

Kit for determination of copper

Instructions for the user

You will need

1. Oenolab diagnostics Copper kit
2. Spectrophotometer
3. Micropipettes
4. Plastic tubes of 5 ml



STEP 1: Preparation of Cu standard at 2mg/l



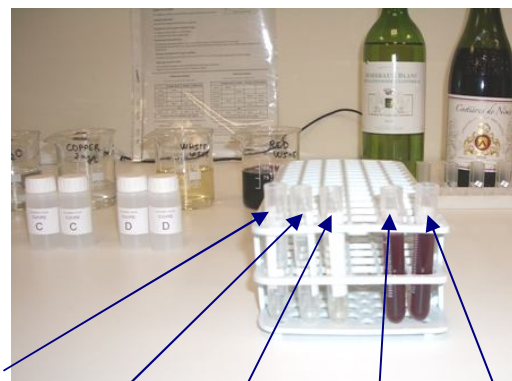
Transfer exactly 1ml of the standard supplied in the kit into a 50 ml volumetric flask. Fill up to the mark with distillate water.



STEP 2: Preparation of the samples



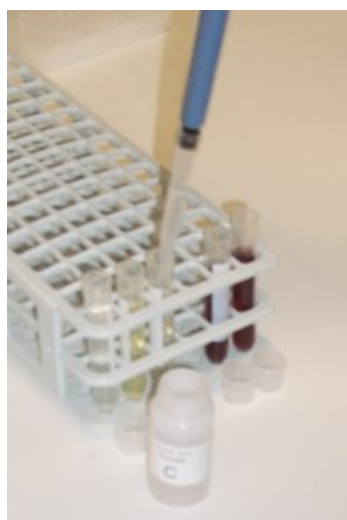
In a corresponding plastic tube transfer 3ml of dH₂O, standard 2mg/l and each sample of white wine. Red wines need to be pipette 2 times 3ml in separate tubes.



Tube 1: dH₂O
Tube 2: Std 2mg/l
Tube 3: White wine
Tube 4a: Red wine
Tube 4b: Red wine



Add 400µl of reagent A into all tubes except the tube 4a containing red wine. Into the tube 4a you will need to add 400µl of reagent B. Close the tubes and mix well



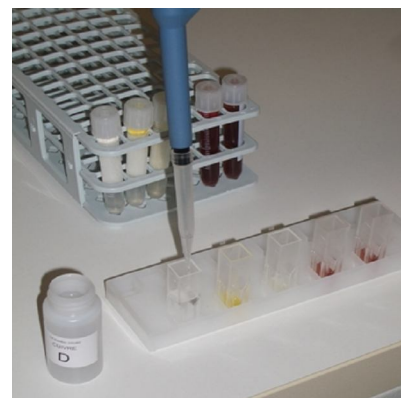
In each tube add 800 µl of reagent C. Vigorously mix all tubes for around 30 seconds. Wait until the separation of the two phases has completely finished.



STEP 3: Analysis



Take 400 µl from the upper phase of each sample and transfer them into a corresponding semi-micro cuvette. Then add 800 µl of the reagent D and mix the cuvettes.



Set the spectrophotometer at wavelength 450 nm. Make a zero using the cuvette corresponding on dH₂O (Tube 1). Measure the absorbance of all following cuvettes.



STEP 4: Calculations (example)

$$C \text{ white wine (mg/l)} = C \text{ std (2 mg/l)} \times \frac{DO \text{ white wine}}{DO \text{ standard}}$$

$$C \text{ white wine (mg/l)} = 2 \times \frac{0,037}{0,306} = 0,24 \text{ mg/l}$$

$$C \text{ red wine (mg/l)} = C \text{ std (2 mg/l)} \times \frac{DO_{\text{b red wine}} - DO_{\text{a red wine}}}{DO \text{ standard}}$$

$$C \text{ red wine (mg/l)} = 2 \times \frac{0,478 - 0,436}{0,306} = 0,27 \text{ mg/l}$$

Tube 2	→	STD Copper 2mg/l	0.306
Tube 3	→	WHITE WINE	0.037
Tube 4a	→	RED WINE A	0.436
Tube 4b	→	RED WINE B	0.478

OENOLAB DIAGNOSTICS

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