

# PREPARING LAB BENCH TRIALS

Bench trials are essential to determine proper dosing and the efficiency of a treatment (addition of fining agents, addition of tannins or polysaccharides). To set-up bench trials, follow these steps:

- Prepare 1% (1g in 100 mL), 2% (2g in 100 mL) or 5% (5g in 100 mL) treatment solutions of the product to be tested:
  - For fining agents: prepare solution in water as recommended in the Technical Data Sheet
  - For tannins: prepare solution in neutral alcohol-water solution (~ 13%)
  - For polysaccharides, prepare solution in warm water, let rehydrate for two hours and allow to cool down before use
  - For liquid products: use solution as it is or dilute if necessary
- Label each sample bottle. Keep one untreated sample as a control.
- Fill samples with wine up to 80% of final volume, leaving space for the addition.
- Add the treatment solution. Refer to Table 1 for volume of a 1% solution to add into wine. Refer to Table 2 for liquid products.
- Mix after addition, top each bottle with wine and mix again.
- For fining agents:
  - Store in refrigerator for settling (usually 1-2 days). Let come to room temperature before evaluating.
  - For tannins, polysaccharides and gum Arabic: wines can be tasted immediately after addition.

ADDITION RATE	WINE SAMPLE VOLUME					
	30 mL	50 mL	100 mL	125 mL	375 mL	750 mL
5 g/hL	0.15	0.25	0.50	0.62	1.87	3.75
7 g/hL	0.21	0.35	0.70	0.87	0.62	5.25
10 g/hL	0.30	0.50	1.00	1.25	3.75	7.50
15 g/hL	0.45	0.75	1.50	1.87	5.62	11.25
20 g/hL	0.60	1.00	2.00	2.50	7.50	15.00
25 g/hL	0.75	1.25	2.50	3.12	9.37	18.75

Table 1: Volume (mL) of 1% solution needed to treat wine sample at the desired addition rate.

ADDITION RATE	WINE SAMPLE VOLUME					
	30 mL	50 mL	100 mL	125 mL	375 mL	750 mL
50 mL/hL	0.015	0.025	0.050	0.063	0.188	0.375
75 mL/hL	0.023	0.038	0.075	0.094	0.281	0.563
100 mL/hL	0.03	0.05	0.10	0.13	0.38	0.75
125 mL/hL	0.04	0.06	0.13	0.16	0.47	0.94
150 mL/hL	0.05	0.08	0.15	0.19	0.56	1.13
50 mL/hL	0.015	0.025	0.050	0.063	0.188	0.375

Table 2: Volume (mL) of liquid product needed to treat wine sample at the desired addition rate.