



COMMISSION II - « OENOLOGY »

“MICROBIOLOGY” EXPERT GROUP

Proceedings report of the 47th session

Date: 03/04/2024

Place: Salle de Flore, Palais des Ducs de Bourgogne, 1 Rue Rameau,
21000 Dijon, France and video conference Kudo

AGENDA47th SessionWednesday 3rd April 2023:

14:30 – 18:30 (UTC+1) (Paris Time)

Place : Salle de Flore, Palais des Ducs de Bourgogne, 1 Rue Rameau, 21000 Dijon, France

and Video-conference Platform Kudo

No.	Topic	Reference Document	Reference OIV Working Plan	Time available ¹
1.	Adoption of the agenda	CII-MICRO 2024-04 OJ		1 min 14:30-14:31
2.	Approval of the proceedings report for the 46 th session	CII-MICRO 2024-04 CR		2 min 14:31-14:33
3.	Information from the OIV Secretariat	CII-MICRO 2024-04 03		2 min 14:33-14:35
4.	Information presented to the Expert Group by the Commission and/or other OIV commissions, sub-commissions, or expert groups	CII-MICRO 2024-04 04		5 min 14:35-14:40
Review of preliminary draft resolutions concerning the joint group TEC-MIC				
5.	Microbiological stabilisation of musts by pulsed electric fields (PEF) - Observations at step 5	OENO-MICRO 20-669A OENO-MICRO 20-669 add1	141.1	30 min 14:40-15:10
6.	Microbiological stabilisation of wines by pulsed electric fields (PEF) - Observations at step 5	OENO-MICRO 20-669B OENO-MICRO 20-669B add1	141.2	
7.	Treatment of must by UV-C radiation - Observations at step 3	OENO-MICRO 20-670A OENO-MICRO 20-670A add1	173.1	15 min 15:10-15:25
8.	Treatment of wine by UV-C radiation - Observations at step 3	OENO-MICRO 20-670B OENO-MICRO 20-670B add1	173.2	

¹ The time available for each point will be evaluated taking into account the number of official comments submitted by **March 9, 2024** and the accompanying documents submitted by **March 18, 2024**.



Review of preliminary draft resolutions				
9.	Yeast cell counting using flow cytometry in oenological matrices (Yeast cultures for oenological use; fermenting musts and wines) - <i>Observations at step 5</i>	OENO-MICRO 22-713 OENO-MICRO 22-713 add1	231	15 min 15:25-15:40
10.	Validation of a standard protocol to evaluate the fermentation properties of <i>S. cerevisiae</i> strains - <i>Observations at step 3</i>	OENO-MICRO 23-739 OENO-MICRO 23-739 add1	255	15 min 15:40-15:55
11.	Studies on products and subproducts of non- <i>Saccharomyces</i> yeasts: Resolution to regulate the use of products and subproducts of non- <i>Saccharomyces</i> yeasts - <i>Observations at step 3</i>	OENO-MICRO 23-740 OENO-MICRO 23-740 add1	248	15 min 15:55-16:10
Work underway				
12.	Bioprotection of yeasts - <i>Update from the OIV Secretariat (eWG02)</i>	CII-MICRO 2024-04 12	75	5 min 16:10-16:15
13.	Energy saving in winemaking - <i>Communication by Italy (eWG07)</i>	CII-MICRO 2024-04 13	254	10 min 16:15-16:25
14.	Review of microbial collections linked to the viticultural-oenological world - <i>Communication by Italy (eWG03)</i>	CII-MICRO 2024-04 14	256	10 min 16:25-16:35
15.	Update of the monograph COEI-1-CONBAC - <i>Communication by France</i>	CII-MICRO 2024-04 15	257	10 min 16:35-16:45
16.	Yeast derivatives - update of the monographs - <i>Information from the electronic working group (eWG05)</i>	CII-MICRO 2024-04 16	291	10 min 16:45-16:55
17.	Production of low alcohol wines with biological ageing in the south of Spain - <i>Communication by Spain</i>	CII-MICRO 2024-04 17	292	10 min 16:55-17:05
18.	Synthetic biology in wine yeasts - <i>Update from the OIV Secretariat</i>	CII-MICRO 2024-04 18	293	5 min 17:05-17:10
19.	Use of microorganisms as antimicrobial agents on grapes and in pre-post-harvest - <i>Communication by Italy - information from the electronic working group (eWG04)</i>	CII-MICRO 2024-04 19	294	10 min 17:10-17:20
20.	Microbiological analysis of grape juice - <i>Information from the electronic working group (eWG06)</i>	CII-MICRO 2024-04 20	87	10 min 17:20-17:30
Proposals for Future Work				
Any other business				



21.	Yeast multipliers in wine industry - <i>Communication by Spain</i>	CII-MICRO 2024-04 21		10 min 17:30-17:40
22.	Ancestral wines, ancestral winemaking - <i>Communication by Prof Malfeito-Ferreira</i>	CII-MICRO 2024-04 22		25 min 17:40-18:05
23.	Usage of virus in oenology - <i>Communication by Prof Cordero</i> <i>Universidad de Cádiz</i>	CII-MICRO 2024-04 23		25 min 18:05-18:30



SUMMARY SHEET OF THE WORK OF THE SUB-COMMISSIONS AND EXPERT GROUPS

Group of experts: « Microbiology »

Date: 03/04/2024

Number of Experts: 31 (present) + 64 (KUDO) = 95

Number of Member States: 8 (present) + 17 (KUDO)

Number of Observers: 2 (present) + 2 (KUDO)

Number of Invited Guests: 2 (present)

I/ Resolutions

Document	Step	Subject	Follow up (step of the procedure)
OENO-MICRO 20-669A	5	Microbiological stabilisation of musts by pulsed electric fields (PEF)	The resolution remained at step 5 , taking into consideration the comments of Member States.
OENO-MICRO 20-669B	5	Microbiological stabilisation of wines by pulsed electric fields (PEF)	The resolution remained at step 5 , taking into consideration the comments of Member States.
OENO-MICRO 20-670A	3	Treatment of must by UV-C radiation	The resolution remained at step 3 , taking into consideration the comments of Member States.
OENO-MICRO 20-670B	3	Treatment of wine by UV-C radiation	The resolution remained at step 3 , taking into consideration the comments of Member States.
OENO-MICRO 22-713	5	Yeast cell counting using flow cytometry in oenological matrices (Yeast cultures for oenological use; fermenting musts and wines)	The resolution moved to step 7, subject to opinion of SCMA group .



OENO-MICRO 23-739	3	Validation of a standard protocol to evaluate the fermentation properties of <i>S. cerevisiae</i> strains	The resolution moved to step 5 , taking into consideration the comments of Member States.
OENO-MICRO 23-740	3	Studies on products and subproducts of non-Saccharomyces yeasts: Resolution to regulate the use of products and subproducts of non-Saccharomyces yeasts	The resolution moved to step 5 , taking into consideration the comments of Member States. The Group decided to send the resolution to step 7, subject to opinion of SPECIF group .

II/ Questions from the Strategic Plan

Ref SP	Theme and treatment	Follow up

III/ Request for additional information or opinion (statistics, economy, legal, technical, health)

Information	Source
OENO-MICRO 22-713	MICRO
Request	Recipient
Opinion of SCMA on this method whether to add it to Compendium	SCMA
Information	Source
OENO-MICRO 23-740	MICRO
Request	Recipient
Opinion of SPECIF on update of 5 monographs	SPECIF

IV/ Presentations other than point II

Document	Country/WG	Subject	Follow up
CII-MICRO 2024-04 12	eWG	Bioprotection of yeasts	The collective expertise document is published. The electronic working group will be closed.



CII-MICRO 2024-04 13	eWG	Energy saving in winemaking	Italian delegation who coordinates the electronic working group gave an update. The collective expertise document is prepared by the eWG. A survey has been prepared with the aim of disseminating it internationally.
CII-MICRO 2024-04 14	eWG	Review of microbial collections linked to the viticultural-oenological world	Italian delegation who coordinates the electronic working group gave an update. Electronic working group conducted a survey and will meet to review the results.
CII-MICRO 2024-04 15	France	Update of the monograph COEI-1-CONBAC	OENOPPIA and France presented the topic. The point is kept for 2025 agenda.
CII-MICRO 2024-04 16	eWG	Yeast derivatives - update of the monographs	OENOPPIA who coordinates the electronic working group gave an update. Electronic working group will meet to start the work.
CII-MICRO 2024-04 17	Spain	Production of low alcohol wines with biological ageing in the south of Spain	No presentation was made. The action was kept for 2025 agenda.
CII-MICRO 2024-04 18		Synthetic biology in wine yeasts	No presentation was made. The action was kept for 2025 agenda.
CII-MICRO 2024-04 19	eWG	Use of microorganisms as antimicrobial agents on grapes and in pre-post-harvest	Italian delegation who coordinates the electronic working group gave an update. Electronic working group will meet to continue the work.
CII-MICRO 2024-04 20	eWG	Microbiological analysis of grape juice	OIV Secretariat gave an update on the electronic working group: The survey results showed that there is no interest and resources to continue this work. The electronic working group will be closed.

V/ Items on the agenda for the next session (without prejudice to subjects which may be added later)

Document	Country	Subject	Follow up



VI/ Other items

Document	Country	Subject	Follow up
CII-MICRO 2024-04 21	President MICRO	Yeast multipliers in wine industry	The President informed the group. An electronic working group will be formed. Oenoppia, Spain, France and Italy are interested on joining the group.
CII-MICRO 2024-04 22	Guest speaker	Ancestral wines, ancestral winemaking	The presentation is made. The Group will be informed about the new advancements in this topic.
CII-MICRO 2024-04 23	Guest speaker	Usage of virus in oenology	The presentation is made. The Group will be informed about the new advancements in this topic.

Document	Country	Subject	Follow up
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Date

Name and signature of the author of the proposal

03/04/2024

Antonio Morata
President of group of experts
"Microbiology"

Valeriu Cotea
Scientific secretary of Commission II

Neslihan IVIT
Head of Unit « Oenology »

INTRODUCTION

The 47th session of the “Microbiology” Expert Group was held on 03/04/2023 in Salle de Flore in Dijon, France and online via video conference platform Kudo with attendance of the official delegates and experts representing Member States and Observers. The meeting was opened by Antonio Morata (Spain), the President of Microbiology Expert Group who welcomed the experts.

1. Adoption of the agenda (CII-MICRO 2024-04 OJ)

- 1.1. The Group adopted the agenda as the meeting’s agenda.

2. Approval of the Proceedings Report for the 46th session (CII-MICRO 2023-03 CR)

- 2.1. The proceedings report for the 46th session was unanimously approved.

3. Information from the OIV Secretariat (CII-MICRO 2024-04 03)

- 3.1. The OIV Secretariat reminded the Group about the deadlines for submitting draft resolutions under the step procedure. The submission date for the draft resolutions which will pass to step 7 is June 14, 2024.

4. Information presented to the Sub-Commission by the Commission and/or other OIV Commissions, Sub-commissions or expert groups (CII- MICRO 2024-04 04)

- 4.1. This item was not applicable.

5. Microbiological stabilisation of musts by pulsed electric fields (PEF) OENO-MICRO 20-669A

- 5.1. The Spanish delegation made a presentation about PEF processing. The current commercial and industrial scale application in the food industry and the mechanism of microbial inactivation by PEF were explained.
- 5.2. Numerous studies were made to show the effect of PEF on must and wine, inclusion effectiveness on microbial inactivation and impact on the aroma compounds. Some of these studies included migration tests to quantify the titanium release from the electrodes, and under studied conditions the metal release from the titanium electrodes was below the detection limit of the method.
- 5.3. The cost analysis of the treatment in terms of total electric energy requirement was communicated.
- 5.4. The delegations asked questions about volumes used in the industrial scale studies, the pre-heating and cooling process, possibility to use the treatment during alcoholic fermentation to produce wines with residual sugar, and to use it under pressure for sparkling wine making.
- 5.5. Editorial changes requested by Portuguese, South African and French delegations.

- 5.6. The Australian delegation requested more detailed information on the prescription section, to outline typical performance parameters, such as flow rate, contact time, temperatures and energy requirements, to give winemakers tools to apply the treatment in a continuous industrial process.
- 5.7. **Conclusion:** The draft resolution is kept in step 5, taking into consideration the comments of Member States and those made during the meeting.
- 5.8. Additional information about the metal migration from the electrodes and the opinion of the SECUAL Group are awaited.

6. Microbiological stabilisation of wines by pulsed electric fields (PEF) OENO-MICRO 20-669B

- 6.1. The topic was discussed under Item 5 of the agenda.
- 6.2. **Conclusion:** The draft resolution is kept in step 5, taking into consideration the comments of Member States and those made during the meeting.

7. Treatment of must by UV-C radiation OENO-MICRO 20-670A

- 7.1. There were no updates on the work to be presented.
- 7.2. As in the case of last year, it was pointed out that this practice falls under the Novel Foods Regulation in the EU and therefore must be authorised before launching the large-scale trials.
- 7.3. The French and Australian delegations requested detailed information about the efficacy of the treatment in controlling microbial contamination.
- 7.4. The Portuguese delegation requested more information about the cost of the production.
- 7.5. The Group awaits the opinion of the SECUAL Group on this treatment.
- 7.6. **Conclusion:** The draft resolution is kept in step 3, taking into consideration the comments of Member States and those made during the meeting.
- 7.7. The German delegation will provide requested information next year.

8. Treatment of wine by UV-C radiation OENO-MICRO 20-670B

- 8.1. The topic is discussed under Item 7 of the agenda.
- 8.2. **Conclusion:** The draft resolution is kept in step 3, taking into consideration the comments of Member States and those made during the meeting.

9. Yeast cell counting using flow cytometry in oenological matrices (Yeast cultures for oenological use; fermenting musts and wines) OENO-MICRO 22-713

- 9.1. The Group examined the comments forwarded to the Organisation. The Italian delegation presented the amended version of the draft resolution which answered the official comments submitted by the Member States.
- 9.2. The French delegation indicated that the prescription of the method is too detailed and precise that it can cause difficulty during its application in the laboratories, and the necessity to ask SCMA's opinion in regard to format and type of the method. The

Portuguese delegation indicated the same point of asking SCMA's opinion and requested some editorial amendments.

- 9.3. The Australian delegation asked whether the method will be added to the Compendium of International Methods of Analysis. They proposed to cross reference this method under the existing method in the Compendium, Method OIV-MA-AS4-01 Microbiological Analysis of Wines and Musts.
- 9.4. **Conclusion:** The resolution moved to step 7, subject to the opinion of SCMA group.
- 9.5. The OIV Secretariat will inform the SCMA group on the meeting on 5 and 6 April 2024.

10. Validation of a standard protocol to evaluate the fermentation properties of *S. cerevisiae* strains OENO-MICRO 23-739

- 10.1. The Group examined the comments forwarded to the Organisation. The Italian delegation presented the amended version of the draft resolution which incorporated the official comments submitted by the Member States.
- 10.2. Based on the answers received from the Italian delegation, the Australian delegation withdrew their firm and motivated opposition.
- 10.3. **Conclusion:** The resolution moved to step 5, taking into consideration the comments of Member States.
- 10.4. The Italian delegation will provide the amended draft resolution.

11. Studies on products and subproducts of non-Saccharomyces yeasts: Resolution to regulate the use of products and subproducts of non-Saccharomyces yeasts OENO-MICRO 23-740

- 11.1. The Group examined the comments forwarded to the Organisation.
- 11.2. The Australian delegation asked for clarity on the purpose of the draft resolution. It aims to amend five monographs (yeast extracts containing mannoproteins, yeast protein extracts, inactivated yeasts, yeast autolysates and cellular yeast hulls) by addition of non-Saccharomyces yeast in the origin of these products.
- 11.3. Based on the purpose of the draft resolution, the title was amended as "Update of monographs regarding products and subproducts of non-Saccharomyces yeasts".
- 11.4. The Group discussed that an accelerated progress can be followed given the nature of the resolution.
- 11.5. **Conclusion:** The resolution moved to step 5, taking into consideration the comments of Member States. The Group decided to send the resolution to step 7, subject to opinion of SPECIF group.

12. Bioprotection of yeasts CII-MICRO 2024-04 12

- 12.1. The OIV Secretariat informed the group that the collective expertise document on the topic has been published and can be downloaded from the OIV website under technical documents.
- 12.2. The President of the Group thanked the members of the electronic working group, and all the authors who contributed to the work.
- 12.3. **Conclusion:** The electronic working group reached its goal; therefore, it will be closed.



13. Energy saving in winemaking CII-MICRO 2024-04 13

- 13.1. The Italian delegation who coordinates the electronic working group gave an update.
- 13.2. The collective expertise document is prepared by the eWG, with contributions of the members from South Africa, Spain, France, Russia and Turkey. The aim of the document is to bring together different competences that exist currently and how it is possible to make energy savings by avoiding unnecessary cooling during alcoholic fermentation.
- 13.3. A survey has been prepared for the wineries, to learn about their practices on the temperatures of alcoholic fermentation and their willingness to increase these temperatures. This survey was already launched in Italy and 120 responses were received. The aim is to disseminate it internationally to collect data on the topic.
- 13.4. The French delegation indicated that the survey currently includes only white and base wines, however it can also include red winemaking where there is high energy consumption.
- 13.5. **Conclusion:** The collective expertise document will be finalized at the electronic working group and sent to the editorial committee for its publication.
- 13.6. The electronic working group will continue their work for dissemination of the survey.
- 13.7. The SUSTAIN and TECHNO groups will be informed about the progress of the topic.

14. Review of microbial collections linked to the viticultural-oenological world CII-MICRO 2024-04 14

- 14.1. The Italian delegation who coordinates the electronic working group gave an update.
- 14.2. A survey has been prepared and sent out to all the members of MICRO Group. The goal is to understand the current state to check the status quo of microbial collections that exist among the OIV members and evaluate the opportunities to create a network and collaborate.
- 14.3. The results of the survey were recently received, and the results are being evaluated by the Italian delegation. Among the countries who answered the survey, it was confirmed the existence of numerous microbial collections with interest to vitivinicultural world.
- 14.4. **Conclusion:** The electronic working group will continue their work to review the results of the survey and identify the next steps.

15. Update of the monograph COEI-1- CONBAC CII-MICRO 2024-04 15

- 15.1. OENOPPIA and France presented the topic to update the monograph which outlines methods of microbiological analysis of oenological products in the International Oenological CODEX.
- 15.2. The proposal to make an update on the culture media for detection of Salmonella, improve medium for E. coli as some of the reagents used are out of date, and adding a medium to analyse the total mesophilic aerobic flora which is already asked for yeast protein extract and yeast mannoproteins.
- 15.3. **Conclusion:** France and OENOPPIA will present an updated monograph.
- 15.4. The point is kept for the 2025 agenda.



16. Yeast derivatives - update of the monographs CII-MICRO 2024-04 16

- 16.1. OENOPPIA who coordinates the electronic working group gave an update.
- 16.2. The goal is to harmonize the methods of analysis which are used for 6 yeast derivatives adopted by the OIV, which are yeast extract containing mannoproteins, yeast protein extracts, yeast autolysates, yeast cell walls, inactivated yeasts and inactivated yeasts with guaranteed glutathione levels.
- 16.3. **Conclusion:** Electronic working group will meet to start the work.

17. Production of low alcohol wines with biological ageing in the south of Spain CII-MICRO 2024-04 17

- 17.1. No presentation was made.
- 17.2. **Conclusion:** The action was kept for the 2025 agenda.

18. Synthetic biology in wine yeasts CII-MICRO 2024-04 18

- 18.1. No presentation was made.
- 18.2. **Conclusion:** The action was kept for the 2025 agenda.

19. Use of microorganisms as antimicrobial agents on grapes and in pre-post-harvest CII-MICRO 2024-04 19

- 19.1. The Italian delegation made a presentation to summarize the recent studies conducted. The work focuses on biocontrol, which can be considered as a full or partial alternative to chemical treatments used to control pathogens and diseases of grapes, including post-harvest period.
- 19.2. The Italian delegation who coordinates the electronic working group gave an update. The Group will work on a document that outlines the topic.
- 19.3. **Conclusion:** The electronic working group will continue their work.

20. Microbiological analysis of grape juice CII-MICRO 2024-04 20

- 20.1. OIV Secretariat gave an update on the electronic working group.
- 20.2. Last year 4 microbial methods of analysis in grape juice, concentrated grape juice, reconstituted grape juice and grape nectar were adopted. They are referenced from ISO methods.
- 20.3. Following, an electronic working group was formed to check if there is an interest to develop new OIV methods for microbial analysis of grape juice. To achieve this goal, the electronic working group sent out a survey to all the experts of MICRO Group.
- 20.4. The survey results showed that there is no interest and resources to develop new methods for microbiological analysis of grape juice.
- 20.5. **Conclusion:** The electronic working group will be closed.

21. Yeast multipliers in wine industry CII-MICRO 2024-04 21

- 21.1. The President of MICRO Group presented the topic. Some industry members are using various techniques and oenological products to multiple oenological yeasts, which is a

- practice that needs harmonisation among the industry. If not framed within the OIV, it may cause problems due to growth of mold or pathogens.
- 21.2. Oenopbia, Spain, France and Italy are interested in joining the group.
- 21.3. **Conclusion:** An electronic working group will be set up to discuss the topic.

22. Ancestral wines, ancestral winemaking CII-MICRO 2024-04 22

- 22.1. The presentation was made by the guest speaker Professor Manuel Malfeito Ferreira from Instituto Superior de Agronomia, University of Lisbon.
- 22.2. The research aims to examine the ancient winemaking techniques, replicate them and learn from them to help with the current challenges faced in the industry.
- 22.3. The presentation included experiments on fermentation performance on three different methods, by using similar containers to the ancient pottery vessels, by using withered grapes of Muscat of Alexandria and by producing piquettes from grape pomaces. It was indicated that during application of previously mentioned methods, it was seen significant levels of natural sulphite production.
- 22.4. It was also highlighted that some of the iconic wines of antiquity are still continued to be produced and they are in line with the wines that are currently demanded by the consumers, such as aged sweet wines, white wine with maceration, *pét-nat* wines, organic wines without sulphur and etc.
- 22.5. **Conclusion:** The Group thanked the guest speaker.
- 22.6. The Group will be informed about the new advancements in this topic.

23. Usage of virus in oenology CII-MICRO 2024-04 23

- 23.1. The presentation is made by the guest speaker Dr Gustavo Cordero-Bueso from Universidad de Cadiz.
- 23.2. Currently there is ongoing research on usage of viruses in oenology, mainly using bacteriophages, mycoviruses of botrytis and yeast viruses. The goal is to find solutions to some common problems in oenology microbial spoilage, stuck fermentation, sulphur dioxide alternative, veil or flor debilitation.
- 23.3. **Conclusion:** The Group thanked the guest speaker.
- 23.4. The Group will be informed about the new advancements in this topic.