



COMMISSION II - « OENOLOGY »

“TECHNOLOGY” EXPERT GROUP

Proceedings report of 59th session

Date: 02/04/2024 - 03/04/2024

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

International Organisation of Vine and Wine
Intergovernmental Organisation
Created on 29 November 1924 • Restructured on 3 April 2001

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**AGENDA¹**59th Session

Tuesday 2nd April 2024:

9:00 – 13:00 and 14:30– 18:30 (UTC+1) (Paris Time)

Wednesday 3rd April 2024:

9:00 – 13:00 pm (UTC+1) (Paris Time)

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

2 nd April 2024				
No.	Topic	Reference Document	Ref. OIV WP	Time avai- lable ²
1.	Adoption of the agenda	CII-TECHNO 2024-04 OJ		2 min 9:00-9:02
2.	Approval of the proceedings report for the 58 th session	CII-TECHNO 2023-09 CR		2 min 9:02-9:04
3.	Information from the OIV Secretariat	CII-TECHNO 2024-04 03		3 min 9:04-9:07
4.	Information presented to the Group by the Commission and/or other OIV commissions, sub-commissions or expert groups	CII-TECHNO 2024-04 04		3 min 9:07-9:10
Review of preliminary draft resolutions at step 5				

¹ Topics that delegations wish to add in accordance with the 2024 work programme, will be discussed under the item "proposals for future work". In that regard, the filled project presentation document must be returned to the OIV Secretariat with the working documents on the topic in question at least **15 days** before the date of the OIV meetings, therefore before **Monday March 18, 2024**, so that the delegates and experts may read them carefully. Failing this, the subject will not be presented during the meeting.

Warning: Taking into account the logistical and technical imperatives linked to the organisation of videoconferences, delegates and experts who plan to provide a document or make a presentation in accordance with the agenda are requested to do so **no later than Monday March 18, 2024**. Otherwise, it will be technically impossible to share their document or presentation via the videoconference system.

² 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**.

5.	Specific oenological practices for dealcoholised wine and partially dealcoholised wine - <i>Observations at step 5</i>	OENO-TECHNO 14-540 OENO-TECHNO 14-540 add1	19	90 min 9:10- 10:40
6.	Treatment with polydimethylsiloxane - update of the international code of oenological practices - <i>Observations at step 5</i>	OENO-TECHNO 14-544 OENO-TECHNO 14-544 add1	9	15 min 10:40- 10:55
20 min Coffee break 10:55-11:15				
7.	Treatment with fumaric acid in wine for acidification - <i>Observations at step 5</i>	OENO-TECHNO 15-581B OENO-TECHNO 15-581B add1	20.2	30 min 11:15-11:45
8.	Revision of the OIV Standard for international wine and spirituous beverages of vitivinicultural origin competitions - <i>Observations at step 5</i>	OENO-TECHNO 20-671A OENO-TECHNO 20-671A add1	150.1	60 min 11:45- 12:45
90 min Lunch break 12:45-14:15				
9.	Treatment with a functionalised mesoporous silica (FMS) for the protein stabilisation of musts - <i>Observations at step 5</i>	OENO-TECHNO 20-672A OENO-TECHNO 20-672A add1	174.1	40 min 14:15- 14:55
10.	Treatment with a functionalised mesoporous silica (FMS) for the protein stabilisation of wines - <i>Observations at step 5</i>	OENO-TECHNO 20-672B OENO-TECHNO 20-672B add1	174.2	
Review of preliminary draft resolutions at step 3				
11.	Musts - treatment by medium-chain fatty acids (MCFA) - <i>Observations at step 3</i>	OENO-TECHNO 17-615 OENO-TECHNO 17-615 add1	21	30 min 14:55- 15:25
12.	Update to file 3.3.13 "Treatment of wines with yeast mannoproteins" - <i>Observations at step 3</i>	OENO-TECHNO 21-706 OENO-TECHNO 21-706 add1	177	30 min 15:25- 15:55
13.	Oenological practice treatment of musts with grape seed extract - <i>Observations at step 3</i>	OENO-TECHNO 22-717 OENO-TECHNO 22-717 add1	268	40 min 15:55- 16:35
14.	Oenological practice treatment of wines with grape seed extract - <i>Observations at step 3</i>	OENO-TECHNO 22-718 OENO-TECHNO 22-718 add1	269	
20 min Coffee break 16:35-16:55				



15.	Limit of sorbic acid in wine - <i>Observations at step 3</i>	OENO-TECHNO 23-730 OENO-TECHNO 22-730 add1	264	15 min 16:55- 17:10
16.	Must treatment with styrene-divinylbenzene adsorbent microspheres to remove oxidised and oxidisable polyphenolic compounds - <i>Observations at step 3</i>	OENO-TECHNO 23-734 OENO-TECHNO 23-734 add1	249	40 min 17:10- 17:50
17.	Wine treatment with styrene-divinylbenzene adsorbent microspheres to remove oxidised and oxidisable polyphenolic compounds - <i>Observations at step 3</i>	OENO-TECHNO 23-735 OENO-TECHNO 23-735 add1	250	
18.	Fining using yeast nucleic extracts - must - <i>Observations at step 3</i>	OENO-TECHNO 23-736A OENO-TECHNO 23-736A add1	251.1	40 min 17:50-
19.	Fining using yeast nucleic extracts - wine - <i>Observations at step 3</i>	OENO-TECHNO 23-736B OENO-TECHNO 23-736B add1	251.2	18:30
3rd April 2024				
20.	Treatment of musts with fumaric acid for acidification - <i>Observations at step 3</i>	OENO-TECHNO 23-737 OENO-TECHNO 23-737 add1	20.3	20 min 09:00- 09:20
21.	Treatment of musts with fumaric acid for microbiological control- <i>Observations at step 3</i>	OENO-TECHNO 23-738 OENO-TECHNO 23-738 add1	20.4	20 min 09:20- 09:40
Work underway				
22.	OIV Research Grant Evaluation of natural polyphenolic compounds from plant extracts and hydrolates, as an alternative to SO ₂ in winemaking - <i>Communication by Felipe Salinas Bonich</i>	CII-TECHNO 2024-04 22		30 min 09:40- 10:10
23.	Treatment of wine with natural polyphenolic compounds from plant extracts and hydrolates - <i>Communication by Germany</i>	CII-TECHNO 2024-04 23	253	20 min 10:10- 10:30
24.	Broadening the scope of application for proteases on the lees, filtration and maceration - <i>Communication by Oenoppia</i>	CII-TECHNO 2024-04 24	73	20 min 10:30- 10:50
20 min Coffee break 10:50-11:10				



25.	Tartaric stabilization by adding yeast nucleic extracts - <i>Communication by France</i>	CII-TECHNO 2024-04 25	252	20 min 11:10- 11:30
26.	Evaluation of the environmental impact of oenological practices - <i>Communication by France</i>	CII-TECHNO 2024-04 26	290	20 min 11:30- 11:50
27.	Correction of the alcohol content of wines by the treatment of musts by partial evaporation under vacuum - <i>Communication by France</i>	CII-TECHNO 2024-04 27	295	20 min 11:50- 12:10
28.	Update on treatment with D,L-tartaric acid in must (II.2.1.21) and in wine (II.3.4.15) - <i>Communication by France</i>	CII-TECHNO 2024-04 28	296	20 min 12:10- 12:30
29.	Update the sheet 3.4.21 of Malolactic fermentation activators - <i>Communication by Oenoppia</i>	CII-TECHNO 2024-04 29	297	20 min 12:30- 12:50
Proposals for Future Work				
Any other business				



SUMMARY SHEET OF THE WORK OF THE COMMISSION, SUB-COMMISSIONS, EXPERT GROUPS AND AD HOC GROUPS

Expert group: « Technology »

Date: 02/04/2024

Number of experts: 44 (present) + 76 (KUDO) = 120

Number of countries: 14 (present) + 24 (KUDO)

Number of observers: 3 (present) + 5 (KUDO)

Number of people invited: 0

Date: 03/04/2024

Number of experts present: 39 (present) + 69 (KUDO) = 108

Number of countries: 13 (present) + 20 (KUDO)

Number of observers: 2 (present) + 4 (KUDO)

Number of people invited: 1

I/ Resolutions

Document	Step	Subject	Follow up (step of the procedure)
OENO-TECHNO 14-540	5	Specific oenological practices for dealcoholised wine and partially dealcoholised wine	The resolution is divided into two parts as OENO-TECHNO 14-540 A and B. Both resolutions remained at step 5 , taking into consideration the comments of Member States.
OENO-TECHNO 14-544	5	Treatment with polydimethylsiloxane - update of the international code of oenological practices	The item was withdrawn from the agenda until there are updates on the methods of analysis to determine amount of polydimethylsiloxane in wine and new information on the requested points.
OENO-TECHNO 15-581B	5	Treatment with fumaric acid in wine for acidification	French delegation made a presentation about the topic. The resolution moved to step 7 , taking into consideration the comments of Member States.
OENO-TECHNO 20-671A	5	Revision of the OIV Standard for international wine and spirituous beverages of vitivinicultural origin competitions	The resolution is divided into two parts, OENO-TECHNO 20-671A remained at step 5 , while OENO-TECHNO 20-671C moved to step 7 . The Group request an opinion from DROCON on some parts of Article 13 and Article 14. The electronic group will continue to work on the resolution.
OENO-TECHNO 20-672A	5	Treatment with a functionalised mesoporous silica (FMS) for the protein stabilisation of musts	Italian delegation made a presentation about the topic. The resolution remained at step 5 , taking into consideration the comments of Member States.



OENO-TECHNO 20-672B	5	Treatment with a functionalised mesoporous silica (FMS) for the protein stabilisation of wines	Italian delegation made a presentation about the topic. The resolution moved to step 7 , taking into consideration the comments of Member States.
OENO-TECHNO 17-615	3	Musts - treatment by medium-chain fatty acids (MCFA)	The draft resolution was withdrawn from the working programme .
OENO-TECHNO 21-706	3	Update to file 3.3.13 "Treatment of wines with yeast mannoproteins"	No presentation was made. The resolution remained at step 3 , taking into consideration the comments of Member States.
OENO-TECHNO 22-717	3	Oenological practice treatment of musts with grape seed extract	Italian delegation presented the amendments in the draft resolution. The resolution remained at step 3 , taking into consideration the comments of Member States.
OENO-TECHNO 22-718	3	Oenological practice treatment of wines with grape seed extract	Italian delegation presented the amendments in the draft resolution. The resolution remained at step 3 , taking into consideration the comments of Member States.
OENO-TECHNO 23-730	3	Limit of sorbic acid in wine	Brazil requested addition of a footnote to mention the different limit for Mercosur countries. The resolution moved to step 5 , taking into consideration the comments of Member States.
OENO-TECHNO 23-734	3	Must treatment with styrene-divinylbenzene adsorbent microspheres to remove oxidised and oxidisable polyphenolic compounds	Spanish delegation made a presentation about the topic. The resolution remained at step 3 , taking into consideration the comments of Member States.
OENO-TECHNO 23-735	3	Wine treatment with styrene-divinylbenzene adsorbent microspheres to remove oxidised and oxidisable polyphenolic compounds	Spanish delegation made a presentation about the topic. The resolution remained at step 3 , taking into consideration the comments of Member States.
OENO-TECHNO 23-736A	3	Fining using yeast nucleic extracts - must	No presentation was made. The resolution remained at step 3 , taking into consideration the comments of Member States.
OENO-TECHNO 23-736B	3	Fining using yeast nucleic extracts - wine	No presentation was made. The resolution remained at step 3 , taking into consideration the comments of Member States.
OENO-TECHNO 23-737	3	Treatment of musts with fumaric acid for acidification	French delegation made a presentation about the topic. The resolution remained at step 3 , taking into consideration the comments of Member States.
OENO-TECHNO 23-738	3	Treatment of musts with fumaric acid for microbiological control	French delegation made a presentation about the topic. The resolution moved to step 5 , taking into consideration the comments of Member States.

**II/ Questions from the Strategic Plan**

Ref SP	Theme and treatment	Follow up
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III/ Request for additional information or opinion (statistics, economy, legal, technical, health)

Information 1	Source
Specific oenological practices for dealcoholised wine and partially dealcoholised wine	TECHNO
	Recipient
TECHNO asks the possibility to add of “blending” into the definition of partially de-alcoholised wine, as this will be an allowed practice for this type of products	DROCON
	Source
Information 2	Source
Specific oenological practices for dealcoholised wine and partially dealcoholised wine	TECHNO
	Recipient
TECHNO asks to decrease the allowed alcohol levels of the products “wine-based beverage” and “beverage based on vitivincultural products” to accommodate the products with low and no alcohol.	DROCON
	Source
Information 3	Source
Revision of the OIV Standard for international wine and spirituous beverages of vitivincultural origin competitions	TECHNO
	Recipient
TECHNO asks opinion of DROCON on following 2 points: Article 13 – Calculation options Article 14 – The percentage of all the medals awarded to the total of samples presented at the competition – currently at 30%.	DROCON

IV/ Presentations other than point II

Document	Country/WG	Subject	Follow up
CII-TECHNO 2024-04 22	OIV Research Grant	Evaluation of natural polyphenolic compounds from plant extracts and hydrolates, as an alternative to SO ₂ in winemaking	The research grant work has been completed.



CII-TECHNO 2024-04 23	Germany	Treatment of wine with natural polyphenolic compounds from plant extracts and hydrolates	A presentation is made to show the recent results. The action was kept for 2025 agenda.
CII-TECHNO 2024-04 24	Oenoppia	Broadening the scope of application for proteases on the lees, filtration and maceration	The action was kept for 2025 agenda, Oenoppia will provide updated documents.
CII-TECHNO 2024-04 25	France	Tartaric stabilization by adding yeast nucleic extracts	No presentation was made. The action was kept for 2025 agenda.
CII-TECHNO 2024-04 26	France	Evaluation of the environmental impact of oenological practices	French delegation who coordinates the electronic working group presented the topic. The action was kept for 2025 agenda. The group refers the action to CII discussion. The electronic working group will work on amendment of project presentation document.
CII-TECHNO 2024-04 27	France	Correction of the alcohol content of wines by the treatment of musts by partial evaporation under vacuum	French delegation made a presentation about the topic. The draft resolution moved to step 3 .
CII-TECHNO 2024-04 28	France	Update on treatment with D,L-tartaric acid in must (II.2.1.21) and in wine (II.3.4.15)	No presentation was made. The action was kept for 2025 agenda.
CII-TECHNO 2024-04 29	Oenoppia	Update the sheet 3.4.21 of Malolactic fermentation activators	No presentation was made. The action was kept for 2025 agenda.

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

Document	Country	Subject	Follow up
CII-TECHNO 2024-04 30	France	Stripping by reinjection of carbon dioxide into fermenting must	French delegation made a presentation about the topic. The action was kept for 2025 agenda.

VI/ Other items

Author	Country	Subject	Follow up
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Date

Name and signature of the author of the proposal

03/04/2024

Valerie Lempereur
President of the “Technology” Expert Group
[signature]

Adriaan Oelofse
Vice President of the “Technology” Expert Group
[signature]

Valeriu Cotea
Scientific Secretary of Commission II
[signature]

Neslihan Ivit
Head of Unit « Oenology Methods of Analysis »
[signature]



INTRODUCTION

The 59th session of the “Technology” Expert Group was held on 02/04/2024 and 03/04/2024 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 Valérie Lempereur (France), the President of the Technology Group, who welcomed the experts.

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

- 1.1. The agenda was amended to reflect the correct number of the session, which is the 59th.
- 1.2. France proposed the addition of a new topic on “Stripping by reinjection of carbon dioxide into fermenting must”.
- 1.3. The Group adopted the agenda as the meeting’s agenda.

2. Approval of the proceedings report for the 58th session (CII-TECHNO 2023-09 CR)

- 2.1. The proceedings report for the 58th session was unanimously approved.

3. Information from the OIV Secretariat (CII-TECHNO 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 14 June 2024.

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

- 4.1. During the last meeting, the TECHNO group asked clarification from DROCON group on the definitions of “beverage obtained by dealcoholisation of wine” and “beverage obtained by partial dealcoholisation of wine”, as the current versions allow these terms to be utilised along with “de-alcoholised wine” and “partially de-alcoholised wine”. Two resolutions entered into step procedure at step 3 to amend these definitions under ECO-DROCON 23-744 and ECO-DROCON 745.

5. Specific oenological practices for beverages obtained by dealcoholisation of wine (OENO-TECHNO 14-540)

- 5.1. The electronic working group which works on the draft resolution has met on March 15 to review the official comments on the draft resolution. In the light of this meeting, the draft resolution was amended.
- 5.2. The OIV Secretariat presented the amended draft resolution and the Group started to examine each section one by one to decide the parts which can reach a consensus. The goal was to move the parts that reach a consensus to step 7 and leave the parts that need more work, research and information at step 5.

- 5.3. **Sweetening:** The Group decided to allow the sweetening agents of grape must, concentrated grape must, rectified concentrated grape must, and solid rectified concentrated grape must.
- 5.4. In the case of sucrose, the Group needs more information on the effect of this addition. The South African delegation stated that the use of sucrose (for example from beet sugar or sugar cane) is not allowed for sweetening in their legislation.
- 5.5. **Blending:** The Group agreed to allow the blending treatment for producing partially de-alcoholised wine. For the prescription, blending a de-alcoholised fraction of wine with the non-dealcoholised fraction of the same initial wine, or blending a partially de-alcoholised fraction of wine with the non-dealcoholised fraction of the same initial wine reached a consensus.
- 5.6. The practices of blending a de-alcoholised wine with another non-dealcoholised wine or blending a partially de-alcoholised wine with another non-dealcoholised wine will be further discussed in the electronic working group.
- 5.7. The Group decided to ask the opinion of DROCON on the possibility of adding “blending” into the definition of partially de-alcoholised wines, as this will be an allowed practice for these types of products.
- 5.8. **Addition of Glycerol:** The delegations could not reach a consensus on this point.
- 5.9. The South African delegation declared a firm and motivated opposition as they requested keeping addition of glycerol on the part of resolution that will move to step 7. They indicated that some producers are using glycerol in these products which are already in the market, therefore adopting the resolution without the glycerol addition may cause commercial problems.
- 5.10. The President of the Group pointed out that the TECHNO group deals with the technical aspects and the effect of oenological practices on the wine and not with the economic aspects. No results were shown in the Group to show the effect of glycerol on de-alcoholised and partially de-alcoholised wines.
- 5.11. The Portuguese delegation confirmed that they made in-house trials with glycerol and have seen its positive effects on the mouthfeel of these types of products. They also mentioned it is a natural compound produced during alcoholic fermentation by the yeasts.
- 5.12. The German delegation will present results on the impact of glycerol next year.
- 5.13. **Reincorporation of the aromatic compounds:** The Group agreed to allow reincorporation of the initial aromatic compounds present in wine into partial de-alcoholised wine or de-alcoholised wine.
- 5.14. The practice of back-addition of any aroma from wine, as proposed by the Australian and the New Zealander delegations, will be further discussed in the electronic working group.
- 5.15. **Reincorporation of water:** The Group agreed on the reincorporation of the initial endogenous water present in wine into partially de-alcoholised wine or de-alcoholised wine.
- 5.16. The practice of addition of water from any food-grade source, as proposed by the Australian and the New Zealander delegations, will be further discussed in the electronic working group.
- 5.17. **Carbon dioxide:** The Group agreed to allow the addition of carbon dioxide to produce carbonated partially de-alcoholised wine or carbonated de-alcoholised

wine or adjust sensory properties of still partially de-alcoholised wine or still de-alcoholised wine.

- 5.18. **Conclusion:** Since it was not possible to reach a consensus on the addition of glycerol, the draft resolution remained at step 5.
- 5.19. The electronic working group will continue their work on the draft resolution. The resolution will be divided into two parts as OENO-TECHNO 14-540 A and B.

6. Treatment with polydimethylsiloxane - update of the international code of oenological practices (OENO-TECHNO 14-544)

- 6.1. The OIV Secretariat informed the group about the meeting with ISO to get information about using PDMS as cork lubricants. The members of ISO/TC 87 who work on cork confirmed that this product is applied as a lubricant.
- 6.2. The OIV Secretariat informed the group about the development of a method to detect PDMS in wine which will be discussed during the next SCMA meeting.
- 6.3. The French delegation indicates that they also need more information on distribution, concentration, solubility, and behaviour of PDMS with regard to pH and residual sugar content of wines.
- 6.4. As there has been no advancement and no new information presented on this draft resolution, the President of the Group proposed to withdraw this draft resolution from the agenda.
- 6.5. **Conclusion:** The item was withdrawn from the agenda until there are updates on the methods of analysis to determine the amount of polydimethylsiloxane in wine and new information on the requested points.

7. Treatment with fumaric acid in wine for acidification (OENO-TECHNO 15-581B)

- 7.1. The French delegation made a presentation to show the impact of addition of fumaric on the chemical and sensory characteristics of varietal wines.
- 7.2. The presentation included the results of the experiments made by adding fumaric acid at bottling on red and white wine, and a comparison with the impact of tartaric acid treatment on various parameters. Under studied conditions, the fumaric acid showed effective pH diminution. Positive sensory results on wine acidity after 2 years of bottling, and better acidity and freshness perception in sensory analysis compared to tartaric acid were also shown.
- 7.3. The Group examined the comments forwarded to the Organisation.
- 7.4. Each delegation presented their own comments.
- 7.5. The Austrian delegation asked for clarity on defining “natural deficiencies in wine” which is mentioned in the draft resolution for the acidity.
- 7.6. The French delegation and the European Union requested some editorial changes.
- 7.7. The Portuguese delegation asked about the stability of fumaric acid after its addition in wine. The Spanish delegation, according to the results of studies made, confirmed its stability, both in pilot scale and in higher volumes.
- 7.8. The Italian delegation made a comment on the dose of fumaric acid, indicating that it has lower solubility than the other authorized organic acids, and that the maximum permissible dose should be reviewed for treatment for acidification. The

President reminded the group that the dose was already discussed and decided in 2023.

- 7.9. **Conclusion:** The draft resolution moved to step 7, taking into consideration the comments of Member States and those made during the meeting.

8. Revision of the OIV Standard for international wine and spirituous beverages of vitivincultural origin competitions (OENO-TECHNO 20-671A)

- 8.1. The OIV Secretariat presented the draft resolution.
- 8.2. The Group examined the comments forwarded to the Organisation.
- 8.3. Each delegation presented their own comments.
- 8.4. The Hungarian delegation proposed the addition of a new option on the calculation of the results of the competition in Article 13. They also proposed increasing the percentage of the sum of all the medals awarded to the samples to the total of samples presented at the competition, from 30 % to 40 %.
- 8.5. Given the regulatory nature of these points, and in line with the comments of the French delegation, the Group decided to send the Article 13 and 14 to DROCON Group's review.
- 8.6. The OIV Secretariat reminded the Group that the number of points and classification of award level categories has been already changed and currently applied in many competitions. The representative of VINO FED confirmed this point. Therefore, the Group decided to move the part of the resolution regarding level categories at step 7, dividing the draft resolution as OENO-TECHNO 20-671C.
- 8.7. The French delegation indicated that it would be useful to make a distinction between obligations and recommendations to make the text clearer and easier to read and apply. It was mentioned that some parts of the draft resolution have not been discussed within the electronic working group, such as tasting sheets.
- 8.8. **Conclusion:** The resolution is divided into two parts, OENO-TECHNO 20-671A remained at step 5, while OENO-TECHNO 20-671C moved to step 7.
- 8.9. The Group requested the opinion of DROCON on some parts of Article 13 and Article 14.
- 8.10. The electronic working group will continue to work on the draft resolution OENO-TECHNO 20-671A.

9. Treatment with a functionalised mesoporous silica (FMS) for the protein stabilisation of musts (OENO-TECHNO 20-672A)

- 9.1. The topic was discussed under Item 10 of the agenda.
- 9.2. The treatment with FMS can be applied before or during fermentation. On the other hand, the application of this treatment is more difficult on must in comparison with wine because of the presence of lees. Similarly, the regeneration procedure is easier in application on wine.
- 9.3. The Italian delegation informed the group that it is a product which was synthesized specifically for oenological purposes, and it has a patent.
- 9.4. **Conclusion:** The draft resolution is kept in step 5, taking into consideration the comments of Member States and those made during the meeting.

- 9.5. The Italian delegation will provide additional information and revised draft resolution.

10. Treatment with a functionalised mesoporous silica (FMS) for the protein stabilisation of wines (OENO-TECHNO 20-672B)

- 10.1. The Italian delegation made a presentation to answer the comments made on the draft resolution. The presentation included the results of the study made on industrial scale and the product regeneration procedure. The regeneration procedure was applied at least five times without reduction in effectiveness of protein removal.
- 10.2. The Italian delegation clarified that the name of the product is functionalised mesoporous silica (FMS), as opposed to functionalised silica polymer (FSP) as it was amended in the previous version of the document.
- 10.3. The Group examined the comments forwarded to the Organisation.
- 10.4. Each delegation presented their own comments.
- 10.5. The Portuguese delegation asked for clarification on the cost of the practice. It was explained that the cost of the process is comparable to the treatment with bentonite, and taking into account the possibility of regeneration, it becomes cost effective. The cost of regeneration can be estimated to be ten percent of the cost of the material.
- 10.6. The German delegation asked the modalities of the process, whether to apply filtration or not, and how the doses were determined for the treatment. It was explained that the filtration or batch addition are two ways to apply this treatment, modalities of action and protein absorption are the same. The filtration technique is easier to incorporate in the winery setting. The Group discussed that this can be called percolation, instead of filtration. The doses of the treatment were selected by applying a fining trial similar to the case of bentonite.
- 10.7. The French delegation asked for information on the volatile compounds and filtration after the treatment. The effect on the volatile compounds was presented in the previous meeting. The filtration through a filtering medium with a pore diameter no larger than 0.45 µm was added to this resolution considering the opinion of SECUAL.
- 10.8. **Conclusion:** The draft resolution was sent to step 7, taking into consideration the comments of Member States and those made during the meeting.
- 10.9. The Italian delegation will provide the revised draft resolution for step 7.

11. Musts - treatment with medium chain fatty acids (OENO-TECHNO 17-615)

- 11.1. The Czech Republic delegation presented the point.
- 11.2. The research group is not able to continue the project due to various reasons and they proposed removal of the draft resolution from the agenda.
- 11.3. **Conclusion:** The Group reached a consensus to withdraw the draft resolution from the working programme.

12. Update to file 3.3.13 “Treatment of wines with yeast mannoproteins” (OENO-TECHNO 21-706)

- 12.1. The OIV Secretariat presented the point.
- 12.2. An electronic working group coordinated by Italy is conducting analyses to evaluate the effect of mannoproteins on red wine colour stability. The group needs more time to analyse the results.
- 12.3. **Conclusion:** The draft resolution is kept in step 3, taking into consideration the comments of Member States and those made during the meeting.
- 12.4. The Group awaits the results of the analyses made by the electronic working group.

13. Oenological practice treatment of musts with grape seed extract (OENO-TECHNO 22-717)

- 13.1. The Italian delegation made a presentation to answer the comments made on the draft resolution. The presentation included the basic protocol for extraction, results of laboratory trials on white and red wines.
- 13.2. The laboratory trials confirmed the reduction of turbidity only in white wines, while in red wines the effect is not evident. On the other hand, the sensorial effect on perception of acidity and astringency, which were confirmed by the analytical data, are evident mainly on red wines.
- 13.3. The Group examined the comments forwarded to the Organisation.
- 13.4. Each delegation presented their own comments.
- 13.5. The German delegation asked for clarification on the objective of application of GSE. It was shown that the main objective is to reduce turbidity. In the recent research conducted in France, the product has shown some limited positive impact on protein stabilisation.
- 13.6. The results of the treatment with GSE on large volumes are missing.
- 13.7. Questions were raised about the protein content of the product which currently lies between the range of 40% to 60%, as well as about interaction of GSE between different components of the must and wine.
- 13.8. **Conclusion:** The draft resolution is kept in step 3, taking into consideration the comments of Member States and those made during the meeting.
- 13.9. The Italian delegation will provide the revised draft resolution.

14. Oenological practice treatment of wines with grape seed extract (OENO-TECHNO 22-718)

- 14.1. The topic is discussed under Item 13 of the agenda.
- 14.2. **Conclusion:** The draft resolution is kept in step 3, taking into consideration the comments of Member States and those made during the meeting.
- 14.3. The Italian delegation will provide the revised draft resolution.

15. Limit of sorbic acid in wine (OENO-TECHNO 23-730)

- 15.1. The Czech Republic delegation reminded the Group the reason for the request of adding the limit of sorbic acid for regulatory purposes.
- 15.2. The Group examined the comments forwarded to the Organisation.

- 15.3. Each delegation presented their own comments.
- 15.4. Brazil requested the harmony of current sorbic acid limits, as in Mercosur Regulation 45/1996, amended by the Regulation 22/2020, is 250 mg/L, as in the case of Brazil. Therefore, they proposed to add a footnote to mention this limit: “Nevertheless, taking into account vine species and special qualitative factors or traditions specific to certain countries, the maximum sorbic acid content may be able to be 250 mg/L by legislation.”
- 15.5. The French delegation pointed out that the table of maximum limits in the OIV Code could be updated to clarify that the maximum level of use for "potassium sorbate" is 0.2 g/L “expressed as sorbic acid.” as currently it is only indicated as 0.2 g/L.
- 15.6. **Conclusion:** The draft resolution was passed to step 5, taking into consideration the comments of Member States and those made during the meeting.

16. Must treatment with styrene-divinylbenzene adsorbent microspheres to remove oxidised and oxidisable polyphenolic compounds (OENO-TECHNO 23-734)

- 16.1. The Spanish delegation made a presentation to outline the applications for adsorbent resins and the results of new analyses done on the topic. Comparative economic cost results were shared.
- 16.2. The Group examined the comments forwarded to the Organisation.
- 16.3. Each delegation presented their own comments.
- 16.4. The delegations asked the effect of this treatment on sensory properties, reduction of terpenes, and requested more information on flow rate, volume of used resin compared to volume treated, efficiency and cost of the treatment, and the regeneration.
- 16.5. The Spanish delegation answered the questions according to results they obtained through laboratory, semi-industrial and industrial trials. The treatment is more suitable for white wines for elimination of oxidised compounds. They also made trials on rosé wines, but not on red wines as it may have an effect on the colour. In light of this information, it was suggested that the objective of the treatment clearly indicates its usage on white and rosé wines.
- 16.6. The Italian delegation indicated that the draft resolution includes the elimination of polyphenolic compounds, but it was mentioned to have effects on other compounds not mentioned in the draft resolution. It was asked if any comparisons were made with other methods, such as hyperoxygenation. There was no comparison made with this method.
- 16.7. The German delegation requested amending the title of the draft resolution to reflect the objective of this treatment as adjusting the colour of white and rosé wines. It was also requested addition of the flow rate, bead size and regeneration information to the draft resolution.
- 16.8. The French delegation kept their firm and motivated opposition due to lack of information on flow rate and effect on the sensory properties.
- 16.9. **Conclusion:** The draft resolution is kept in step 3, taking into consideration the comments of Member States and those made during the meeting.
- 16.10. The Spanish delegation will provide complementary information and a revised version of the draft resolution.

17. Wine treatment with styrene-divinylbenzene adsorbent microspheres to remove oxidised and oxidisable polyphenolic compounds (OENO-TECHNO 23-735)

- 17.1. The topic was discussed under Item 16 of the agenda.
- 17.2. **Conclusion:** The draft resolution was kept in step 3, taking into consideration the comments of Member States and those made during the meeting.
- 17.3. The Spanish delegation will provide complementary information and a revised version of the draft resolution.

18. Fining using yeast nucleic extracts – must (OENO-TECHNO 23-736A)

- 18.1. The French delegation informed the group that there is no new information regarding this draft resolution.
- 18.2. **Conclusion:** The draft resolution was kept in step 3.
- 18.3. The French delegation will provide updates in 2025.

19. Fining using yeast nucleic extracts – wine (OENO-TECHNO 23-736B)

- 19.1. The French delegation informed the group that there is no new information regarding this draft resolution.
- 19.2. **Conclusion:** The draft resolution was kept in step 3.
- 19.3. The French delegation will provide updates in 2025.

20. Treatment of musts with fumaric acid for acidification (OENO-TECHNO 23-737)

- 20.1. The French delegation made a presentation to report the results of the research conducted to understand the effect of use of fumaric acid on must or during alcoholic fermentation.
- 20.2. The results showed that acidification with fumaric acid on must or during alcoholic fermentation is significantly less effective than using tartaric acid on red and malic acid on white, for the same equivalent acid addition.
- 20.3. The Group examined the comments forwarded to the Organisation.
- 20.4. Each delegation presented their own comments.
- 20.5. The French delegation indicated that depending on the objective of the treatment, whether for acidification or microbiological control, different doses are needed to be applied.
- 20.6. **Conclusion:** The draft resolution was kept in step 3, taking into consideration the comments of Member States and those made during the meeting.
- 20.7. The French delegation will provide complementary information and a revised version of the draft resolution.

21. Treatment of musts with fumaric acid for microbiological control (OENO-TECHNO 23-738)

- 21.1. The French delegation made a presentation to share the result of recent studies on the topic. The research was conducted in 2022 during red wine fermentation with carbonic maceration and in 2023 during white wine fermentation to delay early

malolactic fermentation. The research in 2023 showed that the addition of fumaric acid in the absence of total SO₂ enabled prevention of malolactic fermentation.

- 21.2. The Group examined the comments forwarded to the Organisation.
- 21.3. Each delegation presented their own comments.
- 21.4. The Austrian delegation indicated the acidifying effect of fumaric acid. It was clarified that the effects of fumaric acid were split in two draft resolutions according to the decision taken by the Group last year to be in line with the format of International Code of Oenological Practices.
- 21.5. The German delegation suggested a precision of the dose in the draft resolution and amending the language used in prescriptions “control malolactic fermentation” to better reflect the actual effect being delay or prevent malolactic fermentation and provide a precision on the meaning of “the presence of high quantities of inoculum”.
- 21.6. The Italian delegation indicated that fumaric acid has a direct effect on the competition between yeast and bacteria which needs to be included in the objectives, instead of the effect on the pH. There is also a slight increase in the total acidity, however it is not the main objective of this draft resolution.
- 21.7. **Conclusion:** The resolution moved to step 5, taking into consideration the comments of Member States.
- 21.8. The French delegation will provide complementary information and a revised version of the draft resolution.

22. OIV Research Grant: Evaluation of natural polyphenolic compounds from plant extracts and hydrolates, as an alternative to SO₂ in winemaking - Communication by Felipe Salinas Bonich

- 22.1. The project results that were carried out in the framework of the OIV research grant were presented.
- 22.2. The objectives of the research were evaluating the antioxidasic and antioxidant effect of the product in liquid form, as well as its potential as an alternative tool for the control of malolactic fermentation and *Brettanomyces*.
- 22.3. The results of the study showed that the treatment inhibited laccase activity in Riesling musts affected by *Botrytis* and can mitigate the oxidation caused by laccase. However, the evolution of colour should be considered in the long term. Moreover, the treatment under studied conditions effectively inhibited the growth of the tested microorganism populations, and it could be a substitute or complement to the use of SO₂ in winemaking, for the control of the microorganisms evaluated.
- 22.4. The questions were received about the effect of the treatment on browning depending on the form of the product (liquid or powder), if there were studied made on red wine to evaluate the inhibiting the microbial growth, the effect on the oxygen consumption, efficiency of malolactic fermentation inhibition, and the doses of product used during the study. The questions were answered by the research grant holder.
- 22.5. **Conclusion:** The research grant work has been completed.

23. Treatment of wine with natural polyphenolic compounds from plant extracts and hydrolates (CII-TECHNO 2024-04 23)

- 23.1. The German delegation made a presentation on this subject. Additional information about the composition of the product, extraction methodology, sensory analysis and comparison of acetaldehyde levels were shared. The product has been adjusted to a powder form instead of liquid, to fulfil the conditions and criteria of oenological tannins.
- 23.2. The Spanish delegation suggested that the data on the co-pigmentation is needed to complement the study. They also have asked about the solubility of the product. It was indicated that the solubility is about 95 %.
- 23.3. The French delegation asked the difference of effectiveness between liquid and powder forms. The German delegation indicates that the form of the product was changed to reflect the requests made last year, and the studies were repeated during harvest season.
- 23.4. The South African delegation suggested evaluating the microbial effect of the product on high pH wines and de-alcoholised wines. The German delegation indicated that the product is tested for the transport of de-alcoholised wine from the de-alcoholisation facility to the bottling line and showed promising results.
- 23.5. **Conclusion:** The action was kept for the 2025 agenda.

24. Broadening the scope of application for proteases on lees, filtration and maceration (CII-TECHNO 2024-04 24)

- 24.1. OENOPPIA presented the topic. Proteases (Aspergillopepsin I) were authorized in 2021 to remove haze-forming proteins in must and/or wine for white and rose wines. Two other applications can be considered such as ageing on lees (yeast autolysis) and improvement of filtration. The results of studies showing the impact of proteases on these objectives have been shared. Another application is maceration of red wines; however, no results were shared this year, and it was requested to be kept in the agenda for the next year.
- 24.2. The delegations raised questions about the effect of this treatment on mannoproteins, if foamability tests had been conducted in the case of sparkling wine production, and the effect of flash pasteurization.
- 24.3. **Conclusion:** Taking into account the comments received by Member States and those made during the meeting, the topic is kept in the agenda for 2025.
- 24.4. Project presentation documents for two different applications with corresponding modifications will be prepared.

25. Tartaric stabilization by adding yeast nucleic extracts (CII-TECHNO 2024-04 25)

- 25.1. The French delegation informed the group that there is no new information regarding this point.
- 25.2. **Conclusion:** The point is kept in the agenda for 2025.

26. Evaluation of the environmental impact of oenological practices (CII-TECHNO 2024-04 26)

- 26.1. The French delegation who coordinates the electronic working group presented the topic.

- 26.2. The electronic working group has worked on complementary information about the
- 26.3. environmental impact of oenological practices which would be necessary to be presented when entering OIV's resolution adoption procedure. The necessity of amending project presentation document OIV-CST 356-2011 was identified.
- 26.4. The German delegation made a question about how to evaluate the existing methods since this project currently focused only on the new treatments, and if it is needed to start a new initiative to collect information and create a database to compare the sustainability of the methods. It was explained that currently there are not a lot of references concerning the environmental impact of the existing oenological practices. That is why the electronic working group decided to focus on the new methods first, and in the light of the progress, it can be continued with the existing methods.
- 26.5. It was suggested to extend the goal of the electronic working group to draw up recommendations on the tests to be carried out once the oenological practice has reached step 3 (such as recommendations on volumes, on the collection of data on consumables and waste generated).
- 26.6. The President of the MICRO group indicated that there is ongoing work for energy savings during alcoholic fermentation, and the experts from the MICRO group can contribute to this work.
- 26.7. **Conclusion:** The electronic working group will work on amendment of the project presentation document and on the recommendations mentioned under point 26.5.
- 26.8. The Group will provide updates to the SUSTAIN group as the project progresses.
- 26.9. The action was kept for the 2025 agenda.

27. Correction of the alcohol content of wines by the treatment of musts in fermentation by partial evaporation under vacuum (CII-TECHNO 2024-04 27)

- 27.1. The French delegation made a presentation. The presentation included a new application of the partial evaporation under vacuum for de-alcoholisation of must during alcoholic fermentation. The studies showed a decrease of 2 to 3 % vol. of ethanol from the de-alcoholised fermenting must, accompanied by a slight increase of polyphenol in red wine due to the concentration by removal of ethanol. The researchers aim for an optimization of the process in 2024 to allow more decrease in the alcohol content.
- 27.2. **Conclusion:** Considering the comments received by Member States and those made during the meeting, the draft resolution moved to step 3.

28. Update on treatment with D,L-tartaric acid in must (II.2.1.21) and in wine (II.3.4.15) (CII-TECHNO 2024-04 28)

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

29. Malolactic fermentation activators (CII-TECHNO 2024-04 29)

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



30. Stripping by reinjection of carbon dioxide into fermenting must (CII-SCMA 2024-04 30)

- 30.1. The French delegation made a presentation.
- 30.2. The treatment is a patented method that includes capturing the CO₂ produced during alcoholic fermentation and reutilising it for reducing the alcoholic degree (between 0.5° to 2°) of fermenting must.
- 30.3. **Conclusion:** The action was kept for the 2025 agenda.