SUPPLEMENTARY MATERIALS: Characterization tables in absolute and percentages values, for FU by winery

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Table S1. *Characterization results for ORG1(Data per FU: one 0,75 L wine bottle).*

Impact category	Unit	Vineyard Materials	Fertilization and Treatments	Agricultural Machinery Use	Transport	Winery Practices	Packaging	Total
CC	kg CO2 eq	0.01720	0.03102	0.07407	0.00125	0.02001	0.68078	0.82433
OD	kg CFC-11 eq	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
TA	kg SO2 eq	0.00006	0.00038	0.00045	0.00001	0.00008	0.00496	0.00594
FE	kg P eq	0.00001	0.00005	0.00002	0.00000	0.00001	0.00014	0.00022
ME	kg N eq	0.00000	0.00010	0.00002	0.00000	0.00000	0.00016	0.00029
HT	kg 1,4-DB eq	0.00789	0.10172	0.02537	0.00043	0.00410	0.20570	0.34521
POF	kg NMVOC	0.00006	0.00013	0.00055	0.00001	0.00004	0.00289	0.00369
PMF	kg PM10 eq	0.00003	0.00012	0.00026	0.00000	0.00003	0.00182	0.00226
TET	kg 1,4-DB eq	0.00000	0.00012	0.00001	0.00000	0.00000	0.00017	0.00030
FET	kg 1,4-DB eq	0.00020	0.00169	0.00064	0.00001	0.00021	0.00472	0.00749
MET	kg 1,4-DB eq	0.00020	0.00177	0.00064	0.00001	0.00019	0.00452	0.00733
IR	kBq U235 eq	0.00169	0.00308	0.00439	0.00007	0.00323	0.05017	0.06264
ALO	m2a	0.00159	0.01739	0.01120	0.00019	0.00124	0.18918	0.22079
ULO	m2a	0.00042	0.00081	0.00239	0.00004	0.00009	0.03928	0.04305
NLT	m2	0.00000	0.00004	0.00002	0.00000	0.00000	0.00016	0.00023
WD	m3	0.00029	0.00148	0.00036	0.00001	0.00051	0.00622	0.00886
MRD	kg Fe eq	0.00521	0.01895	0.00880	0.00015	0.00049	0.02596	0.05957
FFD	kg oil eq	0.00299	0.00936	0.02089	0.00035	0.00594	0.20834	0.24787

Impact category	Unit	Vineyard Materials	Fertilization and Treatments	Agricultural Machinery Use	Transport	Winery Practices	Packaging	
CC	kg CO2 eq	2.1%	3.8%	9.0%	0.2%	2.4%	82.6%	100.0%
OD	kg CFC-11 eq	1.3%	7.9%	8.5%	0.1%	2.7%	79.5%	100.0%
TA	kg SO2 eq	1.0%	6.4%	7.6%	0.1%	1.4%	83.5%	100.0%
FE	kg P eq	2.3%	22.8%	9.5%	0.2%	2.7%	62.6%	100.0%
ME	kg N eq	1.0%	34.6%	7.6%	0.1%	1.0%	55.5%	100.0%
HT	kg 1,4-DB eq	2.3%	29.5%	7.3%	0.1%	1.2%	59.6%	100.0%
POF	kg NMVOC	1.7%	3.5%	15.0%	0.3%	1.2%	78.5%	100.0%
PMF	kg PM10 eq	1.5%	5.3%	11.3%	0.2%	1.2%	80.4%	100.0%
TET	kg 1,4-DB eq	0.8%	38.7%	3.0%	0.1%	0.4%	57.0%	100.0%
FET	kg 1,4-DB eq	2.7%	22.6%	8.6%	0.1%	2.9%	63.0%	100.0%
MET	kg 1,4-DB eq	2.8%	24.1%	8.7%	0.1%	2.6%	61.6%	100.0%
IR	kBq U235 eq	2.7%	4.9%	7.0%	0.1%	5.1%	80.1%	100.0%
ALO	m2a	0.7%	7.9%	5.1%	0.1%	0.6%	85.7%	100.0%

ULO	m2a	1.0%	1.9%	5.6%	0.1%	0.2%	91.3%	100.0%
NLT	m2	1.7%	17.4%	8.3%	0.1%	1.3%	71.0%	100.0%
WD	m3	3.3%	16.7%	4.0%	0.1%	5.7%	70.2%	100.0%
MRD	kg Fe eq	8.7%	31.8%	14.8%	0.2%	0.8%	43.6%	100.0%
FFD	kg oil eq	1.2%	3.8%	8.4%	0.1%	2.4%	84.1%	100.0%

Table S2. *Characterization results for ORG2 (Data per FU: one 0,75 L wine bottle).*

Impact categories	UNITS	Vineyard Materials	Fertilization and Treatments	Agricultural Machinery Use	Transport	Winery Practices	Packaging	Total
CC	kg CO2 eq	0.02648	0.00691	0.27077	0.00397	0.01574	0.58114	0.90501
OD	kg CFC-11 eq	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
TA	kg SO2 eq	0.00025	0.00022	0.00161	0.00002	0.00008	0.00424	0.00642
FE	kg P eq	0.00000	0.00005	0.00007	0.00000	0.00001	0.00012	0.00024
ME	kg N eq	0.00001	0.00001	0.00008	0.00000	0.00001	0.00014	0.00025
HT	kg 1,4-DB eq	0.06221	0.10463	0.09868	0.00136	0.00573	0.17684	0.44946
POF	kg NMVOC	0.00027	0.00006	0.00221	0.00003	0.00004	0.00247	0.00508
PMF	kg PM10 eq	0.00015	0.00007	0.00092	0.00001	0.00003	0.00156	0.00274
TET	kg 1,4-DB eq	0.00000	0.00001	0.00003	0.00000	0.00001	0.00015	0.00020
FET	kg 1,4-DB eq	0.00029	0.00200	0.00220	0.00003	0.00034	0.00407	0.00893
MET	kg 1,4-DB eq	0.00028	0.00206	0.00217	0.00003	0.00031	0.00389	0.00876
IR	kBq U235 eq	0.00002	0.00191	0.01621	0.00024	0.00209	0.04331	0.06377
ALO	m2a	0.00004	0.00103	0.03798	0.00060	0.00165	0.21058	0.25187
ULO	m2a	0.00000	0.00024	0.00814	0.00013	0.00013	0.00682	0.01546
NLT	m2	0.00000	0.00001	0.00007	0.00000	0.00000	0.00014	0.00022
WD	m3	0.00004	0.00125	0.00124	0.00002	0.00125	0.00412	0.00791
MRD	kg Fe eq	0.00042	0.01931	0.02991	0.00047	0.00082	0.02023	0.07116
FFD	kg oil eq	0.02169	0.00524	0.07768	0.00112	0.00438	0.17795	0.28805

Impact categories	UNITS	Vineyard Materials	Fertilization and Treatments	Agricultural Machinery Use	Transport	Winery Practices	Packaging	Total
CC	kg CO2 eq	2.9%	0.8%	29.9%	0.4%	1.7%	64.2%	100.0%
OD	kg CFC-11 eq	4.2%	5.7%	28.4%	0.4%	2.1%	59.3%	100.0%
TA	kg SO2 eq	3.9%	3.4%	25.1%	0.4%	1.2%	66.0%	100.0%
FE	kg P eq	0.2%	19.6%	28.9%	0.5%	2.4%	48.5%	100.0%
ME	kg N eq	3.6%	5.1%	32.3%	0.5%	2.7%	55.8%	100.0%
HT	kg 1,4-DB eq	13.8%	23.3%	22.0%	0.3%	1.3%	39.3%	100.0%
POF	kg NMVOC	5.3%	1.2%	43.6%	0.6%	0.8%	48.5%	100.0%
PMF	kg PM10 eq	5.4%	2.6%	33.5%	0.5%	1.1%	57.0%	100.0%
TET	kg 1,4-DB eq	0.5%	4.8%	15.7%	0.2%	4.1%	74.6%	100.0%
FET	kg 1,4-DB eq	3.2%	22.4%	24.6%	0.4%	3.8%	45.6%	100.0%

MET	kg 1,4-DB eq	3.2%	23.5%	24.8%	0.4%	3.6%	44.5%	100.0%
IR	kBq U235 eq	0.0%	3.0%	25.4%	0.4%	3.3%	67.9%	100.0%
ALO	m2a	0.0%	0.4%	15.1%	0.2%	0.7%	83.6%	100.0%
ULO	m2a	0.0%	1.5%	52.7%	0.8%	0.9%	44.1%	100.0%
NLT	m2	0.0%	2.4%	32.8%	0.5%	1.1%	63.3%	100.0%
WD	m3	0.5%	15.7%	15.7%	0.2%	15.7%	52.1%	100.0%
MRD	kg Fe eq	0.6%	27.1%	42.0%	0.7%	1.1%	28.4%	100.0%
FFD	kg oil eq	7.5%	1.8%	27.0%	0.4%	1.5%	61.8%	100.0%

Table S3. *Characterization results for BD1 (Data per FU: one 0,75 L wine bottle).*

Impact category	Unit	Vineyard Materials	Fertilization and Treatments	Agricultural Machinery Use	Transport	Winery Practices	Packaging	Total
CC	kg CO2 eq	0.00725	0.00257	0.04124	0.00151	0.00241	0.45130	0.50627
OD	kg CFC-11 eq	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
TA	kg SO2 eq	0.00003	0.00005	0.00025	0.00001	0.00001	0.00323	0.00358
FE	kg P eq	0.00000	0.00001	0.00001	0.00000	0.00000	0.00009	0.00011
ME	kg N eq	0.00000	0.00000	0.00001	0.00000	0.00000	0.00011	0.00012
HT	kg 1,4-DB eq	0.00416	0.02092	0.01412	0.00052	0.00110	0.13412	0.17495
POF	kg NMVOC	0.00003	0.00002	0.00031	0.00001	0.00001	0.00188	0.00225
PMF	kg PM10 eq	0.00002	0.00002	0.00014	0.00001	0.00000	0.00119	0.00137
TET	kg 1,4-DB eq	0.00000	0.00000	0.00000	0.00000	0.00000	0.00011	0.00012
FET	kg 1,4-DB eq	0.00006	0.00040	0.00036	0.00001	0.00009	0.00307	0.00400
MET	kg 1,4-DB eq	0.00006	0.00041	0.00035	0.00001	0.00008	0.00294	0.00386
IR	kBq U235 eq	0.00061	0.00088	0.00245	0.00009	0.00036	0.03282	0.03722
ALO	m2a	0.00058	0.00022	0.00624	0.00023	0.00016	0.13082	0.13825
ULO	m2a	0.00016	0.00006	0.00133	0.00005	0.00001	0.03651	0.03812
NLT	m2	0.00000	0.00000	0.00001	0.00000	0.00000	0.00011	0.00012
WD	m3	0.00011	0.00022	0.00020	0.00001	0.00014	0.00470	0.00538
MRD	kg Fe eq	0.00112	0.00386	0.00490	0.00018	0.00018	0.01519	0.02542
FFD	kg oil eq	0.00183	0.00400	0.01163	0.00043	0.00069	0.13584	0.15442

Impact category	Unit	Vineyard Materials	Fertilization and Treatments	Agricultural Machinery Use	Transport	Winery Practices	Packaging	
CC	kg CO2 eq	1.4%	0.5%	8.1%	0.3%	0.5%	89.1%	100.0%
OD	kg CFC-11 eq	1.1%	4.5%	7.9%	0.3%	0.6%	85.7%	100.0%
TA	kg SO2 eq	0.8%	1.5%	7.0%	0.3%	0.3%	90.1%	100.0%
FE	kg P eq	1.3%	8.5%	10.1%	0.4%	0.9%	78.9%	100.0%
ME	kg N eq	1.1%	2.3%	10.1%	0.4%	0.4%	85.8%	100.0%
HT	kg 1,4-DB eq	2.4%	12.0%	8.1%	0.3%	0.6%	76.7%	100.0%
POF	kg NMVOC	1.4%	0.9%	13.6%	0.5%	0.3%	83.3%	100.0%

PMF	kg PM10 eq	1.2%	1.3%	10.4%	0.4%	0.3%	86.4%	100.0%
TET	kg 1,4-DB eq	0.7%	1.7%	4.2%	0.2%	0.8%	92.4%	100.0%
FET	kg 1,4-DB eq	1.5%	10.1%	9.0%	0.3%	2.2%	76.9%	100.0%
MET	kg 1,4-DB eq	1.6%	10.7%	9.2%	0.3%	2.1%	76.1%	100.0%
IR	kBq U235 eq	1.7%	2.4%	6.6%	0.2%	1.0%	88.2%	100.0%
ALO	m2a	0.4%	0.2%	4.5%	0.2%	0.1%	94.6%	100.0%
ULO	m2a	0.4%	0.2%	3.5%	0.1%	0.0%	95.8%	100.0%
NLT	m2	1.2%	3.2%	8.7%	0.3%	0.3%	86.3%	100.0%
WD	m3	2.0%	4.1%	3.7%	0.1%	2.6%	87.5%	100.0%
MRD	kg Fe eq	4.4%	15.2%	19.3%	0.7%	0.7%	59.7%	100.0%
FFD	kg oil eq	1.2%	2.6%	7.5%	0.3%	0.4%	88.0%	100.0%

Table S4. *Characterization results for BD2 (Data per FU: one 0,75 L wine bottle).*

Impact category	Unit	Vineyard Materials	Fertilization and Treatments	Agricultural Machinery Use	Transport	Winery Practices	Packaging	Total
CC	kg CO2 eq	0.03332	0.02589	0.04728	0.00055	0.00873	0.42918	0.54495
OD	kg CFC-11 eq	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
TA	kg SO2 eq	0.00026	0.00022	0.00029	0.00000	0.00004	0.00312	0.00392
FE	kg P eq	0.00000	0.00002	0.00001	0.00000	0.00000	0.00009	0.00012
ME	kg N eq	0.00001	0.00011	0.00001	0.00000	0.00000	0.00010	0.00024
HT	kg 1,4-DB eq	0.06030	0.02900	0.01620	0.00019	0.00473	0.13056	0.24097
POF	kg NMVOC	0.00028	0.00008	0.00035	0.00000	0.00002	0.00181	0.00255
PMF	kg PM10 eq	0.00015	0.00007	0.00016	0.00000	0.00002	0.00115	0.00155
TET	kg 1,4-DB eq	0.00000	0.00013	0.00001	0.00000	0.00000	0.00011	0.00025
FET	kg 1,4-DB eq	0.00032	0.00060	0.00041	0.00000	0.00040	0.00301	0.00476
MET	kg 1,4-DB eq	0.00032	0.00060	0.00041	0.00000	0.00037	0.00288	0.00458
IR	kBq U235 eq	0.00088	0.00138	0.00281	0.00003	0.00130	0.03222	0.03861
ALO	m2a	0.00083	0.01843	0.00715	0.00008	0.00058	0.18978	0.21685
ULO	m2a	0.00022	0.00054	0.00153	0.00002	0.00006	0.00502	0.00738
NLT	m2	0.00000	0.00004	0.00001	0.00000	0.00000	0.00010	0.00016
WD	m3	0.00019	0.00062	0.00023	0.00000	0.00018	0.00308	0.00429
MRD	kg Fe eq	0.00153	0.00538	0.00562	0.00007	0.00082	0.01488	0.02829
FFD	kg oil eq	0.02163	0.00498	0.01334	0.00015	0.00252	0.13127	0.17389

Impact category	Unit	Vineyard Materials	Fertilization and Treatments	Agricultural Machinery Use	Transport	Winery Practices	Packaging	
CC	kg CO2 eq	6.1%	4.8%	8.7%	0.1%	1.6%	78.8%	100.0%
OD	kg CFC-11 eq	7.9%	4.9%	8.3%	0.1%	2.1%	76.7%	100.0%
TA	kg SO2 eq	6.6%	5.5%	7.3%	0.1%	1.1%	79.4%	100.0%
FE	kg P eq	1.9%	12.7%	10.7%	0.1%	3.2%	71.4%	100.0%
ME	kg N eq	4.1%	46.0%	6.0%	0.1%	0.8%	43.0%	100.0%

HT	kg 1,4-DB eq	25.0%	12.0%	6.7%	0.1%	2.0%	54.2%	100.0%
POF	kg NMVOC	11.0%	2.9%	13.8%	0.2%	0.9%	71.2%	100.0%
PMF	kg PM10 eq	9.8%	4.4%	10.6%	0.1%	1.1%	74.1%	100.0%
TET	kg 1,4-DB eq	0.8%	52.5%	2.3%	0.0%	1.8%	42.6%	100.0%
FET	kg 1,4-DB eq	6.8%	12.7%	8.6%	0.1%	8.5%	63.3%	100.0%
MET	kg 1,4-DB eq	7.1%	13.0%	8.9%	0.1%	8.0%	62.9%	100.0%
IR	kBq U235 eq	2.3%	3.6%	7.3%	0.1%	3.4%	83.5%	100.0%
ALO	m2a	0.4%	8.5%	3.3%	0.0%	0.3%	87.5%	100.0%
ULO	m2a	3.0%	7.3%	20.7%	0.2%	0.8%	68.0%	100.0%
NLT	m2	1.3%	27.2%	7.5%	0.1%	0.8%	63.1%	100.0%
WD	m3	4.3%	14.4%	5.3%	0.1%	4.2%	71.7%	100.0%
MRD	kg Fe eq	5.4%	19.0%	19.9%	0.2%	2.9%	52.6%	100.0%
FFD	kg oil eq	12.4%	2.9%	7.7%	0.1%	1.4%	75.5%	100.0%