

Supplementary material of the manuscript published in *Vitis* **59**, 163–168 (2020):

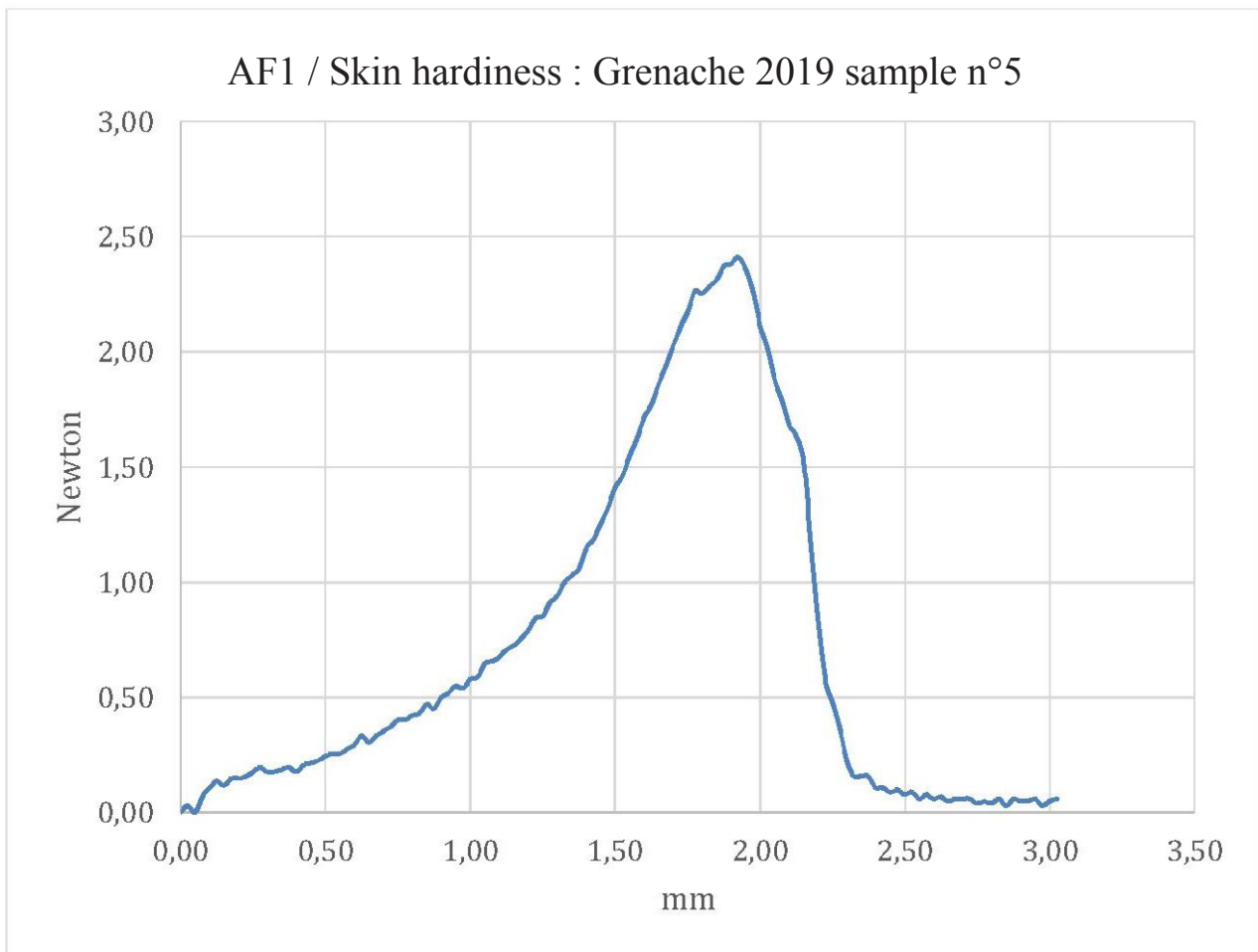
**Mechanical tests and definition of new indexes of grape berry firmness.
Evolution of berry skin hardness during alcoholic fermentation**

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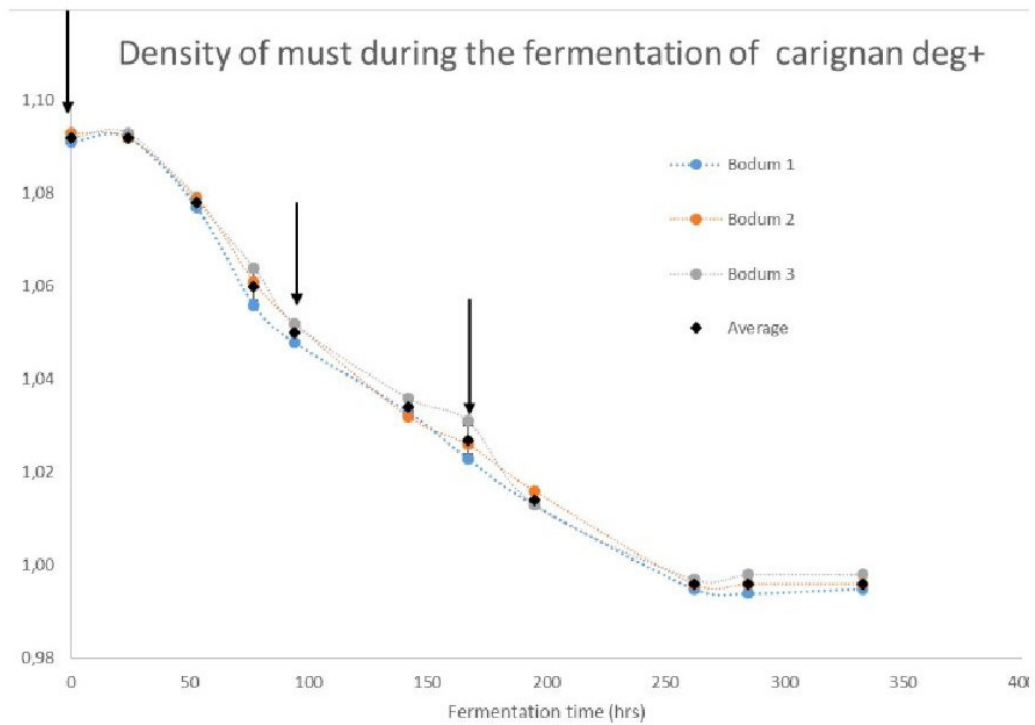
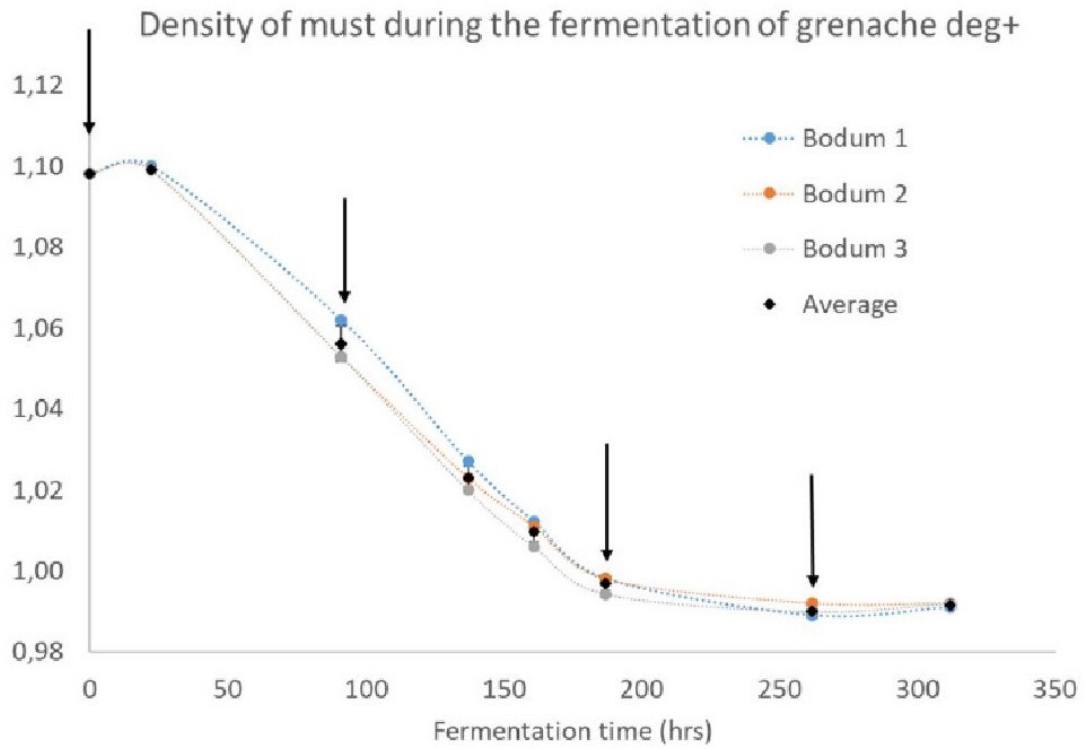
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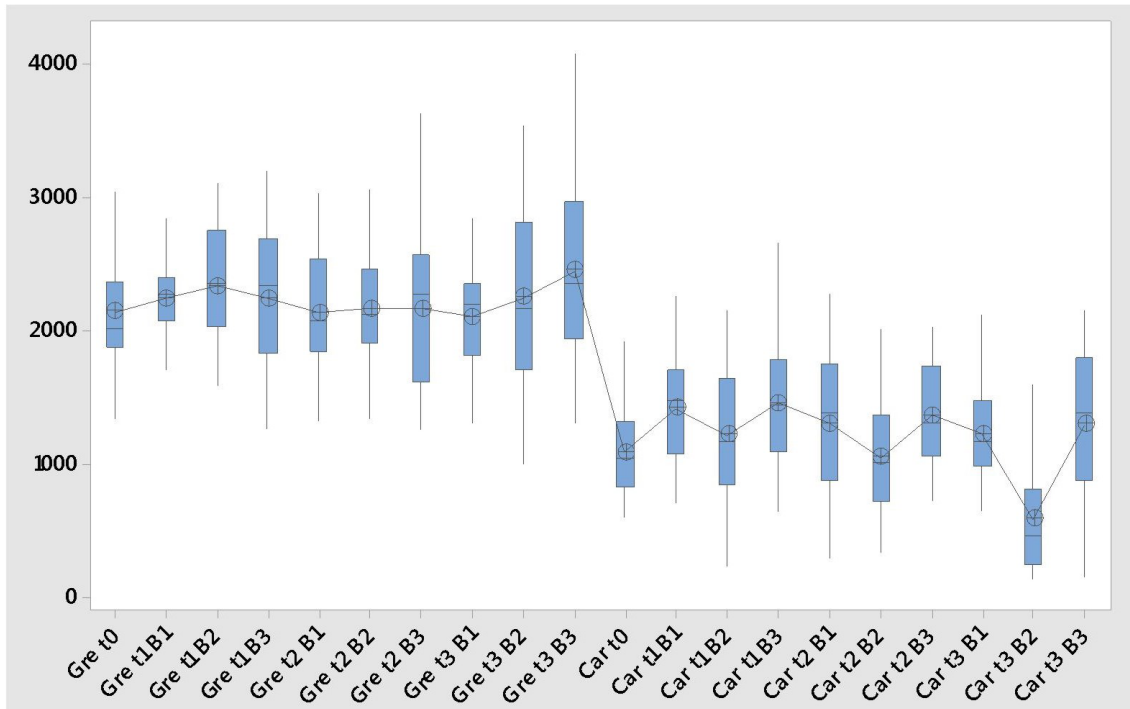
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Supplementary data S1: Stress curve recorded by Penelaup.



Supplementary data S2: Fermentation performed in 2019 (Bod 1, Bod 2, Bod 3). The arrows indicate the time of rheological measurements.



Supplementary data S3: Boxplots of grapeskin hardness ('Grenache' and 'Carignan') during fermentation, measured on fermentation triplicates (B1, B2, B3), at t0, t1, t2, t3. Around 20 measurements were done on each fermentation triplicate. The skin hardness did not evolve significantly during fermentation, except for 'Carignan' B2 at late fermentation time: a bacterial contamination may have started damaging the skins.

Supplementary data S4

Anova of skin hardness of 'Grenache' and 'Carignan' during fermentation.
Averages that do not share any letters are significantly different

		Number of measurements	Average	Standard deviation	Group
Grenache	t0	34	2137.8	419.8	A
Grenache	t1 B1	19	2242.1	274.7	A
Grenache	t1 B2	19	2332.9	420	A
Grenache	t1 B3	21	2243	550	A
Grenache	t2 B1	20	2136	485	A
Grenache	t2 B2	20	2165.8	409.6	A
Grenache	t2 B3	21	2167	647	A
Grenache	t3 B1	21	2101.8	392.2	A
Grenache	t3 B2	21	2250	682	A
Grenache	t3 B3	21	2451	667	A
Carignan	t0	38	1088	323.8	B
Carignan	t1 B1	21	1415.2	400.9	B
Carignan	t1 B2	21	1213	540	B
Carignan	t1 B3	21	1452	494	B
Carignan	t2 B1	21	1301	545	B
Carignan	t2 B2	21	1046.8	454.1	BC
Carignan	t2 B3	21	1359.4	399.3	B
Carignan	t3 B1	22	1227.1	379.5	B
Carignan	t3 B2	19	584	463	C
Carignan	t3 B3	21	1296	591	B