

“Film Yeast” or “Wine Flowers”

The following article was found at <http://www.oardc.ohio-state.edu/grapeweb/vinevan/van0199.htm> and explains the basics of “Film Yeast” or “Wine Flowers” – the white filmy substance often found atop wine aging in both bottles and carboys.

WINEMAKERS, WATCH OUT FOR CANDIDA MYCODERMA by Todd Steiner

What is *Candida mycoderma*? *Candida* is the primary Genus of yeast that causes "Film Yeast" in our wines. Mycoderma is a general term for a mixed population of several different yeast, molds, and bacteria that contribute to film yeast. A term otherwise known as "wine flower" describes this aerobic yeast which gives a chalky fragile white film on the surface of wines. These species of *Candida* can utilize ethanol as a source of carbon and form a film or pellicle on the wine surface. They are strongly oxidative and lead to a decrease in ethanol content along with an increase in acetaldehyde concentration. This acetaldehyde content contributes to an objectionable oxidized flavor. Acetaldehyde is also an intermediate component of acetic acid formation by acetic acid bacteria.

It is essential to prevent film yeast from forming in your wines. Since *Candida* needs aerobic conditions to live, it is crucial to keep oxygen from attacking your wine. This is done by keeping your head space to a minimum. Transfer lines, pumps, and receiving tanks may be purged with an inert gas such as nitrogen before use. Also, by keeping your tanks and barrels filled to the top will prevent oxygen from attacking your wine.

A second important step in preventing film yeast from occurring is with the addition of sulfur dioxide. Special attention should be given to your concentrations of "free" sulfur dioxide. Under most conditions, maintaining 25 to 40 ppm of "free" sulfur dioxide will protect wines in storage from film yeast, bacteria and other microorganisms. By doing this you will be well on your way of producing a sound quality wine.

Cellar temperature is a third factor in helping to prevent film yeast formation. Temperatures above 12°C (54°F) are more favorable for film yeast formation. Therefore, keeping your wine storage temperatures below 12°C will be an important preventive measure. The cooler that you can store your wines, the more beneficial it will be toward producing a stable wine.

Literature Cited

B.W. Zoeklein, K.C. Fugelsang, B.H. Gump, F.S. Nury, 1995. Wine Analysis and Production. New York. Chapman & Hall, 14:220-221.

M.A. Amerine, M.A. Joslyn, 1970. Table Wines. Univ. of Cal. Press, Berkley.