VINEGAR

Vinegar is nothing more or less than an alcoholic beverage which has gone sour. In fact, that is exactly what the roots of the word mean, coming from the French vin, meaning wine, and aigre, meaning sour.[140] When alcoholic beverages sour it is the act of certain bacteria, known as acetobacter, on alcohol, turning it to acetic acid and water. It is the alcohol gone acid which gives us the taste which we associate with vinegar. It is the other elements, specific to the actual source of the original alcohol, which give the vinegar its individual character and body. The information in the next two sections on the history and making of vinegar is drawn almost exclusively from the pamphlet 'Making Vinegar at Home'.[141]

History of Vinegar

Vinegar has been around and in use for considerably longer than would be suggested if one only goes as far back as the introduction of the methods of production put forth in the next section. The use and production of vinegar probably goes back to a time not much more recent than that of the making of mead and wine, possibly by no more than a few months. Vinegar is mentioned in the Bible -- in the Book of Ruth and in Proverbs. It is also specifically called for in the making of haroseth in Pesachim, a section of the Talmud. Vinegar was known to the Egyptians and it was drunk by Caesar's armies. Hippocrates prescribed the drinking of vinegar for his patients in ancient Greece. It would appear that in all the places that we have seen the production of wine or beer in the ancient world, we also find the production of vinegar.

How Vinegar is Made

As mentioned above, the making of vinegar, in theory, is very simple. Make beer or weak wine and leave it out for the vinegar bacteria to attack it. In practice, this is not the best of methodologies, although the realities of a vinegar generator are not much more complex than this.

Note that I have said in the foregoing to leave the wine, or beer out for the bacteria to take hold. This is the first necessity. The acetobacter reaction, unlike that of yeast on sugar to make alcohol, is an aerobic reaction. It requires the presence of oxygen. The more oxygen, the better. Most of the improvements in vinegar production over the millenia during which it has been made and used by man have been in the form of finding better ways to get greater amounts of oxygen to the bacteria in a shorter period of time. The next necessity is to keep insects away from the acetifying must while allowing for the air flow. Put these two items together in a workable fashion and you have a vinegar generator.

One of the oldest actual methods for the production of vinegar is what has come to be known as the Orleans method. The vinegar generator used in this method is a large, wooden barrel laid on its side with the bung hole up. In each end of the barrel a hole, or holes, is drilled so that when the liquid in the barrel is just below these holes, the barrel will be about three-quarters full. The barrel is then filled to this point with beer or dilute wine and a starter of vinegar which has been untreated and still contains active mother of vinegar (another name for the vinegar bacteria). The holes in the ends are covered with a fine screen- ing, or loose cloth, to prevent the entrance of insects, and the generator is allowed to sit for several months. The optimum temperature for this conversion is about 85øF, or 29øC. After this resting time the alcohol has been almost entirely converted to vinegar and it is drawn off through a spiggot placed near the bottom of the barrel on one end, leaving about 15% behind to charge the next batch. The next batch would be added through the bung hole using a long funnel which would reach below the surface level of the charging vinegar. The reason for this is that a scum will form on the surface of the mash as it is converted to vinegar. This is a very active layer of acetobacter and forms on the surface, where there is the most oxygen (from contact with the air). While succeeding batches of vinegar will procede even if this layer is broken up, they will get off to a much better start if this layer is left undisturbed.

More modern methods of production, as stated earlier, are designed to allow more oxygen to reach the acteobacter. The first of these methods was to use a larger generator and loosly pack it with a porous material, such as pommace (grape pulp, after pressing), or beachwood shavings. The mash was allowed to slowly trickle down onto these materials, thus greatly increasing the amount of surface area for the volume of mash. This allowed for much more rapid production of vinegar with better controls. Further improvements came with the addition of more holes in the generator, allowing for freer passage of air through the generator and the oxygen which it brought.

Vinegar generators grew in size, thus increasing the distance which the mash would travel over the porous materials and thereby increase the oxygen reaching the mash as well. The last of the advances which has been made only in much more recent times (circa 1952) is the use of submerged fermentation which consists of aerating the entire mash with tiny bubbles, much as an aquarium aerator would produce when attached to a pummace tip and placed at the bottom of the generator. This method introduces oxygen to the entire volume of the mash at all times and can reduce the time necessary for conversion from several months, to several days. This is, however, quite out of the period of our study and if you wish to maintain period techniques you will be advised to adhere to the Orleans method and its early variations.

Uses of Vinegar

Vinegar has been used, both as a food, and also as a preserva- tive of food. It has been prescribed, mixed with sugar or honey, as a gargle to be used as a remedy for sore throats. It can also be used as a cleaning agent, or furniture polish. It is not, however, to be recommended for the use of cleaning polished marble, as some suggest, as its acidity will eat away at the surface and leave it lightly pocked, causing it to lose its luster.

Vinegar Recipes

The following is a recipe not for the actual making of vinegar, but for its subsequent distillation to purify it. This recipe was found in *Delightes for Ladies*.[142]

How to distill wine vinegar or good Aligar that it may be both cleare and sharpe

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I Know it is an usuall manner among the Novic-
es of our time to put a quart or two of good
vinegar into an ordinay leaden stil, and so to
distill it as they doe all other waters. But
this way I do utterly dislike, both for that
heere is no separation made at all, and also
because I feare that the Vinegar doth carry an
ill touch with it, either fro the leaden botto
or the pewter head or both. And therefore I
could wish rather that the same were distilled
in a large bodie of glasse with a head or
receiver, the same beeing placed in sand or
ashes. Note that the best part of the vinegar
is the middle part that ariseth, for the first
is fainte and phlegmatick, and the last will
taste of adustion, because it groweth heavie
toward the latter end, and must be urged up
with a great fire, and therefore you must now
and then taste of that which commeth both in
the beginning & towardes the latter end, that
you may receive the best by it selfe.


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