SUPPLEMENTARY DATA
Laposa, Z., Balla, J., Héberger, K., & Keszei, E. (2026). Effect of light on sparkling wines: sensory and chromatographic evaluation of different elaboration methods and maturation states. *OENO One, 60*(3).
https://doi.org/10.20870/oeno-one.2026.60.3.9970

SUPPLEMENTARY DATA

Supplementary material S1. List of the properties of the samples with the coding system used.

Code	Brand	Method	Bottle	Vintage	Varietal composition	Lees aging (months)	Alcohol v/v %	Sugar g/L	Total acid g/L	pH	Illumination (hours)
CF23	Gála Sec	Charmat	Clear (flint)	2023	Grüner Veltliner 60% Királyleánka 25% Olaszrizling 15%	10?	11.8	20	6.0	3.15	0, 2, 5, 10, 20
CG23	Gála Sec	Charmat	Green	2023	Grüner Veltliner 60% Királyleánka 25% Olaszrizling 15%	10?	11.8	20	6.0	3.15	0, 3, 10, 20, 30
FB19	François Brut Nature	Traditional	Thick dark green	2019	Chardonnay 65–85% Pinot Noir 15–35%	45	11.9	0	7.6	3.2	0, 48, 240, 480
FB20	François Brut Nature	Traditional	Thick dark green	2020	Chardonnay 65–85% Pinot Noir 15–35%	33	12.4	0	7.2	3.3	0, 48, 240, 480
FB21	François Brut Nature	Traditional	Thick dark green	2021	Chardonnay 65–85% Pinot Noir 15–35%	21	12.5	0	6.5	3.3	0, 48, 240, 480

Supplementary material S5. Relevant weather data for wine production in the vintage years 2019, 2020 and 2021.

Data collected from the official reports of the National Meteorological Service (OMSZ), the Central Statistical Office (KSH), and the reports of the National Council of Wine Communities (HNT)

In the year 2019, the annual average temperature was 12.9°C, which was 1.1°C higher than the 1981–2010 average, and the annual precipitation was 646 mm, representing 107% of the average. The August precipitation was 51.7 mm, 83% of the average, while in September, it rose to 84.6 mm, 136% of the average. The higher September rainfall may have increased the risk of rot, which resulted in faster oxidation and aroma loss in 2019. The effect of oxidation was particularly noticeable in the 2019 vintage, leading to quicker oxidation and the loss of aromas.

In the year 2020, the annual average temperature was 12.7°C, 0.9°C higher than the average, and the annual precipitation was 615 mm, representing 102% of the 1981–2010 average. In August, the average temperature was 22.1°C, and the precipitation was 62.3 mm, matching the average. In September, the average temperature dropped to 17.1°C, and the precipitation was 35.2 mm, the latter representing 56% of the average. The optimal precipitation distribution and temperature supported the optimal ripening of grapes, with suitable sugar and acid content, while reducing the risk of rot. As a result, the 2020 vintage was the most favourable for winemaking, and its base wine had a lower oxidation level. This allowed the wine to preserve its aromas for longer, even under the longest light exposure times, where oxidation was only moderately present. The 2020 vintage generally experienced less oxidation, while the 2019 and 2021 vintages had a higher risk of rot, which caused oxidation to occur faster.

In the year 2021, the annual average temperature was 11.9°C, just 0.1°C higher than the 1981–2010 average, and the annual precipitation was 661 mm, representing 109% of the average. In August, the precipitation was 78.9 mm, 127% of the average, and in September, it rose to 92.4 mm, 148% of the average. The higher rainfall in both months increased the risk of rot, resulting in faster oxidation in 2021. The faster rate of oxidation and the decrease in aroma intensity were particularly characteristic of the 2021 vintage and had a detrimental effect on wine.