

## **What is that smell!?!?!?**

Written by Carl Eshelman

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Ahhh.... The time has finally arrived to taste the magical elixir you have been pouring your heart and soul into. You draw some wine from the carboy and drain it into a glass. You carefully swirl the wine in the glass to release the bouquet, anticipating the magical aromas and flavors to come. You tilt the

glass and inhale the beautiful aroma... cough, cough, what the!?!?

You jerk back from the glass frantically trying to get the awful smell out of your nose.

Not quite what you expected.

Unfortunately, it has happened to all of us at some point.

Here are some common problems experienced in winemaking and a few suggestions on how to correct or better yet, prevent them. No matter how easy the cure sounds, remember an ounce of cure is worth a pound of prevention. So rather than

counting on the cures to help you out, it's always best to prevent the problems to begin with.

### ***Wine that smells like wet cardboard:***

Your wine is "corked." Cork taint is the presence of 2,4,6-trichloroanisole (TCA) in the wine. Wine containing TCA has an off odor resembling a moldy newspaper, wet dog, damp cloth, or damp basement.

Corked wine is harmless but does not taste good.

Cork taint is one of the main reasons so many wineries are changing to screw caps.

### ***Cure:***

Traditionally it there has been no cure for "Corked" wine. But Andrew Waterhouse, a professor at UC-Davis, claims it can be corrected by pouring the wine into a bowl containing a sheet of plastic wrap. The TCA molecules are chemically similar to polyethylene and stick to the plastic wrap within a few (10-15) minutes

### ***Prevention:***

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Use quality corks from a reputable supplier. Do not use chlorine for sterilization, especially on your corks.

### ***Wine that smells like rotten eggs:***

A rotten egg smell is caused by hydrogen sulfide contamination. Hydrogen sulfide is a colorless gas that smells like rotten eggs.

It is produced during primary fermentation from sulfur residue on the grapes.

Montrachet yeast produces more hydrogen sulfide than most.

### ***Cure:***

Mild hydrogen sulfide problems can often be cured by adding extra sulfur dioxide and racking the wine with some splashing. Rack the wine immediately after fermentation and add 60 ppm SO<sub>2</sub>. The SO<sub>2</sub> will bind the H<sub>2</sub>S and settle out as a precipitate. Rack the wine 48 hours after adding the SO<sub>2</sub>, if the odor is still there, try Desulfin or Copper Sulfate solution and follow instructions.

Severe hydrogen sulfide problems are difficult to repair and the wine is often a total loss.

### ***Prevention:***

Avoid grapes with excessive sulfur residue. Sulfur is often used to protect grapes from mildew, so check your grapes carefully.

during the fermentation process, add nitrogen and a good yeast food early.

Avoid using Montrachet yeast.

### ***Wine that smells like Sherry:***

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The insidious O has found its way to your wine. That's right, your wine has oxidized due to exposure to oxygen. Oxidation is probably the number one most frequently encountered flaw in amateur winemaking. Sherry wines contain a material called acetaldehyde that gives sherry its distinctive smell. Acetaldehyde is produced

when oxygen comes in contact with alcohol.

The aroma is pleasant in Sherry wines but is considered a flaw in table wines.

### **Cure:**

Sulfur dioxide can react with acetaldehyde removing some of the smell. Try adding a little extra sulfur dioxide to remove unwanted sherry odors from slightly oxidized table wine. But like hydrogen sulfide contamination, severe oxidation is nearly impossible to correct.

### **Prevention:**

Maintain 0.8 ppm of molecular sulfur dioxide in the wine. Limit oxygen access by keeping your carboys topped up and your airlocks in shape. Check pumps for leaks in suction lines and seals. When racking, fill empty containers from the bottom up with a minimum of splashing.

### ***Wine that smells like vinegar and/or finger nail polish:***

Acetobacter bacteria have found its way into your wine and are turning it into vinegar. Acetobacter bacteria turn alcohol into vinegar by converting alcohol into acetic acid and then the acetic acid into ethyl acetate (fingernail polish remover). The good news is that acetic acid can be removed from wine. The bad news is that the process is complex and requires expensive equipment. As a result it is not an option for most amateur winemakers.

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### ***Cure:***

Use the vinegar to make pickles or serve with olive oil and bread. If you are insistent on trying to remove acetic acid there are firms that off this as a service.

You can find them on the web.

### ***Prevention:***

*Acetobacter* bacteria require oxygen to survive, so keep your carboys topped up and your airlocks in shape. Maintain 0.8 ppm of molecular sulfur dioxide in the wine. Keep your winery (bathroom, basement, closet) clean. Dispose pomace promptly.

### ***Wine that smells like a burnt match:***

This is the result of too much of a good thing. Too much molecular sulfur dioxide is the culprit. The bad news, sulfur dioxide is not easy to remove from wine.

### ***Cure:***

The good news, sulfur dioxide slowly dissipates as wine ages and the problem will often disappear after a few months of bulk aging.

### ***Prevention:***

Keep free sulfur dioxide to less than 40 ppm. Check your pH and use less sulfur dioxide in wines with low pH.

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### ***Wine that smells or tastes like cooked-fruit:***

There are a couple of common causes for a “cooked fruit” flavor. On common culprit is a high fermentation temperature. Overripe grapes and/or too many raisins in the must can also be a cause.

### ***Cure:***

As mentioned earlier, an ounce of prevention is worth a pound of cure. Prevention is the only cure in this case.

### ***Prevention:***

Keep whites cool during fermentation, preferably between 50 to 60 degrees F. Reds like it a bit warmer but keep them under 90 degrees F.

Avoid fermenting overripe grapes containing large numbers of raisins (a few won't hurt).

If you are adding raisins to a kit wine don't get carried away.

If you follow these suggestions hopefully you will never experience the disappointment of having to throw a batch of wine out... at least not for the problems covered in this article.

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