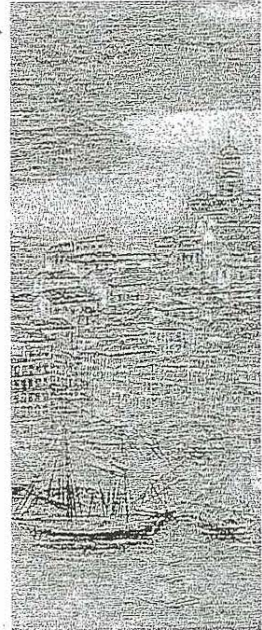


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FOODBORNE ILLNESS

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Research of fungicides residues in grapes and wine: growth effects on
Saccharomyces cerevisiae

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The grape disease caused by *Botrytis cinerea* Fungi is one of the principal diseases of wine, being responsible for large damage in the green wine region, and others, specially in sensible sorts. This disease is usually fought with fungicides. If this practice is made 8 to 15 days before harvest could leave some fungicides residues in the wine or could contribute to stop fermentation.

It was studied the effect of fungicides - *Procimidona*, *Iprodiona*, *Penconazol*, *Benomyl*, *Vinclozolina* and *Diclofuamida* - in the growth and final biomass of *S. cerevisiae* ESA1. This microorganism was isolated from "Adega Cooperativa de Murça" most. Additionally it was evaluated for the presence of fungicide residues in grapes and wine.

Using pH 4 at 25°C, the fungicides presence in the extra-celular, with concentrations upper than the minimal inhibitory concentration cause the decrease of specific growth rate (k_c) and final biomass. This inhibitory effect was accentuated with fungicide concentration, in the culture medium. In this experimental conditions, the k_c and the final biomass were an exponential function of fungicide concentration, to all the studied samples. To which one of the studied compounds, the inhibitory exponential constants of growth (K_{in}) were estimated from the slope of semi-logarithmic straight lines.

In the other side, the comparative studies of induced effects by different fungicides in growth and final biomass, shows that the toxic effect of *Diclofuamida* was superior to all others fungicide.