



CONTAMINATION

What are the signs of contamination?

Contaminated wines show any of the following signs: popping corks; sediment in the bottle coupled with excess carbonation; sediment in the bottle that was not initially present after filtration; flavours of soap, solvents, rubber, or bitterness and aromas of geraniums, vegetables, solvents, or fusel alcohols.

How did my wine become contaminated?

The possibility of contamination increases as the winemaking process progresses. When yeast is added to the must, it outcompetes any minor population of microbes that may have been introduced to the primary fermenter. Once the fermentation is complete the chances of contamination increase. Contaminating bacteria, mould and wild yeast no longer have to compete with the initial large wine yeast population. Areas of concern include the following.

1. The Carboy – Dry wine that enters a carboy that is not sanitised runs the risk of becoming contaminated. Often a wine will become contaminated in the carboy, only to have the contaminants physically removed through stabilizing, fining and filtering. The aroma and flavour of contamination will then be present, but there will be no signs of sediment in the finished product.
2. Racking Hoses – Racking hoses are often not adequately cleaned, sanitised and drained. There is an extremely large surface area within the hose that the wine comes in contact with.
3. Filter Machines – There is a large surface area that the wine is in contact with as it is filtered. Any area of the machine that is not sanitised will introduce contaminants to the wine. Due to the fact that sulphite levels decrease during filtration, the wine is less protected from contaminants during and after this process.
4. Bottle Fillers – Filling machines are the last contact source with the wine before it enters the bottle. Even small amounts of microbes introduced to the wine will be present in the finished product.
5. Bottles – Bottles should always be cleaned and sanitised since the wine will remain in full contact with the entire inside surface until it is consumed.

Why are the corks popping out of my bottles?

The wine is contaminated and a secondary fermentation is occurring in the bottle. There is a large amount of carbon dioxide pressure in the bottle and it poses a serious safety risk. Safely dispose of these bottles.

The first 10 bottles of the batch tasted great. Now it tastes off and there is sediment in the bottle. What went wrong?

Most likely during the filtering or filling process yeast, bacteria or mould was introduced to the wine. The sulphite levels in the wine kept the contaminants from reproducing for a period of time. As the wine ages, the sulphite levels decrease. Once the level is below the threshold for the contaminant, it is able to reproduce and cause a fault in the wine.

CONTAMINATION CONTINUED

Only one type of kit is continually becoming contaminated. All the other kits produced are fine. What is the problem?

All types of contaminants have different ideal conditions under which they can survive and flourish. Some prefer high pH, some low pH. Some are inhibited by the level of sorbate added, some are not. Certain kits have sugar, acid, and add pack parameters which makes the wine more or less suitable for certain contaminants. Therefore a wild yeast might flourish in a high acid white, yet be unable to reproduce in a tannic red.

The wine has a contaminated aroma or taste but no sediment. Where in the process could have this occurred?

The contamination most likely occurred after the primary fermentation but before the addition of the add pack ingredients. The likely source is therefore the carboy or racking hose.

How do I avoid contamination?

For further information on craft winemaking, visit www.rjscraftwinemaking.com.