

DIWINE 2+/3+

Specific formulation to bind heavy metals

CHARACTERISTICS

DIWINE 2+/3+ is an innovative fining agent which can be used to reduce heavy metal content (including iron and copper) in musts and wines. These metals usually come from products used for vine treatment and from wine equipment.

OENOLOGICAL PROPERTIES

- **DIWINE 2+/3+** binds heavy metals and eliminates them (see table 1). This avoids casse in bottles (see figure 1).
 - **DIWINE 2+/3+** acts on all heavy metals with differing affinities:

$$\text{Cu}^{2+} > \text{Au}^{2+} = \text{Ag}^+ = \text{Hg}^{2+} > \text{Fe}^{3+} > \text{Al}^{3+} > \text{Ni}^{2+} > \text{Co}^{2+} > \text{Zn}^{2+}$$
 - **DIWINE 2+/3+** replaces treatment for the elimination of copper and iron in white wines using potassium ferrocyanide and for the elimination of iron in red wines using calcium phytate .
 - The dispersion capacity of **DIWINE 2+/3+** provides optimum reaction time for the chelation of metals before settling of the complexes formed.

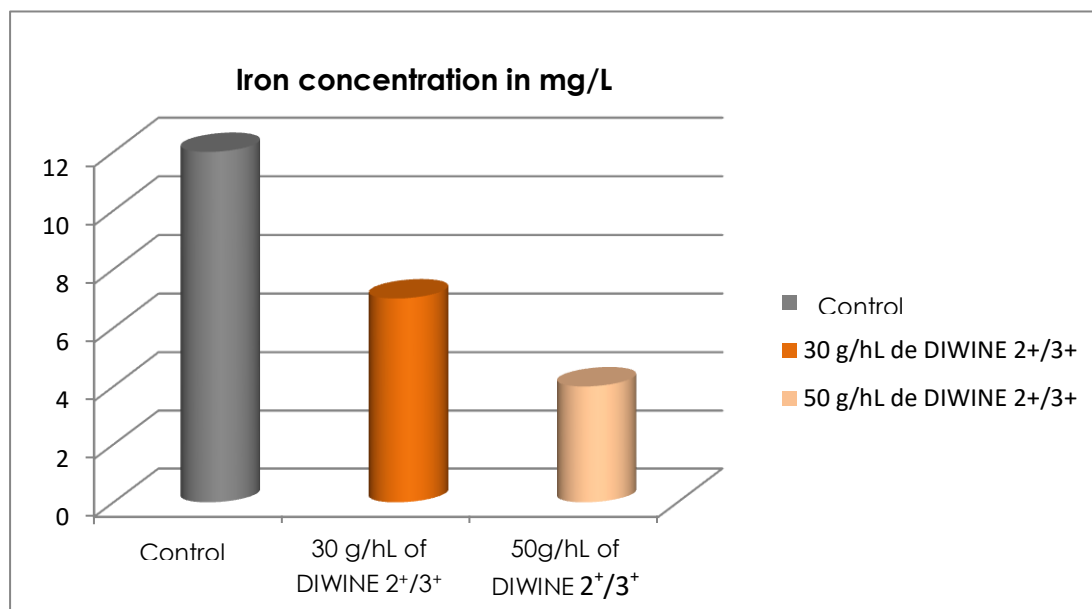


Figure 1: Decrease in iron concentration using **DIWINE 2+/3+** in a generic Bordeaux red wine with a known risk of iron casse

	DIWINE 2+/3+ 0 g/hL	DIWINE 2+/3+ 10 g/hL	DIWINE 2+/3+ 20 g/hL	DIWINE 2+/3+ 30 g/hL	DIWINE 2+/3+ 40 g/hL	DIWINE 2+/3+ 50 g/hL
Estate A	2,92	0,66	0,42			
Estate B	5,44	1,24	0,89			
Estate C	9,12			1,31	0,90	0,62

Table 1: Decrease in copper concentration in 3 musts with addition of **DIWINE 2+/3+**.

APPLICATIONS

- **DIWINE 2+/3+** can be used on must, wine for the elimination of heavy metals.

DOSAGE

- A few trial runs should be carried out in order to determine the optimum dosage.
- Dose from 5 to 50 g/hL

Maximum application rate according to current European regulations : 50 g/hL.

INSTRUCTIONS FOR USE

Dilute **DIWINE 2+/3+** in 10 times its weight of water. Then add it to the must or wine and mix thoroughly for at least 15 minutes in a closed system (removal via a nozzle at the bottom of the tank and return via the top).

Precautions for use:

To eliminate iron: Chelation can only occur if it is found in ferric form. For maximum effectiveness, it is therefore strongly recommended to carry out aeration before adding **DIWINE 2+/3+**, in order to get the iron to change from the ferrous form Fe²⁺ to the ferric form Fe³⁺.

The treatment must be recorded in the cellar register.

The implementation of the treatment has to be the responsibility of an oenologist or qualified technician.

Product for oenological and specifically professional use.

Use in accordance with current regulations.

PACKAGING

1 kg and 5 kg bags.

STORAGE

Store unopened, sealed packaging away from light in a dry, odour-free environment.
Once opened use rapidly.

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