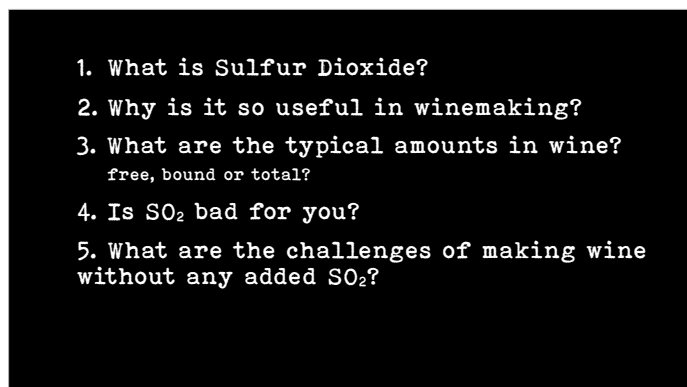






1. What is Sulfur Dioxide?
2. Why is it so useful in winemaking?
3. What are the typical amounts in wine?
free, bound or total?
4. Is SO₂ bad for you?
5. What are the challenges of making wine without any added SO₂?

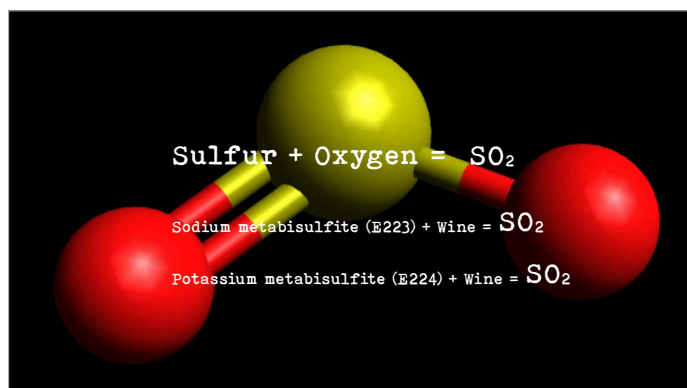
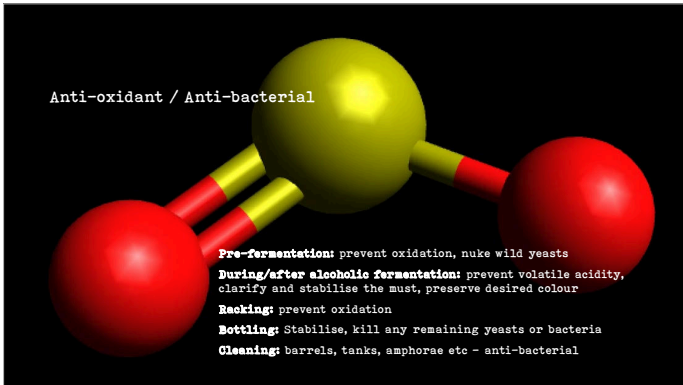
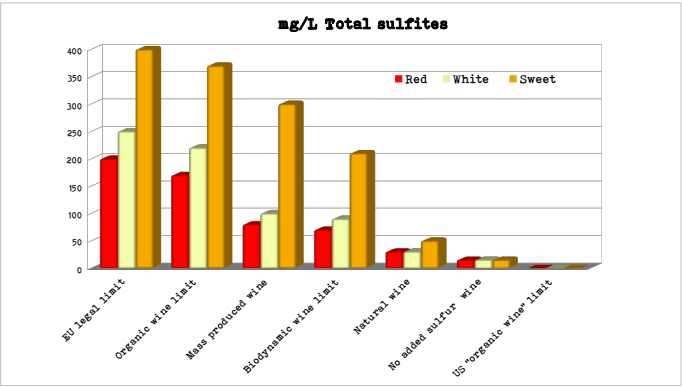


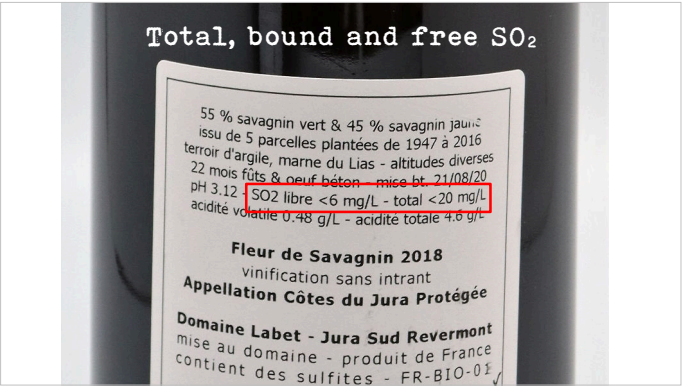


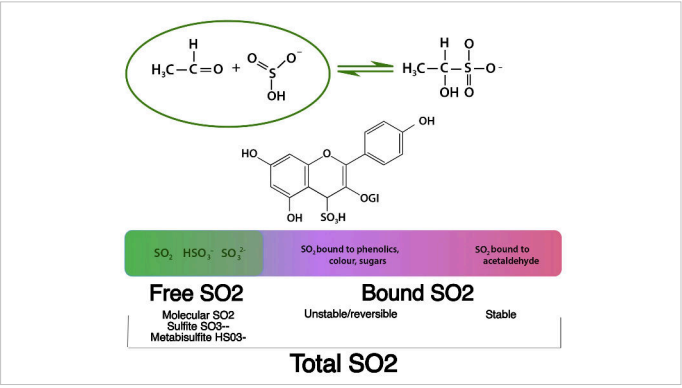
Photo: Andrew Lambert











Winemaker's associations etc.

Raw Wine fairs

- 70mg/L total SO₂

Vin Natur

- 50mg/L total (white/rosé)
- 30mg/L total (red)

AVN

- 30mg/L total SO₂

Vin Méthode Nature

- 30mg/L total SO₂

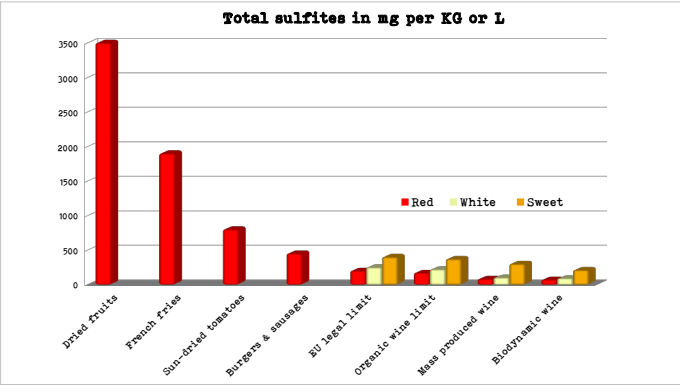
Vin Méthode Nature sans sulfites ajoutés

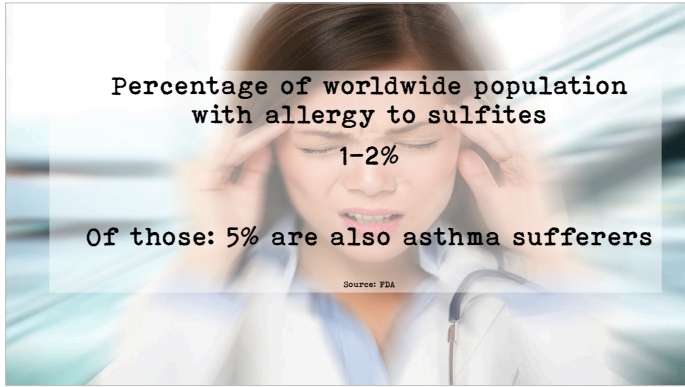
- no added SO₂

Vins S.A.I.N.S.

- no added SO₂







Percentage of worldwide population
with allergy to sulfites

1-2%

Of those: 5% are also asthma sufferers

Source: FDA





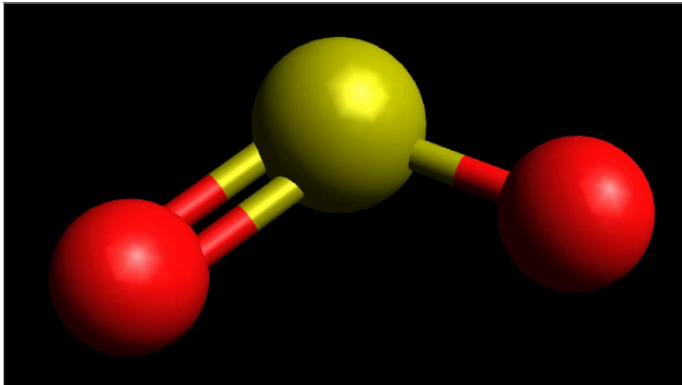
Biogenic amines

Histamine

Tyramine

Putrescine

Cadaverine



Risks with no added sulfur

- Volatile acidity
- Unintended oxidation
- Brettanomyces
- Mousiness

Mousy taint

Not volatile at normal pH of wine
(2.8 - 4)

Must first mix with saliva, to
raise pH to around 7

Mousy taint

2-ethyltetrahydropyridine (ETHP)
2-acetyltetrahydropyridine (ATHP)
2-acetylpyrroline (APY)

Risk factors

High pH (low acidity)
Warm conditions
Prescence of oxygen
Free (unbound) SO₂ below 10mg/L

Recommended no added sulfur winemakers

Domaine Labet *Jura, France*
Jef Coutelou *Languedoc, France*
Domaine Milan *Provence, France*
Andi Weigand *Franken, Germany*
Gernot Heinrich *Burgenland, Austria*
Gut Oggau *Burgenland, Austria*
Radikon *Friuli Collio, Italy*
Čotar *Karst, Slovenia*
Zorjan *Štajerska, Slovenia*

Further reading

Wine Folly on biogenic amines in wine
<https://winefolly.com/deep-dive/clean-wines-the-truth-about-biogenic-amines-and-wine/>
Jamie Goode on biogenic amines in wine
<https://www.winemag.com/2021/05/24/sulfites-headache-wine-science/>
Jamie Goode on mousiness
<https://wineanorak.com/2020/04/24/the-latest-on-mouse-the-wine-taint-of-our-times/>
<https://www.internationalwinechallenge.com/Canopy-Articles/the-mystery-of-mousiness.html>
Simon J Woolf on mousiness
<https://www.themorningclaret.com/2017/are-natural-winemakers-in-denial-about-mousiness/>
CDC page on health risks relating to sulphites
<https://www.cdc.gov/niosh/topics/sulfurdioxide/default.html>

thank you



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