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## Predicting calcium in grape must and base wine by FT-NIR spectroscopy

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Key words: calcium; base wine; grape must; FT-NIR spectroscopy; alginate beads

### Abstract:

Calcium content in sparkling wines may not exceed 80 mg/L due to the risk of aggregation with alginate capsules. The high calcium content usually found in wine and must emphasizes the need to develop alternative and appropriate techniques faster and cleaner than atomic absorption spectrometry (AAS). To obtain a robust model to predict calcium content, FT-NIR spectroscopy was used in 98 base white wine samples and 60 must samples from an Alentejo winery. The reference method for calcium determination was AAS technique, with a dry ashing sample procedure, as a prior treatment.

Results confirmed the ability of FT-NIR as an alternative technique to AAS, to predict calcium content in grape must and base wine. Advance knowledge of the calcium content in the grape must will help avoid obtaining a mixture of musts with a high calcium content in the same container.

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