase Microextraction Coupled with Gas Chromatography and Mass Spectrometry (HS/SPME/GC/MS).

 $\label{lower} \emph{Journal of the American Society of Brewing Chemists}, Volume~81,~2023~-~Issue~4~~\\ \text{https://doi.org/}10.1080/03610470.2023.2165387~~}$

(2) Masahito Muro, et al., Report of 2021 BCOJ Collaborative Work: Efficient Analysis of Alcohol Concentration in RTD (Ready to Drink) Alcoholic Beverages Using a Near-Infrared System.

 $\label{lower} \emph{Journal of the American Society of Brewing Chemists}, Volume~81,~2023~-~Issue~4~~ https://doi.org/10.1080/03610470.2023.2165386$

(By Masahito Muro)

2023 Activity Report of the BCOJ Program Committee

Committee Chair, Kei Asada

1. Members

The program committee for the year 2023 was comprised of the individuals listed below.

Title	Name	Affiliation	Note
Chair	Kei Asada	Sapporo Breweries Ltd.	
Vice Chair	Tomonori Kano	Kirin Holdings Company, Ltd	
Member	Masashi Sakai	Suntory Spirits Ltd.	
	Shuhei Nishimura	Asahi Quality and Innovations, Ltd.	
Councilor	Takashi Kawanowa	Brewers Association of Japan	Until September
	Masanori Mizutani	Brewers Association of Japan	
	Hideki Kanai	Brewers Association of Japan	
	Toshiya Ito	Brewers Association of Japan	From October

2. Objectives of the Program Committee

The Program Committee has planned and managed the BCOJ Annual Meeting to "facilitate scientific and technological research through mutual communication among beer brewing industry specialists." and "work in collaboration with other foreign and domestic organizations having the same objectives."

3. Activities

The Program Committee held nine meetings in 2023, including five regular and four extra sessions. Details are found in Chapter 4. The 2023 BCOJ Annual Meeting was held on November 9 and 10, 2023. The aim of expanding the BCOJ Annual Meeting resulted in a significant change to the format this year. The modifications included a change in venue, additional content, a new auditing style, and the inclusion of poster sessions and networking parties. We made some significant changes to the event. First, we moved the venue from Seiryo Kaikan to TKP Garden City Premium Kyobashi. Additionally, we expanded the number of presenters to include not just the five major beer companies, but also craft brewers and suppliers. Our goal was to promote growth across the entire beer industry. Approximately 260 people attended the event, making it the largest turnout ever.

The conference comprised of 19 presentations - 10 oral and 9 poster - from the ASBC Meeting and Master Brewers Conference. Dr. Sylvie Van Zandyche, the ASBC Chair, delivered a keynote speech on "Brewing Yeasts and the Future". Associate Professor Ai Hisano from the Graduate School of Interdisciplinary Information Studies at the University of

Tokyo was invited to give a lecture on "How the Senses Have Been Created: History and Culture through the Senses". The Japan Brewers Association President, Mr. Gentaro Tamura, also gave a lecture. In addition, five craft brewers and a supplier presented poster presentations with beer samples. Kataoka Bussan was also present at the conference. The conference was a success with high-quality and abundant content. The attendees actively engaged with one another, resulting in a fruitful event. Many individuals expressed their support for continuing the conference. We will continue to make improvements to make it an even better experience in the future.

4. Program Committee Meetings

■ 1st Regular meeting (January 23 @BAJ)

Update the roles of program committee members, determine potential invited speakers, establish the order of approach, reserve new venues, confirm the timing of venue reservations for the following year, and verify the number of international presentations.

2nd Regular meeting (March 6 @ Teams)

Schedule of invited speaker visits, site visits, new content, and abstract discussion.

■ Tasting Session (March 6 @ Hiroshima)

Ask Mr. Tamura, president of the Craft Beer Association, to participate in the annual meeting.

1st Extraordinary meeting (April 5 @Teams)

We discussed collaborating with craft breweries and also talked about operational matters.

■ 2023 ASBC Meeting (6/4, 5 (Sun, Mon) @ Pittsburgh, PA (Asada))

Confirm the ASBC Chair's Japan visit, discuss BCOJ/ASBC exchanges, and build board member relationships.

2nd Extraordinary meeting (June 15 @ Daisen G Beer (Tottori))

Greetings to Mr. Tamura, President of JBA. Discussion about collaborating with craft breweries.

■ 3rd Extraordinary meeting (June 28 @ University of Tokyo, TKP Kyobashi and BAJ)

Inspection of TKP Kyobashi, identification of issues, and formal request to invited speaker Dr. Hisano.

3rd Regular meeting (July 18 @Suntory Kumamoto Plant)

Decision on the program outline for the upcoming annual conference.

■ 4th Extraordinary meeting (September 14 @Teams)

Fix a preliminary version of programs.

4th Regular meeting (September 28 @ BAJ)

The deadline for participants and finalize the materials for the annual meeting. Additionally, conduct a site check to ensure everything is ready for the event.

Preparation for the day before (November 8 @ BAJ)

Confirm all operational aspects. Ensure that everything is in order and ready to go.

■ The BCOJ Annual Meeting (November 9,10 @ TKP Kyobashi)

Operation of the Annual Meeting.

5th Regular meeting (November 16@Sapporo Hokkaido Brewery)
Review of the Annual Meeting, determination of activity policy, and schedule for 2024.

Text Responsibility: Kei Asada