

GLOBAL PUBLISHING

PRESENTS



HOW TO MAKE PERFECT WINES & SPIRITS FROM HOME

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A FEW WORDS TO BEGIN...

Firstly, many congratulations on obtaining this eBook – as you're about to discover, "How To Make Perfect Wines & Spirits From Home" is one of the most detailed & useful instructional books for wine & drink enthusiasts everywhere. It is crammed with step by step instructions to make just about any wine type from your own home. Creating your own fine tasting wines is one of the most pleasurable and rewarding things in the world – it is enjoyable, relaxing and once perfected you can share with family and friends who will admire you for your talents. And of course, with the raw ingredients costs being so very low it is also a way of saving a lot of money.

I also invite you to create your very own signature wine – one that is suited to your own taste, that has your perfect delicate blend of flavours. It is the ultimate achievement!

Enjoy the book, and drink in good health :)

GETTING STARTED

At one time or another you must have sent away for something. A "do it yourself kit," of some sort. Something that gave you instructions on how to make, build, or create something. Something that you seen, was important to you, so, you sent away for it, and just had to do it for yourself. That's what this electronic book is about. "Making Wine In Your Home" is an ebook, an instructional on how to make wine. Made simple, with easy-to-understand instructions, on how to get the job done.

It requires very little money, and very little effort. It does require a bit of time, but this is due to the fermenting process. When you get right down to it, everything that's worth doing requires time.

The supplies required for making wine, will be the biggest obstacle. I have discovered that most kitchens have enough utensils to more than "get the job done".

I should say that making wine is one of the most satisfying things that you will ever achieve. Simply because its really simple, and because time does all the grunt work for you!

THE BASICS

The simple methods described here are designed for beginners who do not know where to begin and for those with some experience who frequently run into difficulties and disappointments.

The making of top-quality wines is absurdly simple, yet not quite so simple that we can be careless about it. Too many people are still following Granny's fruit mixtures to ferment of their own accord, leaving bottles of fermenting wines corked loosely (the three main causes of ruined wines), while others are still preparing their fruits and other ingredients in a manner which nine times out of ten produces cloudy, acid wines that more often than not find their way down the drain.

If your previous attempts have not been up to expectations there is a reason. This will be found with in these pages as well as the essential, yet simple, information that ensures success in making what is, surely, the finest home product on Earth.

I repeatedly make it clear that I am an advocate of simplicity. There are many highly complicated scientific and chemical aspects underlying amateur wine-making. A few home operators begin to dabble in these, so that, to them, wine-making becomes a grueling test of knowledge and skill. Expensive laboratory equipment becomes necessary as does some experience in laboratory techniques and from then on all pleasures are lost in a worrying maze of technicalities. And all for no reason at all, because their wines are no better than those turned out by the simple methods and recipes here. However, so that readers understand the reason for wines being spoiled, I have included a few chemical details so that the very beginner not only knows what to do and how to do it, but also why he is doing it in one particular way. Success is thus assured. Nevertheless, he will need no knowledge of chemistry and no more in the way of utensils than is already available in most homes.

USING UTENSILS

For making wines with the recipes and ingredients here all one needs is a gallon-size glass bottle, an unchipped enamel saucepan and a polythene pail. Make certain to use polythene as some plastics are not suitable. Do not use aluminum or copper vessels and do not use an enamel vessel not ordinarily intended for cooking purposes as these often contain lead in the glaze, and this could render wines poisonous.

Fermentation will not be carried out in an open vessel such as a crock or polythene pail in all these recipes unless you want it to; it is best to ferment the liquors in a gallon-size glass bottle-this point will be covered again later on. A polythene pail is necessary for only a few of the recipes and may be disregarded for the time being.

THE ART OF FERMENTATION

This is the process by which the liquors we prepare are turned into wine, and we have nothing to do with it. All we do when making wine is to prepare a liquid containing substances that will give a pleasant flavour to what will eventually become a finished wine. The yeast we add turns the liquid into wine for us.

Ordinarily, baker's yeast and white granulated sugar are used by the average home wine maker. However, over the past few years wine-making has taken such a hold that suppliers of equipment and ingredients offer a wide range of yeasts specially imported from the wine-producing areas of France, Italy and Germany. These yeasts make the

finest wines because they are true wine yeasts whereas bakers' yeast in only bread yeast and should not be expected to make good wine-though of course it does, but not to be compared with the results following the use of wine yeasts.

Wine yeast is capable of producing eighteen per cent of alcohol by volume (32 proof), against the fourteen per cent of bakers' yeast.

More and more people are using these wine yeasts together with invert sugar instead of household sugar.

Now let us understand what happens when we add yeast to a prepared liquor containing sugar.

Yeast is obtainable in the form of a compressed cake, dried tablet, pellet or in power form as a liquid culture, and all are inactive (dormant) at the time of purchase.

When making our wines fermentation is seen as a slight frothing during the early stages and this soon settles down to a gentle ferment that may last as long as six months. But if warmth is given-as we shall see later on-fermentation should be over and done with in half that time.

All the time fermentation is going on; that is, all the time the yeast continues to reproduce itself, the amount of alcohol in the wine increases. But it cannot go on for ever because when what we call the maximum alcohol tolerance of the yeast is reached, the alcohol formed kills the yeast. It will be seen then that from the tiny amount of yeast we add at the start masses of new yeast is made and all this helps to make alcohol until the last surviving generation of the original yeast is finally destroyed by the alcohol it and all the other generations put together have formed since we began. When this happens, fermentation ceases and no more alcohol is made. Thus the old tale that the longer wine is kept the stronger it becomes is proven a fallacy-or old wives' tale.

As already mentioned, bakers' yeast can make up to fourteen per cent of alcohol by volume, while wine yeast makes from fifteen per cent to eighteen per cent by volume.

To get the maximum alcohol and to get fermentation over without undue waste of time we must keep the fermenting wine warm. The ideal

temperature at which to keep a 'must' is between 65 degrees F. and 70 degrees F. However, few can manage this, but if fermenting wines are kept warm throughout fermentation time, this will do. Most people use an airing cupboard for this and it works well. Others use all sorts of ingenious devices and these are described under the heading 'Aids to Fermentation'. Do not be tempted to keep a 'must' hot during fermentation; during the warmer weather almost any warm spot in the kitchen will do, but during cold weather and especially during very cold nights it is always best if a little added warmth can be given.

When a ferment is allowed to become cold the yeast ceases to work. This means that at some time later, if the weather turns warm, fermentation begins again. If the wine has been bottled in the belief that fermentation has ceased for good, the result is a popping under the stairs and corks flying in all directions and the loss of valuable wine.

FERMENTATION AIDES

Most beginners will be content to keep their fermenting wines warm in an airing cupboard or near the boiler in the kitchen. Others will want to know how they can make a special fermenting cupboard.

If only two or three jars of wine are fermenting at one time, a small cupboard with a small electric heater installed will be ideal. Alternatively, an electric light bulb hanging in a cupboard and the jars grouped round this will serve the purpose just as well, especially if the cupboard is just large enough to accommodate the jars and not so big that a lot of warmth is lost. I know of people who group several jars round a small safety paraffin lamp, but this would only be satisfactory when the wine is under a fermentation lock otherwise the wine might become tainted by fumes.

Other aids to satisfactory fermentation are good nutrients. Yeast nutrients, as they are called, are carefully balanced yeast foods which assist the yeast to reproduce and therefore make the largest possible amount of alcohol. Sufficient nutrient speeds fermentation so much that, once you have used a good one, you will always do so. I know from my vast experience that warmth, a good yeast and good nutrient will together make wines ten times better than any old yeast, no nutrient and a warm atmosphere one day and a chilly one the next. We want the best; very well, let us take just that little extra care and spend those few extra

coppers which will make such an immense difference to the finished product.

Suppliers of special ingredients offer a variety of nutrients are accompanied by directions how to prepare. In most cases it is just a matter of mixing the nutrient with some of the prepared liquor and then adding it to the brew with the yeast.

Now, a word about 'invert' sugar. Most of you will be content to use household sugar and it is household sugar that I include in the recipes. However, I have proved beyond doubt that invert sugar gives better results. this is also obtainable from the same fires.

A summary of the foregoing is this: the inexperienced wine maker who uses bakers' yeast, no nutrient, household sugar and who allows the wine to ferment anywhere cannot possibly expect the results which can be achieved by following my advice. By doing so anyone, including beginner who do not have to endure years of apprenticeship, with the aid of a fermentation lock, by keeping the wine warm during the whole of the fermenting period, using the appropriate wine yeast, invert sugar and nutrient will obtain wines with a strength, clarity, flavour and bouquet of which they will be justly proud.

When bakers' yeast is used it is crumbled into the prepared liquor. When wine yeast is used the directions supplied by the dealer must be followed. This involves starting what is called a 'nucleus ferment'. A half-pint mild bottle will do for this. About a quarter-pint of water and a teaspoonful of sugar are boiled together for a minute and then allowed to cool. This is then put into the milk bottle-sterilized as directed later on- and the yeast then added in whatever form it is obtained.

The neck of the bottle is then plugged with cotton wool and put into a warm place. Within a few days-usually three-this little lot is fermenting merrily ready for adding to a batch of wine that you will be waiting to make.

If you prepare the liquor for wine-making and then add the wine yeast it will take three or four days to begin to ferment. Better therefore to get the nucleus fermenting ready to add to the liquor when you have prepared it so that the whole lot is quickly in a state of vigorous fermentation.

It is most important that the yeast is not added to hot because a temperature well below boiling will destroy the yeast. Let the little drop

of sugar-water cool well before adding the yeast and later let the prepared liquor cool well before adding the nucleus or 'starter bottle' as we call it. In the recipes I shall refer to adding the yeast as 'adding the nucleus' on the assumption that you will have taken my advice and will be using wine yeasts prepared as directed, but if you must use bakers' yeast merely crumble this into the liquor at the time you would add the nucleus.

It will be seen in the recipes that all the sugar is not used at once, this is because yeast ferments much better if the sugar is fed to it in stages. Too much sugar at the outset might cause the yeast to stop fermenting at around ten percent of alcohol. Inexperienced operators might think fermentation has finished naturally and put their wine in a cool place to clear- which, of course it would do. But it would be an over-sweet wine likely to start fermenting again at any time.

For a simple re-statement; having prepared the liquor as the recipes advise, the yeast or nucleus is added together with the nutrient and the wine put in a warm place until all fermentation has ceased.

In some of the recipes (chiefly those calling for flavoring to be added at a late stage of production), directions read: 'leave until fermentation has nearly ceased'. This is rather a broad term to beginners, but where fermentation locks are in use they will know when this stage is reached because the water will remain pushed up to one side of the lock and a bubble just manages to push through every two or three minutes.

Where fermentation locks are not in use, but where clear-glass jars are being used, beginners will be able to see the bubbles of gas rising. All the time there is quite a mass of them rising steadily, fermentation is quite vigorous. But when there is only the faintest trace of a line of bubbles round the perimeter of the wine and where only a few bubbles are seen rising slowly to the surface they may say, for all intents and purposes, that fermentation has nearly ceased-though it may go on for several more weeks.

THE CLEARING PROCESS

With the recipes and methods described here there is no need to use isinglass or any other aids to clarifying. These wines clear themselves usually before fermentation has ceased. Indeed, it is usual to have a brilliantly clear wine a month before fermentation has ceased. If one or two lots of wine appear to be slow to clear, do not worry, a week or two after fermentation has finally stopped clarifying will take place very

quickly. It is important to bear in mind that a clear wine usually has a little deposit to throw, so that it is always best to leave the wine for at least a month after it has become crystal clear in order that the last of the impurities and perhaps some unseen yeast cloud has time to settle out. If this is not done, a slight sediment might form in the bottles and when you begin to pour the wine into a glass the sediment is churned up so that it clouds the wine. Such a happening is not a calamity as the cloud will settle again, probably overnight, but it means putting the bottle away.

It is best when all fermentation has ceased, to siphon the clear wine (if not yet crystal clear) into another jar leaving the deposit behind. Then when the wine is finally crystal clear it should be siphoned into bottles. This racking, as we call it, helps to get the slight cloudiness to settle out quickly.

NATURAL ENEMIES

The enemies of successful wine-making are wild yeasts and acetic bacteria. The acetic bacteria which converts alcohol into acetic acid thereby turning wine to vinegar is ever present in the air.

Similarly, the yeasts and spores of fungi which turn wine insipid and flat or turn it sour are also in the air. When using fresh fruit and other ingredients from the garden or from shops these bacteria and yeasts and fungi are already on them, but they are easily destroyed so that they do no harm. The ingredients we shall be using will be supplied in sealed containers so that they will not already be contaminated by the causes of spoilage-as we call them.

However, the water we use might contain harmful bacteria that can spoil the wine or possibly wild yeast which can cause what we call 'undesirable' ferments. These ferments give 'off' flavors to put it politely-otherwise sour flavors as we refer to sourness in milk-not acid flavors.

Anyway, the methods described here ensure the destruction of all harmful yeasts and bacteria at the outset so they need not worry you.

Now, if wild yeasts and bacteria are in the air they must be on corks, inside bottles and jars; indeed, they are on everything we use. But they are easily destroyed so that success is assured.

It is not generally known that the molds on cheese, half-empty pots of meat paste and jam are often yeasts growing there, and it is this kind of

yeast floating about in the air that ruins our wines if we allow it to settle. To defeat this souring yeast we must keep our fermenting wines and finished wines covered closely. Treatment of finished wines is covered under the heading 'storing'. Covering fermenting wines in jars is very simple, but most important.

As soon as the prepared yeast has been added to the prepared liquid the top of the jar should be covered with a piece of polythene. This should be pressed down all around by hand and strong string tied tightly around. This will keep airborne diseases away from the wine because the gas generated during fermentation will find an outlet for itself and keep up a constant outgoing stream, thus preventing the diseases air contains from gaining access. Far better than this polythene covering is a **FERMENTATION LOCK**.

The whole idea of fitting a fermentation lock is to prevent air and airborne diseases reaching the wine. Firstly, the lock is fitted to a drilled cork and the cork then fitted to the jar. Water is then poured into the level shown. The gas formed during fermentation pushes through the water in the form of bubbles, but air-borne diseases are kept out. Better than water in the lock is a little of the sterilizing solution described latter, or a crushed and dissolved Campden tablet. This is best because if as sometimes happens a vacuum forms in the jar the air drawn in is purified by the sterilizing solution. When a vacuum forms inside the jar the lock works in reverse for a while and this often happens when warm wine is put into a jar and the lock fitted at once. But don't worry if this happens, because as soon as gas has been generated the lock will begin working properly.

Another advantage of having a fermentation lock in use is that it indicates when the fermentation has ceased.

All the time the bubbles are passing through, and all the time the water in the lock remains pushed up to one side, it means that there is pressure in the jar and that this pressure is gas being formed by the act of fermentation. When the fermentation ceases for good, the water returns to normal. During the early stages of fermentation, bubbles are running through the water at a rate of one a second or even faster than this. But as fermentation slows down they become far less frequent. Later on, the water remains pushed to one side and it may take five or even ten minutes for sufficient gas to make one bubble. During the very last stages of fermentation, it may take a week for one bubble to push through. Clearly,

then, all the time the water remains pushed up to one side the wine should be left, as it is safe to say that fermentation is still going on.

When the water returns to normal, give the jar a vigorous twist and the chances are that you will get fermentation on the go again for a day or two longer. If the whole idea in using locks is to keep airborne diseases from contaminating the wine we must ensure that the bung and lock are airtight. If they are not, the gas leaking will prevent air reaching the wine during the early stages, but as it slows down the outgoing stream of gas through the leakage holes would not be strong enough for this so that airborne diseases could easily reach the wine.

Having fitted the lock to the bung and jar, run a little sealing wax round where the bungs enter the jar and where the lock enters the bung. This precaution may not be necessary, but it is better to be on the safe side. When fermentation has ceased the lock and bung are removed in one piece and a new bung inserted. The wine is then put away to clear-as mentioned before.

NOTE: I have advised sealing wax above, but candle wax does just as well.

Where fermentation is carried on in a polythene pail or similar fermenting vessel during the early stages of production, the top of the vessel should be pulled down all around and then secured with thin strong string or a tightly fitting elastic band. The gas generated during this early vigorous ferment will find an outlet for itself and keep up a constant outgoing stream so that airborne diseases cannot gain access.

STERILIZATION

As mentioned, wild yeast and bacteria are likely to be inside bottles, jars and on corks, etc. Therefore, if we are to prevent them damaging our wines they must be destroyed. Bitter than boiling bottles, etc., in a pail of water or baking them in an oven is to use a sterilizing solution that does the job in a matter of seconds. This may be made up as follows:

Get 2 ozs. of sodium metabisulphite (or potassium metabisulphite), there being two forms. Nearly fill a half-gallon bottle with warm water and then add the crystals (or powder) and revolve the jar until all is dissolved. Try to use a glass stoppered jar or bottle for this.

To sterilize bottles and jars with this, pour a pint into the first bottle and shake it up so that all the inside is wetted. Then pour it into the next bottle and so on and then back to the bulk again. Having treated the bottles, it is best to rinse them out with boiled water that has cooled well. This will rid the bottles of the rather pungent odor of the sterilizing solution. But don't worry if a slight whiff remains in the bottles, because it will do no harm. Having rinsed the bottles, let them drain for a minute or two and they are now ready for use.

Corks. More wine has been ruined through using unsterilized corks than through any other cause. The crevices of corks teem with all sorts of harmful bacteria and spoilage yeasts. The best way to sterilize them is to put them in a small basin with something heavy on top to keep them submerged-a heavy cup will do-and then cover with the sterilizing solution. Leave this for about ten minutes and during the time you are bottling a batch of wine. As each cork is required, take it, dip it in boiled water and then wipe it dry with a cloth dipped in the sterilizing solution-which, incidentally, is known as sulphur dioxide or sulphite solution.

The drying of corks is necessary to prevent the weight of the wine pushing over the corks when the bottles are put away on their sides.

SIPHON, BOTTLING & HOW TO STORE

It is almost impossible to pour clear wine from one bottle to another without stirring up the lees (deposit) - the best method is to siphon the clear wine at bottling time.

First, put the bottle or jar of wine on a table and the empty bottles on a box or stool on the floor. Then, using a yard and a half of surgical rubber or plastic tubing, siphoning is quite a simple operation. Put one end of the tubing in the full jar (or the first of the full bottles) and suck the other end until the wine comes. As soon as this happens, pinch the tube at your lips and, while holding on tightly, put this end in the first empty bottle and let the wine flow. As the empty bottle nearly fills, slowly press the tube between finger and thumb in order to cut off the flow slowly rather than with a jerk. Sudden stoppage often stirs up the deposit. When the bottle has filled to the shoulders pinch the tube at the neck of the bottle being filled and put this end into the next bottle and let the wine flow again.

As the level in the full jar falls, lower the tube into the wine. But be careful not to lower so far that the deposit begins to be sucked into the

tubing. A good way of avoiding this is to ask a chemist to let you have fifteen inches of quarter-inch tubing and get him to bend the last inch of one end upwards. Then fit the straight end to the rubber tubing you have. At siphoning time, insert the glass tube to the bottom of the full jar of wine. The bend in the tube will rest on the bottom of the jar, but the opening of the end bent upwards will remain above the lees.

Now let me give the impatient wine-maker a warning. I know how nice it is to build up a stock and build it quickly, but don't be in such a hurry that you put wines away that are not yet perfectly clear. This results in disappointment upon opening if, as often happens, you decide to try a bottle of the oldest and the best you have for some special friend and find that you have stirred up a deposit and clouded what you imagined to be a perfectly clear wine. A reliable test to decide whether a wine is perfectly clear or not-and one I always carry out before bottling for storage purposes-is to hold a high-powered torch against the bottle. If there is no suggestion of a beam passing through a haze, then the wine is as clear as you will get it; but if there is a slight beam of light, leave the wine to clear perfectly. You will soon get used to this little test and be saved from what might be a most embarrassing position.

Finally, when the clear wine has been bottled and the corks have been rammed home they should be sliced off level with the rim of the bottles. Sealing wax should then be run over the whole surface and the bottles stored on their sides.

Sealing and storing in this fashion is important because it allows for the wine to keep the cork moist and so prevent shrinkage. Shrinkage would cause cracking in the sealing wax with the result that tiny air holes would appear through which wild yeast and bacteria can attack the wine.

In the ordinary way a well-made wine-that is one made with good yeast and nutrient-is strong enough in alcohol to preserve itself. A goodly percentage of alcohol acts as its own preservative and that of the wine itself. But poorly made wines are low in alcohol and can be spoiled in the bottles if air reaches them. Our wine, made by the recipes and directions here, will contain enough alcohol to destroy any wild yeast or bacteria that might reach it owing to shrinkage of corks. Nevertheless, it is still important that air is not allowed to reach the wine, because if it did so for prolonged periods the quality would deteriorate, the flavor suffer and much of the bouquet be lost.

Experienced wine makers, myself included, use the new plastic seals which when fitted to a bottle of wine shrink tightly, effecting a perfect airtight seal. I expect you have come across these often enough on bottles of cordial. The T'Noirot extracts described in later chapters are fitted with these. When these capsules (as they are called) are used the bottles may be stored upright. Storing bottles horizontally often presents a problem for some people, but friends of mine with a small cupboard to spare have lined it with orange boxes. In each partition they have fitted soft-drink cardboard crates so that each orange box holds twenty-four bottles on their sides. Having heard that wines must be stored at a temperature which should remain constant throughout the year, people are going to all sorts of trouble and thinking up all sorts of ingenious devices to achieve that end. Opinion is divided as to the ideal temperature in which to store wines-probably because wines, like human beings, prefer what suits them individually. The temperature suitable for one wine is not necessarily best for another.

Rapid changes of temperature are certainly best avoided, so if you can store your wines on a stone floor or in a cupboard which has a stone floor, so much the better. If you cannot do this, store your wines where you can and don't worry.

MATURING

I am afraid I always have to suppress a grin when people ask me how long a wine needs to mature because I know that all they really want to know is how soon they can drink it. It is surprising the number of people who simply will not believe that wines improve with age. They set about making wines possessed of urgency which should not exist and an impatience that is hard to believe. They really believe that wine can be made, matured and drunk in six or seven weeks. With luck, you might get fermentation over and done with and your wines clear and bottled in that time, and truly they are drinkable even so young, but-and it is an enormous 'but'-wine tasted at that tender age cannot be compared with the same wine tasted a year later. It is impossible to describe the changes that take place, but take place they do. Chemical changes are taking place constantly, so that one batch of wine does not taste the same when sampled at intervals of six weeks.

I know full well that you will be itching to get your teeth into these wines and I cannot blame you for that – I'm the same myself, always anxious to sample the latest batch to be bottled off. And it is a waste of time for me

to tell you to keep it at least a year before drinking because I know you'll never manage it; especially after you had a taste of it when siphoning it into bottles.

But please do this for your own sake. At bottling time, put say two bottles in the attic or some place where they cannot be reached easily—send them to me if you like. Seriously, those two bottles of each lot made will soon amount up to a nice little stock. The remaining four bottles from each gallon may be used as required.

The whole secret of building up a stock is to make several lots at the same time and when a jar is emptied at bottling time, start again with another lot. In this way you will always have a few gallons fermenting, several dozen bottles for use as required and a dozen or so slowly growing into a nice reserve. Then, when the first two bottles put away are a year or two old you may sample them. These will have become such magnificent wines in that time that your lesson will have been well and truly learned and the vow taken that hence forth half of all that is bottled is going to the attic. I hope it does, and I hope even more that you will be able to keep some of it for five years at least. For at five years it is better than age four and at three years old it is better than age two. I have proved all this to myself and have a few bottles of wine that I made over fifteen years ago.

BRIEF, BUT IMPORTANT

FERMENTATION LOCKS: There is no substitute for the fermentation lock, although many people use a balloon stretched over the jar instead of a fermentation lock, and provided this is a tight fit, it will certainly protect the wine. But this cannot give any indication as to when fermentation has ceased. The Balloon is fitted over the neck and, as gas escapes into it, slight inflation takes place and as pressure grows the gas forced out round the neck of the jar. Another substitute for the lock is a three-inch piece of quarter-inch bore glass tubing stuffed with cotton wool and fitted in the same way as the lock. But, as with a balloon this can give no indication as to when fermentation has ceased.

YEAST-AND ADDING IT

It will be seen in the recipes that I give 'yeast' without mentioning any kind. This is because some of you will be using bakers' yeast and others

one of the many varieties of wine yeast. In the directions which accompany the recipes the time to add the yeast is clearly stated. If bakers' yeast is used, use half an ounce and crumble this into the jar at the time advised. Experienced wine makers and those using wine yeasts for the first time will have their little nucleus ferments ready and these will be added at the time advised in the directions given with each recipe.

SUGAR WATER (Syrup)

In the recipes and directions it will be seen that the sugar and water are added to the mixtures as a syrup. Make sure the sugar has dissolved before the water comes to the boil. And so that mistakes do not occur, label the jar so that you know how much sugar has to be added at each stage. There is no need to be exact when adding 'one third' or whatever the direction happens to be, but it is a good plan to have the total amount of sugar to be used at the outset put aside; in this way, when all has been added you will know there is no more to go in and you will not be left wondering if you have used as much as you should have done.

GALLON JARS

Someone is sure to ask before they begin: How can I get a gallon of water, the flavoring, and all that sugar into a one-gallon jar? The fact is that, in the way we shall be doing it, it is quite a simple matter. Gallon jars hold half a pint more than a gallon when full, and because we shall be adding the sugar in stages, most of each lot of sugar will be used up before the next is added. Before the last lot of sugar and water is added, the wine is transferred to another jar and the deposit thrown away. This will leave space for the last lot of syrup to be added. If, through some misfortune, this is not quite the case, put the little remaining syrup in a freshly sterilized screw-stoppered bottle and screw down tightly. This will keep it safe for the few days necessary for fermentation to reduce the liquor in the jar and so make room for that little drop of left-over.

If at the time called for in the recipes you do not have a second jar in which to put the fermenting wine (at the time given for disposing of the deposit) you may pour the wine into any suitable container, then throw away the deposit, clean out the jar, sterilize it and then return the wine to it.

SAUCEPANS

If it happens that your saucepans are not quite large enough to hold the sugar and five pints of water that is to be boiled at the first stage of making the wine, boil the sugar in a quart of water and the remaining three pints of water in another saucepan then mix.

FRESH FRUIT WINES

There is no need for me to mention the enormous popularity this branch of home wine-making enjoys, or that countless thousands of people all over the world embark with tremendous enthusiasm each summer upon turning wild fruits and surplus garden fruits into wines fit to grace the tables of a banqueting hall. Just let me say that, no matter how advanced methods become and how easily obtainable special ingredients for wine making are, there will always be in the hearts of everyone a place for the true country wines, for they have that indefinable 'something' which sets them apart from all others, a uniqueness that cannot be found in any other wine either commercial or home produced.

The methods I use myself are described here, and although they are the simplest and the surest ever evolved, it is necessary to point out the complications that arise if these methods are not used.

Years ago-and, I am very sorry to say, even today-many thousands of unfortunate home wine makers are following methods which advocate: 'crush the fruit, add the water and leave to ferment'. Other methods advise boiling the fruits. In both cases disappointment is almost a certainty, and the reason for this is easy enough to understand.

The gray-white bloom that forms on grapes and other fruits is yeast put there by nature and it may be said that the first wine known to early man was the result of this yeast fermenting fruits crushed for a purpose other than wine-making. In the ordinary way, this yeast might well make good wine if allowed to ferment alone. Unfortunately with this yeast comes what we term 'undesirable' yeast (wild yeast), and several kinds of bacteria-each of which can ruin our wines. They bring about what we call 'undesirable' ferments that usually take place at the same time as the ferment we want to take place so that instead of a wine of quality the result is one tasting of flat beer or cloudy evil-smelling liquid fit only for disposal. Another bacterium, known as the vinegar bacterium, will turn wines into vinegar.

Since there is nothing we can do when any of these calamities has occurred, they must be prevented from happening.

Clearly, we must destroy all these enemies before beginning. The simplest method is of course-at first thought anyway-is to boil the fruits. But here rises another problem. All fruits contain pectin, a glutinous substance which causes jams to 'set'. Boiling fruit releases pectin. This pectin holds itself and minute solids in suspension. Giving the wine a cloudiness that is impossible to clarify or even filter out. We may put the crushed fruit through a jelly-bag to remove every particle of pectin-bearing fruit and then boil the juice only, but this is a messy, tedious job that takes hours and eliminates all the pleasure from wine-making.

Obviously, what we need is a method which will destroy the wild yeast and bacteria on the fruits (as boiling does) without actually boiling, and, indeed, without heating our fruits at all because it needs very little heat to bring out the pectin.

Our method, known as the 'sulphiting' method, does just this and produces full-bodied, crystal-clear wines easily and quickly without fuss or bother. All that is necessary to achieve this are tablets costing just pennies. Campden fruit-preserving tablets are available in bottles of twenty from most chemist. In the ordinary way-and provided the fruit is not too heavily affected with wild yeast and bacteria-one tablet will destroy the undesirable element contained in one gallon of crushed fruit pulp, but we cannot be sure of this. Now, two tablets will surely do this, but being a comparatively heavy dose this might also destroy the yeast we shall be adding so that the ferment we desire does not take place. My method takes care of both these risks, not only destroying the wild yeast and bacteria on the fruits, but also allowing the yeast we add to ferment alone and unhindered to produce wines of clarity and quality the like of which cannot be produced by any other method. By adding one Campden tablet to a good deal less than one gallon of fruit pulp ('must') this will represent a rough equivalent to two tablets per gallon. But before we add our yeasts we shall have increased the amount of liquid or pulp to nearly twice the amount, consequently reducing the amount of sterilizing solution to half or the equivalent of one Campden tablet per gallon. In this way we achieve our overall aim.

Each Campden fruit-preserving tablet contains four grains of sodium metabisulphite; therefore, any readers finding Campden tablets in short supply may ask their chemist for four grains of sodium metabisulphite (or potassium metabisulphite-there being two forms), and use this. But because a chemist would find a single order of four grains rather trivial, it would be best to ask for say, six or ten packets each containing four grains. If you are making two-gallon lots of wine the amount to use

would be eight grains. Do not be tempted to buy by the ounce and measure out a grain as this is impossible unless you have the appropriate scales.

Just in case you happen to be one of those people who, even in these enlightened days, abhors the use of chemicals, let me assure you that sulphur dioxide (the solution which results when Campden tablets are dissolved) is quite harmless to humans when used in the proportions recommended. Indeed, as many as eight tablets (thirty two grains) may be used with safety, but such heavy dosing would prevent a 'must' fermenting.

The sulphiting method is used by the trade, so we shall be following a method well tried and proved.

Heaven knows how many hundreds of gallons of wines I have made by this method and all with the same unfailing success.

Method 1 makes wines of the heavier type; their flavors are more pronounced and their color more full than those produced by method 2. Those wishing for lighter wines more suitable for serving with meals should use method 2. The main difference in the two methods is that we ferment the fruit pulp itself in method 1, and the juice only in method 2. It will be appreciated that when fermenting the pulp we must as a matter of course get far more from our fruits. But we do not want too much in a light wine otherwise the subtle difference between a heavier wine and the popular lighter wines is lost.

The short pulp ferment of method 1 ensures that we get all the flavour and desirable chemical matter from our fruits in the right proportion.

The best method to use for each type of fruit is given with each recipe. It should be taken into account that varied amounts of fruit and sugar with the use of proper method produce distinctly different types of wine.

METHOD 1

Crush the fruit by hand in a polythene pail and pour on one quart of boiled water that has cooled. Mix well. Crush one campden tablet and dissolve the powder in about half an egg cupful of warm water and mix this with the fruit pulp.

Leave the mixture for one or two hours. A little bleaching will take place but this is nothing to worry about. After this, take one-third of the sugar to be used (or approximately one-third) and boil this for one minute in three pints of water.

Allow this syrup to cool and then stir into the pulp. Then add the yeast (or nucleus) and ferment for seven days. After seven days, strain the pulp through fine muslin or other similar material and wring out as dry as you can. Put the strained wine into a gallon jar and throw the pulp away. Then boil another one-third of the sugar in one pint of water for one minute and when this has cooled add it to the rest. Plug the neck of the jar with cotton wool or fit a fermentation lock and continue to ferment in a warm place for a further ten days.

At this stage, if you have not a spare jar, pour the wine into a polythene pail leaving as much of the deposit in the jar as you can. Clean out the jar, sterilize it and return the wine to this. The remaining one-third of the sugar may now be boiled for one minute in the remaining pint of water. When this has cooled, add it to the rest. Refit the lock or plug the neck of the jar with fresh cotton wool. After this, the wine should be left in a warm place until all fermentation has ceased.

NOTE: If there is not quite enough space for all of this last lot of syrup, put the remainder in a sterilized screw-top bottle and store for a few days in a cool place. This may be added when fermentation has reduced the level of the liquid in the jar. If you have to do this, don't forget to refit the lock.

METHOD 2

Crush the fruit in a polythene pail and add one quart of boiled water that has cooled. Mix well. Crush one Campden tablet and dissolve the powder in about half an egg cupful of warm water and mix this with the fruit pulp. Leave the mixture in a cool place for twenty-four hours, stirring twice during that time. Strain through fine muslin or other similar material and squeeze gently but not too hard. Discard the fruit pulp.

Then boil one-third of the sugar in half a gallon of water for one minute and allow to cool. Mix this with the juice and return the lot to the polythene pail. Then add the yeast (or nucleus), and ferment for ten days. After this, pour the top wine into a gallon jar leaving as much of the deposit behind as you can. Boil another one-third of the sugar in half a

pint of water for one minute and when it is cool add it to the rest. Plug the neck of the jar with cotton wool or fit a fermentation lock and ferment in a warm place for fourteen days.

After this, boil the remaining sugar in the remaining half-pint of water for one minute and when cool add it to the rest. refit the lock or plug the neck of the jar with fresh cotton wool and leave in a warm place until all fermentation has ceased. The recipes are designed to make one gallon of wine, if two gallons are being made at once twice the amount of each ingredient must be used (including Campden tablets) and the sugar and water added in double quantities. This principle applies where three or four gallons are being made and it is easy enough to work out. Just to be sure that mistakes do not occur when adding the syrup-sugar and water-stick a label on the jar and note on this the amount added. Readers will be quick to appreciate that certain fruits are more suitable than others for making certain types of wine. Clearly, it would be as hopeless to try to make port from rhubarb as it would be to try to grow potatoes on a pear tree, and I think it is in this respect that many people go astray; they make wines from the cheapest and most readily available fruits (naturally enough) but they do not give the slightest thought to what the result will be or whether they will like it or not. Before you begin decide on the type of wine you are most likely to prefer and then use the fruit and the method which will make this type of wine. Elderberries make an excellent port-style wine and many variations, each with the basic port style underlying them, so that from this lowly wild fruit we may obtain not only a full-bodied port-style wine, but also a Burgundy style, a claret and others according to the whim of the operator.

Blackberries make similar wines, as do certain varieties of plums, damsons and black currants. The juice from lighter-colored fruit such as raspberries, loganberries, red and white currants and others make excellent table wines. But there is no need to cover this aspect fully here because every recipe is preceded by the name of the type or style of wine that can be expected from each recipe. I say 'expected' because to guarantee that the wine will be identical to the one expected would be unwise, but only because the amounts of sugar and acid present in the fruits vary from season to season-indeed, they vary with the type of tree, soil, situation and with the sort of summer we have had while the fruits have been growing. A hot summer produces fruits containing more sugar and less acid than a wet sunless summer, when the effect is the reverse.

In each recipe appears the name of the best yeast to use and this is best added as a nucleus as already described. If you must 'use bakers' yeast or

a dried yeast, merely sprinkle it over the surface of the 'must' at the time given in the method you are using.

A final word. Make sure all fruits are ripe. This is far more important than most people imagine. Half-ripe fruits or those with green patches on them should be discarded as it needs only one or two of these to give a gallon of wine an acid bite. Fully ripe fruit is essential if we hope to make the best wine.

When we have decided that our garden fruits are ripe enough or those you have your eye on in the hedgerows, leave them for another three or four days before gathering.

RECIPES 1 - 32 (BERRY WINES)

1. BLACKBERRY WINE (Port Style):

4lb. blackberries, 4lb. sugar (or 5lb. invert), 7pts. water, port yeast, nutrient.
Use method 1. Ferment the pulp.

2. BLACKBERRY AND ELDERBERRY WINE (Port Style):

2 1/2lb. elderberries, 2 1/2lb. blackberries, 7pts. water, 3 1/2lb. sugar (or 4lb. invert), port yeast, nutrient.
Use method 1. Ferment the pulp after crushing and mixing together.

3. BLACKBERRY WINE (Burgundy Style):

4-5lb. blackberries, 3 3/8lb. sugar (or 4lb. invert), burgundy yeast, nutrient, 7pts water.
Use method 1. Ferment the pulp.

4. BLACKBERRY WINE (Beaujolais Style):

This recipe was passed on to me by a friend. It won 1st prize among 600 entries on the occasion of the 2nd National Conference and Show for Amateur Wine-Makers at Bournemouth. Unfortunately it wasn't my original recipe, or I could have won that prize!

4 1/2lb. blackberries, 2 1/2lb. sugar (or 3lb. 2oz. invert), burgundy yeast, nutrient, 7pts. water.
Method 1 was used. The wine was, of course, dry.

5. BLACKBERRY WINE (Light Table Wine):

3lb. blackberries, 3lb. sugar (3 3/4lb. invert), 7pts. water, burgundy yeast, nutrient.
Use method 2. Ferment the diluted juice.

6. BLACKCURRANT WINE (Port Style):

4lb. blackcurrants, 1lb. raisins, 3lb. sugar (or 3 3/4lb. invert), port yeast, nutrient.
Use method 1. Ferment the pulp with the raisins.

7. BLACKCURRANT WINE (Port Style):

4lb. blackcurrants, 7pts. water, 3 1/2lb. sugar (or 4lb. invert), port yeast, nutrient.

Use method 1. Ferment the pulp.

8. BLACKCURRANT CLARET:

3lb. blackcurrants, 2 1/2lb. sugar (or 3lb. invert), 7pts. water, all purpose wine yeast, nutrient.

Use method 2. Ferment the diluted juice.

9. BLACKCURRANT WINE (A Light, Sweet Wine):

3 3/4lb. blackcurrants, 3 1/2lb. sugar (or 4lb. invert), 7pts. water, all-purpose wine yeast, nutrient.

Use method 2. Ferment the diluted juice.

10. CHERRY WINE (A Delightful Sweet Wine):

8lb. black cherries, 7pts. water, 3 1/2lb. sugar (or 4lb. invert), all-purpose wine yeast or Bordeaux yeast, nutrient.

Use method 1 Weight with stones and ferment the pulp.

11. CHERRY WINE (A Light Dry Wine):

8lb. black cherries, 7pts. water, 2 1/2lb. sugar (or 3 1/4lb. invert), sherry yeast is best, otherwise all-purpose wine yeast, nutrient.

Use method 2. Ferment the strained diluted juice.

12. REDCURRANT WINE (Light Table Wine):

3lb. redcurrants, 7pts. water, 3lb. sugar, (or 3 3/4lb. invert), all-purpose wine yeast, nutrient.

Use method 2. Ferment the strained diluted juice.

13. REDCURRANT WINE (A Light Medium-Sweet Wine):

4lb. redcurrants, 7pts. water, 3 1/2lb. sugar (or 4lb. invert), all-purpose wine yeast, nutrient.

Use method 2. Ferment the strained diluted juice.

14. DAMSON WINE (Port Style):

8lb. damsons, 7pts. water, 4lb. sugar, (or 5lb. invert), port yeast, nutrient.

Use method 1. Weight with the stones and ferment the pulp.

15. DAMSON WINE:

Suitable for making into Damson Gin-See 'Recent Experiments'.

5lb. damsons, 7pts. water, 3lb. sugar (or 3 3/4lb. invert), all-purpose wine yeast, nutrient.

Use method 1. Weight with the stones. Ferment the pulp.

16. DAMSON AND ELDERBERRY WINE (Port Style):

3lb. damsons, 1 1/2lb. elderberries, 3 1/2lb. sugar (or 4lb. invert), port yeast, nutrient, 7pts. water.

Use method 1. Ferment the pulp.

17. DAMSON AND DRIED PRUNE WINE (Burgundy Style):

Prunes should be soaked overnight, the water discarded and the prunes added in the crushed state to the crushed damson.

4lb. damsons, 2lb. dried prunes, 7pts. water, 3lb. sugar,

Use method 1. Ferment the crushed pulp.

18. RASBERRY WINE (Light, Dry): yeast, nutrient.

4lb. raspberries, 2 1/2lb. sugar, (or 3lb. 2oz. invert),
7pts. water, sherry yeast or all-purpose wine yeast,
nutrient.

Use method 2. Ferment the strained diluted juice.

19. RASBERRY WINE (Sweet Dessert):

4lb. raspberries, 1lb. raisins, 7pts. water, 3 1/2lb.
sugar, (or 4lb. invert), all-purpose wine yeast and
nutrient.

Use method 2. Ferment the strained diluted juice but with
the chopped raisins for the first seven days.

20. ELDERBERRY WINE (Port Style):

4lb. elderberries, 7pts. water, 4lb. sugar (or 5lb.
invert), port yeast, nutrient.

Use method 1. Ferment the crushed pulp.

21. ELDERBERRY WINE (Medium Dry):

3 1/2lb. elderberries, 3lb. sugar (or 3 3/4lb. invert),
7pts. water, sherry yeast or all-purpose wine yeast,
nutrient.

Use method 2. Ferment the strained diluted juice.

22. ELDERBERRY CLARET (Dry, of course):

3lb. elderberries, 2 1/2lb. sugar (or 3lb. invert), 7pts.
water, sherry yeast or all purpose wine yeast, nutrient.

Use method 2. Ferment the strained diluted juice.

23. PLUM WINE (Burgundy Style):

8lb. plums, any fully ripe variety is suitable, 7pts.
water, 3lb. sugar (or 3 3/4lb. invert), burgundy yeast,
nutrient.

Use method 1. Weight with the stones and ferment the
crushed pulp.

24. PLUM WINE (Port Style):

Dark red, fully ripe fruits must be used. 10lb. plums,
7pts. water, 3 1/2lb. sugar (or 4lb. invert), port yeast,
nutrient.

Weight with the stones. Use method 1. Ferment the crushed
pulp.

25. RHUBARB WINE:

This wine is best made on the dry side and used as an
appetizer. If you try to make it sweet, it would have to
be rather too sweet. Four pounds of sugar will make it a
medium sweet wine, but even this will not reduce the
acidity which gives this wine its character which,
unfortunately, is causing it to lose its popularity. It
is possible to remove the acid by using precipitated
chalk, but this is hardly for beginners and a practice
which, in any case, alters the whole flavour of the
resulting wine.

5lb. rhubarb, 3lb. sugar (or 3 3/4lb. invert), 7pts.
water, sherry yeast or all purpose wine yeast, nutrient.
Crush the rhubarb with a rolling pin, starting in the

of water (boiled), and in which one Campden tablet has been dissolved.
middle of each stick. Soak for five days in three pints
Then strain, wring out dry and warm just enough to dissolve half the sugar.

Having done this, ferment for ten days and then proceed as you would with any other recipe here, adding the rest of the sugar and water in stages.

26. LOGANBERRY WINE:

3 to 4lb. loganberries, 3lb. sugar (or 3 3/4lb. invert), burgundy yeast, nutrient, 7pts water.
Use method 1. Ferment the crushed pulp.

27. GOOSEBERRY WINE (Table Wine):

6lb. gooseberries, 3 1/2lb. sugar (or 4 1/4lb. invert), 7pts. water, tokay yeast or all purpose wine yeast, nutrient.
Use method 1. But ferment pulp for three days.

28. GOOSEBERRY WINE (Sherry Style):

The best gooseberries for this wine are those that have been left on the bushes to turn red or yellow, according to variety. They should be firm but soft and at the same time not damaged. Any damaged ones and any with a suggestion of mould or mildew on them must be discarded. For a dry sherry style use 2 1/2lb. sugar, for a medium dry use 3lb., and for a medium sweet use 3 1/2lb., or the corresponding amounts of invert sugar.
5lb. gooseberries, 7pts. water, sugar (as above), sherry yeast or all purpose wine yeast, nutrient.
Use method 1. But ferment the pulp for five days only.

29. WHORTLEBERRY WINE (Burgundy Style):

Whortleberries are a small wild fruit which many people come to the country to pick; they make excellent jams and jellies-and very good wines, otherwise known as 'herts'.
6pts whortleberries, 7pts. water, 3lb. sugar (or 3 3/4lb. invert), burgundy yeast, nutrient.
Use method 1. Ferment the pulp.

30. WHORTLEBERRY WINE (Port Style):

8pts. whortleberries, 7pts. water 4lb. sugar (or 5lb. invert), port yeast, nutrient.
Use method 1. Ferment the pulp.

31. WHORTLEBERRY WINE (Table Wine):

5pts. whortleberries, 7pts. water, 2 1/2lb. sugar (or 3lb. 2oz. invert), all purpose wine yeast, nutrient.
Use method 2. Ferment the strained diluted juice.

32. SLOE WINE:

Sloes make a delightful wine which is very popular with those living in the country, and is particularly suitable for turning into sloe gin. Not more than 4 lb. should be used owing to their astringency.
4lb. sloes, 3lb. sugar (or 3 3/4lb invert), 7pts. water, all purpose wine yeast, nutrient.
Use method 1. But ferment pulp for three days only.

MAKING WINE FROM RIBENA TUTORIAL

Before I explain how easy it is to make wine with ribena let me point out that this famous syrup of excellent quality could well be added to fermenting 'musts' made up from of the fruits to get special results. The rate to add it would be one to two bottles per gallon.

When making wines from dried fruits the addition of one or two bottles of Ribena per gallon would make a vast improvement to the flavour and quality of the wine.

Similarly, when making wines from fresh fruits that give a red wine, one or two bottles of Ribena could well be added to make up for other fruits in this way, you may disregard the SO₂ preservative (more about this later) because the amount in the Ribena will not be enough to stop fermentation, but it would be best to add it at the vigorous fermentation stage-during the first ten days.

If you propose to use Ribena in this way, bear in mind that each bottle contains approximately eight ounces of sugar, so you should reduce accordingly the amount of sugar in whichever recipes you are using.

Undiluted Ribena is not readily fermentable, because it contains just over seven pounds of sugar per gallon and is preserved with 350 parts per million SO₂-either of which is capable of preventing fermentation.

Obviously, our aim when making wine with Ribena will be to reduce the amount of sugar to about three and a half pounds per gallon, by using half Ribena and half water. In doing this, we shall reduce the SO₂ preservative to around 175 parts per million. This amount is unlikely to prevent fermentation, though it could do so.

My trials with ribena were carried out with the above point borne in mind and it will be seen that I began with a good deal less than equal parts of Ribena and water, gradually bringing them up to equal parts.

Because I did not want to overwork the yeast by giving it too much sugar to work on at the start, and because I wanted to reduce the SO₂ content to below 175 parts per million (without heating with the risk of spoiling the

flavor of the syrup), I decided to work to the following method. The method, incidentally, met with the approval of V. L. S. Charley, B.BC., PH.D., technical director of the Royal Forestry factory of the Beecham group and one-time director of the Long Ashton Research Station, Bristol.

All water used in the process was first boiled and allowed to cool naturally.

STAGE 1

Two bottles of Ribena were diluted with twice the amount of water (four Ribena bottles full). Yeast in the form of a nucleus was added and the mixture allowed to ferment for ten days.

STAGE 2

After ten days' fermentation, two bottles of ribena and one Ribena bottle of water were added and the mixture allowed to ferment for a further ten days.

STAGE 3

After a total of twenty days' fermentation, two bottles of Ribena and one more bottle of water were added. Fermentation was then allowed to carry on to completion, taking, in all, three months. The result was a good, round wine flavored delightfully but not too strongly of fresh blackcurrants.

At stage 3 it was borne in mind that, while most of the SO₂ would have been driven off during fermentation by adding those last two bottles, I was, in effect, bringing the total SO₂ content up to 175 parts per million. Fearing that the yeast might be just a little weakened at this stage I decided to drive off the SO₂ in the last two bottles by raising the temperature of the to 70 deg. C. If you want to do this and have no suitable thermometer, stand the bottles in a saucepan of water and slowly raise the temperature until the Ribena in the bottles has increased in volume enough to reach the rims of the bottles. The temperature is high enough to drive off the SO₂ and the heat should be cut off at once. The caps of the bottles must be removed before heating. The whole of

fermentation was carried out in narrow-necked bottles plugged with cotton wool, fermentation locks being fitted after ten days. Racking was not carried out until one month after the last addition. Monthly racking followed until fermentation ceased. Even at this early stage the wine was nice to drink, but it had improved vastly at the age of six months.

At first it might seem expensive to make wine with Ribena, but against the cost one should set the fact that no sugar need be added and that one has a top-quality product all ready for the job in hand. Apart from this, there is no expensive fruit to buy, no messy crushing-in fact nothing much to do at all. And, most important of all, Ribena has been treated with a pectin-destroying enzyme, which means that you could boil it if you wished without fear of pectin clouding the finished wines. Such boiling would, of course, drive off the SO₂ and give you a wine flavored slightly to cooked blackcurrants.

It will be seen that a sweeter wine may be made by using one bottle more of Ribena or one less of water, while a dry wine would result if less Ribena were used. A dry wine would lack the fuller flavour, but this would be offset to some extent by the dryness.

If eight bottles of Ribena are made into one gallon by adding water, the gallon will contain roughly four pounds of sugar and the equivalent of four pounds of blackcurrants. This amount of fruit is ample for a gallon of wine and, provided one likes a fairly sweet wine, this proportion of sugar to fruit is not too much. On the whole, I feel that seven bottles of Ribena would be the limit you could use to make a gallon of wine without it being too sweet.

It will be clear that my trials with Ribena, using six bottles to make just under a gallon of wine, have been most successful and I do urge readers to have a go.

A point to bear in mind is that a good light wine is often made with as little as two pounds of blackcurrants to the gallon, therefore, if you made four bottles of Ribena into a gallon of 'must', you would have used the equivalent of two pounds of blackcurrants and two pounds of sugar. This would give you a wine of about twelve percent of alcohol by volume. Such a wine would be dry, but by adding half a pound of sugar during the process you would get a sweeter wine of one or two percent more alcohol.

EXTRACT TUTORIAL

This chapter shows how easily wines the flavor of world famous liqueurs and other commercial products may be added with the minimum of utensils and labor; indeed, this is probably, if not decidedly, the simplest the least troublesome and the most rewarding of all adventures into wine-making.

In what are known as T'Noirot Extracts we have a readily prepared ingredient and, as will be seen in the recipes, no preparation is needed, the stuff is ready to use.

You might get a decent imported wine or British wine at seven and six a bottle, but you will never be able to buy wines with the flavour of these world-famous liqueurs at any price, and certainly not for thirty cents a bottle-all they will cost you to make. Nor will you ever buy Vermouth at less than fifty cents a bottle; the Vermouth recipe alone, then, must be worth a fortune to anybody who likes Vermouth.

When making these wines do please use good yeast and nutrient, for the results obtained in this way will surpass any you can hope to achieve by using bakers' yeast and no nutrient.

It will be seen in the recipes that I have included invert sugar because this gives the best results here. Invert sugar contains a little acid and this is essential in wine-making as we have already seen. If you use household sugar, you will have to add the juice of one lemon or one-eighth ounce of citric acid to give just the tiny amount of acid required.

When adding the extract to the prepared syrup (sugar-water), make sure you get all of it out of the bottles.

When deciding which extract to use, you must first decide on which you are likely to prefer (unless you know in advance and from experience that you like Vermouth or Kirsh or cherry brandy) and then choose that one. In this way you will make a wine that might disappoint you-after all, not all tastes are the same.

VERY IMPORTANT: The method we shall be using calls for adding these very highly concentrated flavorings to a very small amount of liquid to begin with.

The flavor will be very, very strong, so do not sample it, and the odor given off might strike people as not quite pleasant. This is quite natural, so do not be put off using them because of this. And don't take a 'sniff' of the wine during the early stages, for the same reason.

T'NOIROT EXTRACTS AND WHAT THEY ARE MADE OF

The following list contains the names of most of the T'Noirot Extracts that we shall be using in this chapter and beside each appears details of their contents. The extracts are scientifically blended to give flavors identical to the world-famous liqueurs of the same names. Thus you are assured of the real thing and not a synthetic substitute.

These flavorings are highly concentrated and should not, therefore, be judged by their odor. Anyone smelling the raw undiluted material or sampling the wines made from the extracts is likely to imagine that something is not quite right. Do not pay any attention to the strength or pungency of the odor and do not sample any wines being made from the extract until fermentation has almost ceased. Even at this stage it is not wise to try to judge the wine. Wait, I implore you, until fermentation has ceased altogether and the wine has been clear for at least a month. As with all other wines, the flavor improves immensely with age. I am able to speak from first-hand experience because I have been making wines with these extracts, and I can assure you in absolute sincerity that each extract makes a wine identical in flavor to the world-famous commercial liqueur the name of which it carries.

And let me just add that the oil of juniper mentioned in other parts of this book is an extract of juniper berries-juniper being an ornamental shrub grown a good deal in this country.

LIQUEUR GREEN CONVENT

LIQUEUR YELLOW CONVENT

Both distilled from plants growing in the high mountain regions. These two established the now world-wide reputation of T'Noirot.

CURACAO, RED

CURACAO, WHITE

Two liqueurs of Dutch origin distilled from small green oranges.

CHERRY BRANDY

Made from unfermented cherries.

DANZIG

A liqueur of German origin.

KUMMEL

Of continental origin, extracted from caraway seed. Wine made from this extract would act as a stimulant of the digestive organs.

MARABELLE

Distilled from the famous Lorraine plum.

PRUNELLE

Distilled from the wild plum.

Many of the extracts contain blends of bitter and aromatic plants-Vermouth being a good example of this. We are all well aware of the delicate flavors of the French and Italian Vermouths and will thus be enabled to appreciate the value of all the T'Noirot Extracts, for they bring us something quite unique when it comes to making wines from them.

These extracts were not intended for the purpose to which I put them. Making wines from them instead of fruit or other ingredients is my own idea entirely and I am proud to be the originator of both the idea and of the recipes herein. I am also proud to pass them on to my readers all over the world.

As will be seen in the recipes, I have advised carrying out the entire fermentation in the gallon jar, but if you would prefer to ferment for the first ten days in a polythene pail by all means do so, but make certain it is covered as directed earlier. If you do this, give the liquor a good stir before putting it into the jar otherwise some of the deposit and a lot of flavoring may be lost. Do not on any account divide the liquor, say, into two half-gallon lots because half-gallon jars happen to be available. Keep it as one until all fermentation has ceased. When this has happened the clearer wine may be siphoned off the deposit into another jar and put away to clear. When clear, it should be bottled.

CHERRY BRANDY WINE

6 bottles of cherry brandy extract, 3 lb. sugar (or 3 $\frac{3}{4}$ invert), 1 gal. water, yeast and nutrient.

Boil one-third of the sugar in half a gallon of water for two minutes, allow to cool and pour into the gallon jar. Then add the extract, yeast and nutrient.

Cover as directed of fit fermentation lock and ferment in a warm place for ten days. Then boil another third of the sugar in a further quart of water for two minutes and when cool add this to the rest. Cover again as before or refit the lock and continue to ferment

in a warm place for a further fourteen days. After this, boil the rest of the sugar in the remaining quart of water as before and when cool add the the rest. Cover again or refit the lock and leave in a cool place until all fermentation has ceased.

VERMOUTH (ITALIAN)

6 bottles of Italian Vermouth extract, 3 lb. sugar (or 3 3/4 lb. invert), yeast and nutrient.

Boil one-third of the sugar in a half-gallon of water for two minutes. Allow to cool and pour into a gallon jar. Then add the extract, yeast and nutrient. Cover as directed or fit fermentation lock and ferment in a warm place for ten days. The boil another one-third of the sugar in a further quart of water and when this is cool add it to the rest. Cover again or refit the lock and continue to ferment in a warm place for a further fourteen days. After this, boil the remaining sugar in the remaining quart of water as before, when add to the rest. Cover again or refit the lock and leave in a warm place until all fermentation has ceased.

VERMOUTH (FRENCH)

6 bottles of French Vermouth extract, 3 1/4 lb. sugar (or 4 lb. invert), 1 gal. water, yeast nutrient.

Boil one-third of the sugar in half a gallon of water for two minutes and when cool pour into a gallon jar. Then add the extract, yeast and nutrient. Cover as directed or fit fermentation lock and ferment in a warm place for ten days. Then boil another one-one third of the sugar in a quart of water for two minutes and when cool add this to the rest. Allow to ferment in a warm place for a further fourteen days. After this, boil the remaining water and sugar as before and when cool add to the rest. Cover again or refit the lock and continue to ferment in a warm place until all fermentation has ceased.

CREAM OF APRICOT WINE

5 bottles of apricot extract, 3 lb. sugar, (or 3 3/4 lb. invert), 1 gal. water, yeast and nutrient.

Boil one-third of the sugar in half a gallon of water for two minutes, allow to cool and pour into a gallon jar. Then add the extract, yeast and nutrient. Cover as directed or fit fermentation lock and ferment in a warm place for ten days. The boil another third of the sugar in a quart of the water for two minutes and when this is cool add it to the rest. Cover again as directed or refit fermentation lock and continue to ferment in a warm place for a further fourteen days. After this, boil the rest of the sugar in the remaining water as before and when cool add to the rest. Cover again or refit lock and continue to ferment in a warm place until all fermentation has ceased.

CREAM OF PEACH WINE

6 bottles of cream of peach, 3 lb. sugar (or 3 3/4 lb. invert), 1 gal. water, yeast and nutrient.

Boil one-third of the sugar in half-gallon of water for two minutes and when cool pour into a gallon-size glass jar. Then add the extract, yeast and nutrient. Cover as directed or fit fermentation lock and ferment in a warm place for ten days.

Then boil another one-third of the sugar in a quart of water and when cool add this to the rest. Cover again as directed or refit the lock and continue to ferment in a warm place for a further fourteen days. After this, boil the rest of the sugar in the remaining water as before and when cool add to the rest. Cover again as directed or refit the lock and continue to ferment in a warm place until all fermentation has ceased.

SLOE GIN WINE

6 bottles of sloe gin extract, 3 lb. sugar (or 3 3/4 lb. invert), 1 gal. water, yeast and nutrient.

Boil one third of the sugar in a half gallon of water for two minutes and when cool pour into a gallon jar. Then add the extract, yeast and nutrient. Cover as directed or fit fermentation lock and ferment in a warm place for ten days. Then boil another one-third of the sugar in a quart of water as before and when this is cool add to the rest. Cover again or refit lock and continue to ferment in a warm place for a further fourteen days. Then boil the rest of the sugar in the remaining water as before and then cool add to the rest. Cover again refit the lock and continue to ferment in a warm place until all fermentation has ceased.

RATAFIA WINE

6 bottles of Ratafia extract, 3 lb. sugar (or 3 3/4 lb. invert), 1 gal. water, yeast and nutrient.

Boil one-third of the sugar in a half gallon of water for two minutes and when cool pour into a gallon glass jar. Then add the extract, yeast and nutrient. Cover as directed or fit fermentation lock and ferment in a warm place for ten days. Then boil another one-third of the sugar in a quart of water as before and when this is cool add it to the rest. Cover again or refit lock and continue to ferment in a warm place for a further fourteen days.

After this, boil the rest of the sugar in the remaining water as before and when cool add to the rest.

Cover again as directed or fit fermentation lock and continue to ferment in a warm place until all fermentation has ceased.

KIRSCH WINE

6 bottles of Kirsch extract, 3 lb. sugar (or 3 3/4 lb. invert), 1 gal. water, yeast and nutrient.

Boil one-third of the sugar in half a gallon of water for two minutes and when cool pour into a gallon glass jar. Then add the extract,

yeast and nutrient. Cover as directed or fit fermentation lock and ferment in a warm place for ten days. Then boil another one-third of the sugar in a quart of water as before and when this is cool add it to the rest. Cover as directed or refit lock and continue to ferment in a warm place for a further fourteen days. After this, boil the remaining sugar in the rest of the water as before and when cool add to the rest. Cover again as directed or refit the lock and continue to ferment in a warm place until all fermentation has ceased.

MIRABELLE WINE

6 bottles of Mirabelle extract, 3 lb. sugar (or 3 3/4 lb. invert), 1 gal. water, yeast and nutrient.

Boil one-third of the sugar in a half gallon of water for two minutes and when cool pour into a gallon glass jar. Then add the extract, yeast and nutrient. Cover as directed or fit fermentation lock and ferment in a warm place for ten days. Then boil another one-third of the sugar in a quart of water as before and when it is cool add to the rest. Cover again or refit the lock and ferment in a warm place for another fourteen days. After this, boil the remaining sugar in the rest of the water as before and when cool add to the rest.

Cover again as directed or refit the lock and continue to ferment in a warm place until all fermentation has ceased.

PRUNELLE WINE

6 bottles of Prunelle extract, 3 lb. sugar, (or 3 3/4 invert), 1 gal. water, yeast and nutrient.

Boil one-third of the sugar in half a gallon of water for two minutes and when cool pour into a gallon jar. Then add the extract, yeast and nutrient. Cover as directed or fit fermentation lock and ferment in a warm place for ten days. Then boil another one-third of the sugar in a quart of water as before and when this is cool add it to the rest. Cover again or refit the lock and continue to ferment in a warm place for a further fourteen days. After this, boil the remaining sugar in the rest of the water as before and when cool add to the rest. Cover again or refit the lock and continue to ferment in a warm place until all fermentation has ceased.

MARASQUIN WINE

6 bottles of Marassquin extract, 3 lb. sugar (or 3 3/4 lb. invert), 1 gal. water, yeast and nutrient.

Boil one-third of sugar in a half gallon of water for two minutes and when cool pour into gallon glass jar. Then pour in the extract, yeast and nutrient.

Cover as directed or fit fermentation lock and ferment in a warm place for ten days. Then boil another one-third of the sugar in a quart of water for two minutes and when cool add this to the rest. Cover again or refit lock and continue to ferment in a warm place for another fourteen days.

After this, boil the remaining sugar in the rest of the water as before and when cool add to the rest. Cover again or refit the lock and continue to ferment in a warm place until all fermentation has ceased.

MANDARINE WINE

6 bottles of Mandarin extract, 3 lb. sugar (or 3 3/4 lb. invert), a gal. water, yeast and nutrient.

Boil one-third of sugar in a gallon of water for two minutes and when cool pour into a gallon glass jar. Then add the extract, yeast and nutrient. Cover as directed or fit fermentation lock and ferment in a warm place for ten days. Then boil another one-third of the sugar in a quart of water as before and when cool add this to the rest. cover again or refit lock and continue to ferment in a warm place for a further fourteen days.

After this, boil the remaining sugar in the rest of the water as before and when cool add to the rest. Cover again or refit the lock and continue to ferment in a warm place until all fermentation has ceased.

GREEN CONVENT WINE

5 bottles of Green Convent extract, 3 lb. sugar (or 3 3/4 lb. invert), 1 gal. water, yeast and nutrient.

Boil one-third of the sugar in half a gallon of water for two minutes and when cool pour into a gallon glass jar. Then add the extract, yeast and nutrient. Cover as directed or fit fermentation lock and ferment in a warm place for ten days. Then boil another one-third of the sugar in a quart of water as before and when cool add this to the rest. Cover again and continue to ferment for another fourteen days. After this, boil the remaining sugar in the rest of the water as before and when cool add to the rest. Cover again and continue to ferment until all fermentation has ceased.

YELLOW CONVENT WINE

5 bottles of Yellow Convent extract, 3 lb. sugar (or 3 3/4 lb. invert), 1 gal. water, yeast and nutrient.

Boil one-third of the sugar in half a gallon of water for two minutes and when cool pour into a gallon glass jar. Then pour in the extract, yeast and nutrient. Cover and ferment for ten days. Then boil another one-third of the sugar and when cool add it to the rest. Cover again and continue to ferment in a warm place for another fourteen days. Then boil the remaining sugar in the rest of the water as before and when cool add to the rest. Cover again and ferment in a warm place until all fermentation has ceased.

REVERENDINE WINE

6 bottles of Reverendine extract, 3 lb. sugar (or 3 3/4 lb. invert), 1 gal. water, yeast nutrient.

Boil one-third of the sugar in half a gallon of water for two minutes and when cool pour into a gallon glass jar. Then pour in the extract, yeast and nutrient. Cover and ferment in a warm place for ten days. Then boil another one-third of the sugar as before and when cool add it to the rest. Cover again and continue to ferment in a warm place for a further fourteen days. After this, boil the remaining sugar in the rest of the water as before and when cool add it to the rest. Cover again and continue to ferment in a warm place until all fermentation has ceased.

RED CURACAO WINE

6 bottles of Red Curacao extract, 3 lb. sugar, (or 3 $\frac{3}{4}$ lb. invert), 1 gal. water, yeast and nutrient.

Boil one-third of the sugar in half a gallon of water for two minutes and when cool pour into a glass jar. Then add the extract, yeast and nutrient. Cover and ferment in a warm place for ten days. Then boil another one-third of the sugar as before and when cool add it to the rest. Cover again and ferment in a warm place for another fourteen days. After this, boil the remaining sugar in the rest of the water as before and when cool add it to the rest. Cover again and continue to ferment until all fermentation has ceased.

WHITE CURACAO WINE

6 bottles of White Curacao extract, 3 lb. sugar (or 3 $\frac{3}{4}$ lb. invert) 1 gal. water, yeast and nutrient.

Boil one-third of the sugar in half a gallon of water and when this is cool pour into a gallon glass jar. Then pour in the extract, and add the yeast and nutrient. Cover the jar and ferment in a warm place for ten days.

Then boil another one-third of the sugar in a quart of water as before and when cool add to the rest. Cover again and continue to ferment for another fourteen days.

After this, boil the remaining sugar in the rest of the water as before and when cool add to the rest. Cover again and ferment in a warm place until all fermentation has ceased.

KUMMEL WINE

6 bottles of Kummel extract, 3 lb. sugar (or 3 $\frac{3}{4}$ lb.invert), 1 gal. water, yeast and nutrient.

Boil one-third of the sugar in half a gallon of water for two minutes and when cool pour into a gallon glass bottle. Then add the extract, yeast and nutrient.

Cover and fermentation for ten days. Then boil another one-third of the sugar in a quart of water as before and when this is cool add it to the rest. Cover again and ferment in a warm place for another fourteen days. After this, boil the remaining sugar in the rest of

the water as before and when cool add it to the rest. Cover again and continue to ferment in a warm place until all fermentation has ceased.

DANZIG WINE

6 bottles of Danzig extract, 3 lb. sugar (or 3 3/4 lb. invert), 1 gal. water, yeast and nutrient.

Boil one-third of the sugar in half a gallon of water for two minutes and when cool pour into a gallon glass jar. Then pour in the extract, yeast and nutrient.

Cover and ferment in a warm place for ten days. Then boil another one-third of the sugar in a quart of water as before and when cool add this to the rest. Cover again and continue to ferment in a warm place for another fourteen days.

After this, boil the remaining sugar in the rest of the water as before and when it is cool add it to the rest.

Cover again and ferment in a warm place until all fermentation has ceased.

EAU-DE-VIE WINE

6 bottles of extract of Eau-de-Vie, 3 lb. sugar (or 3 3/4lb. invert), 1 gal. water, yeast and nutrient.

Boil one-third of the sugar in half a gallon of water for two minutes and when cool pour into a gallon glass jar. Then add extract, yeast and nutrient.

Cover as directed and ferment in a warm place for ten days. Then boil another one-third of the sugar in a quart of water as before and when cool add this to the rest. Cover again and ferment in a warm place for another fourteen days. After this, boil the remaining sugar in the rest of the water as before and when cool add to the rest.

Cover again as directed and continue to ferment in a warm place until all fermentation has ceased.

WINES FROM CITRUS FRUITS (MAKE THESE WINES WITH BAKERS' YEAST-FRESH)

ORANGE WINE

This is a delightful wine that develops a flavor that can readily be likened to an orange-flavored whisky. 12 large oranges, or their equivalent, 4 lb. sugar, ½ oz. yeast, 1 gal. water, nutrient. Drop the whole oranges into boiling water, and push each one under the surface. Then take them out and throw the water away. Cut the oranges into small pieces and pour over them half a gallon of boiled water that has cooled. Cover well, and leave to soak for forty-eight hours, crushing and pressing the peel between the fingers to extract the oil

which gives a very special flavour. Then boil half the sugar in a quart of water for two minutes and when cooled add this to the orange pulp. Then add the yeast and nutrient. Ferment this in a warm place for five days.

Then crush, strain through fine muslin or other suitable material and wring out dry. Discard the pulp and return the fermenting liquor to the fermenting vessel, and allow to ferment for a further ten days. Carefully pour off into a gallon jar, leaving as much of the deposit behind as you can. Then boil the rest of the water and sugar together and when cool add to the rest. Then fit fermentation lock or cover as directed and continue to ferment in a warm place until all fermentation has ceased.

LEMON WINE

This wine is not ordinarily mad to drink as a wine. It is often made by experienced wine makers for blending with dried fruit wines which sometimes fall short of acid requirement. But more often it is made as a novelty. It is particularly suitable for making into lemon gin wine. Use the above directions for making orange wine-using eight lemons instead of using oranges.

GRAPEFRUIT WINE

This is another acid wine, but many people like it, especially where a pound of raisins or dates are fermented with the grapefruits. Use eight large grapefruits following the orange wine recipe above. If you wish to add a pound of raisins or dates do so as soon as you have cut up the grapefruits and ferment them with the rest for the first few days-until straining time.

NOTE: If raisins or dates are used, use half a pound less of sugar, because dried fruits contain approximately fifty percent sugar.

TANGERINE WINE

This makes a really delightful wine and a many tangerines may be used as suits you-but do not use less than fifteen or more than thirty. Dates or raisins may be used with this as well as in the grapefruit recipe and the notes about this should be followed if you want to add them. However, I feel that you would find the raw fruits more to your liking. Follow the directions for orange wine when making tangerine wine.

FLOWER WINES AND MISCELLANEOUS RECIPES

Let me begin this chapter by assuring you that one of the loveliest wines I have ever tasted was made with gorse flowers by a member of the Bournemouth Wine-Makers' Circle. This I sampled while lecturing at the Town Hall there on the occasion of the Amateur Wine-Makers' Second Annual Conference and Show.

Flower wines, cannot, of course, be likened to any other homemade wine- or commercial wine- because their flavors are unique; they can only be described as delicately aromatic, their bouquet cannot be found in any other wine.

Their popularity is lessened only by the labor of collecting the flowers; but by choosing a spot where they abound, enough for a gallon or two may be gathered in an hour.

Care is needed if we are to get the best from our ingredients. When gathering the flowers it is best to use a basket of ample size because crushing will damage the flowers and we shall not get such a delightful wine. All flowers should be gathered on a dry day but not necessarily on a sunny one; though it must be sunny when collecting dandelions otherwise they are either closed or half-closed and difficult to find. In their closed state they teem with insects which would get into the wine and spoil it. Dandelions close when gathered but this does not matter. In fact it is a great help because we should use only the petals of dandelions, and when they are closed the petals may be pulled out all together merely by holding the head of the flower and pulling on the petals grouped together.

Although only petals should be used many people make quite good dandelion wine by using the whole heads, but I use petals only.

To achieve the best result a wine yeast should be used and this may be an all-purpose wine yeast. Invert sugar should not be used in these recipes because it is inclined to slightly alter the aroma of the flower and change the delicate color of the wines made from recipes in this chapter.

Bakers' yeast is included in the recipe together with household sugar; those preferring to use a wine yeast 'started' as directed may, of course, do so.

GORSE WINE

5 pts. gorse flowers, 3 lb. sugar, 1 gal. water, 1 oz. yeast, Five pints is the minimum amount of gorse flowers to use, you may use more if you wish-up to one gallon if you can get them. Other ingredients would remain the same.

Put the flowers in the fermenting vessel and pour on half a gallon of boiling water. Cover and leave to soak for three days, stirring each day and covering again at once.

Boil half the sugar in a quart of water for two minutes and when this is cool add the flower mixture. Then add the yeast and ferment for three days. Strain out the flowers and continue to ferment the liquor in the fermenting vessel for a further seven days. Then pour into a gallon jar, leaving as much of the deposit behind as you can. Boil the rest of the sugar in the remaining water for two minutes and when cool add to the rest. Cover as directed or fit fermentation lock and continue to ferment until all fermentation has ceased.

NOTE: Many people prefer this when the juice of one lemon is added at the same time as the yeast.

CLOVER WINE

3 qts. clover heads, 2 lemons, 3 lb. sugar, 1 gal. water, 1 oz. yeast.

Pull off the petals by gathering them between the fingers whilst holding the base of the flower head. Put the petals in the fermenting vessel and pour on half a gallon of boiling water. Leave well covered for twelve hours. Boil half the sugar in a quart of water for two minutes and when cool add this to the rest. Then add the yeast and ferment the mixture for seven days.

Strain out the flowers, but do not squeeze too hard, and put the liquor into a gallon jar. Then boil the rest of the sugar in the remaining water and when cool add this to the rest. Cover or fit fermentation lock and leave until all fermentation has ceased.

DANDELION WINE

1 gal. flower heads with the tiniest piece of stalk, 3lb. sugar, 1 oz. yeast, 1 gal. water, 2 lemons.

Remove petals as directed for clover wine. Put the petals in the fermenting vessel and pour on three quarts of water-boiling and leave to soak for seven days, well covered.

Stir daily, and cover again at once. Strain and wring out fairly tightly and return the liquor to the fermenting vessel. Boil half the sugar in a pint of water and when cool add to the liquor, then add

the yeast and the juice of two lemons. Cover as directed and ferment for seven days. Then pour carefully into a gallon jar, leaving as much deposit behind as you can. After this, boil the rest of the sugar in the remaining pint of water and when cool add to the rest.

Cover as directed or fit fermentation lock and leave until all fermentation has ceased.

COLTSFOOT WINE

1 gal. coltsfoot flower, 3 lb. sugar, 1 gal. water, 1 oz. yeast.

Pull the petals off in the same way as for dandelions. The method for making this wine is identical to the recipe for making dandelion wine.

HAWTHORN BLOSSOM WINE

2 qts. of the flower, 3 1/2 lb. sugar, 1 oz. yeast and 1 gal. water.

Gathered when they are about to drop they may be shaken off into the fermenting vessel. The method for making this wine is identical to the recipe for making dandelion wine.

ELDER FLOWER WINE

1 gal. flower, 1 gal. water, 3 1/2 lb. sugar, 1 oz. yeast, 2 lemons.

Boil half the sugar in half a gallon of water and while boiling pour over the flowers in the fermenting vessel. Add the juice of the lemons and when the mixture is cool add the yeast. Cover as directed and ferment for seven days.

Strain out the flowers and wring out well, but not too dry. Put the strained liquor in a gallon jar. Boil the rest of the sugar and water for two minutes and when cool add to the rest. Cover as directed or fit fermentation lock and leave until all fermentation has ceased.

Another very good elder flower wine may be made in exactly the same way as the above using only five pints of the flowers with three pounds of sugar, two lemons, 1 oz. yeast and one gallon water.

ROSE PETAL WINE

One of the most delightful of all flower wines. The petals of roses of various colors may be used in one lot of wine, but if you have enough of, say, both red and yellow for a separate lot of each, do keep them separate.

3 qts. rose petals (strongly scented if possible), 1 gal. water, 3 lb. sugar, 1 oz. yeast, 2 lemons.

Pour half a gallon of boiling water over the petals in the fermenting vessel, cover well and leave for forty-eight hours, stirring often.

Boil half the sugar in a quart of water for two minutes and when this is cool add to the petal mixture and ferment for three days. Strain and wring out well, and return the liquor to the fermenting vessel and let it ferment for a further ten days.

Pour the liquor into a gallon jar, leaving as much of the deposit behind as you can. Then boil the rest of the sugar and water as before and when cool add to the rest together with the juice of the lemons. Cover again as directed or fit fermentation lock and leave until all fermentation has ceased.

TEA WINE

Many wine-makers save left-overs from the teapot until they have enough to make a gallon of wine, but I find that the flavour of the wine is somewhat impaired when this is done. Better to make a gallon of weak tea and to start straight off. Don't be tempted to make strong tea for this purpose otherwise you will have too much tannin in the wine.

8 teaspoonsful of tea, 1 gal. water, 1 lb. raisins, juice of 2 lemons, 3 lb. sugar, 1 oz. yeast.

Make tea in the ordinary way using eight teaspoonfuls and a quart of water. Let it stand undisturbed for ten minutes, and then strain into the fermenting vessel.

Boil half the sugar in half a gallon of water for two minutes and when cool add this to the tea. Then add the raisins and finely sliced lemons and their juice. Add the yeast and ferment for ten days, stirring daily.

Strain into a gallon jar. Then boil the rest of the sugar in the remainder of the water for two minutes and when cool add this to the rest. Cover as directed or fit fermentation lock and leave to ferment in a warm place until all fermentation has ceased.

IMITATION TIA MARIA

I am not fond of this myself, but I know of a good many people who are and who make this wine quite regularly. The best plan is to make either easy potato wine or easy parsnip wine, and when this has ceased fermenting flavor it with freshly made coffee or one of the proprietary brands of essence. But do this very carefully as it is easy to overdo it, thus spoiling the flavour.

ROSE HIP WINE

One of the finest of all home-made wines; its flavour is unique and it has body and bouquet that take a lot of matching. Rose hips abound in early autumn and it matters not whether they are gathered from your own rose trees or from the hedgerows. They should not be used until they have taken on their winter coat or red or orange according to the type.

4 lb. rose hips, 3 lb. sugar, 1 gal. water, 1 oz. yeast.

Wash the hips well in half a gallon of water in which one Campden tablet has been dissolved. Crush the hips with a mallet or chop them. Put them in the fermenting vessel and pour on half a gallon of boiling water. Boil half the sugar in a quart of water for two minutes and when cooled a little add to the rest. Add the yeast and ferment the pulp for seven days. Then strain out the solids and put the strained liquor into a gallon jar. Boil the rest of the sugar in the remaining water for two minutes and allow to cool well before adding to the rest. Cover as directed or fit fermentation lock and leave to ferment in a warm place until all fermentation has ceased.

WINES FROM DRIED HERBS

In case the advantages of making wines from dried herbs do not immediately become evident, let me explain that the town and city dweller (and countryman, too, for that matter) may make all the old favourite wines of Granny's day for next to nothing. Practically no work is involved because, unlike fresh fruits which have to be gathered and roots that have to be scrubbed, grated and boiled, suitable packets of herbs are available ready to use. In cases, many town and city dwellers might well know of the old country wines and wish that they could make them- indeed, they may well have lived in the country and tasted the wines made from the fresh herbs; dandelion, sage, coltsfoot, mint, balm, yarrow, and countless others.

People living in large towns like Coventry and Birmingham have written to me asking about this field of winemaking, for they recall their early days when 'Mum' used to make what they now describe as 'really wonderful wines from leaves she used to collect from the fields all round where we used to live'.

Dried herbs normally cost less than twenty cents per packet and such a packet is usually more than enough for a gallon of wine. The actual amount of the dried article may be varied according to personal tastes, but usually two ounces is enough for one gallon, and this amount rarely costs very much. I have found that the packets of herbs supplied by Heath and Heather Ltd., of St. Albans, Hertfordshire branches in many towns), are usually suitable for one gallon of wine-though the amount in each packet varies slightly with the variety of herb.

Those who know their herbs well enough to gather them fresh from the garden or field or hedgerow may do so, of course, but it must be borne in mind that one needs at least one pound of the fresh plant to get the equivalent of two ounces of the dried. It is most important one should be expert at identification because many health-giving herbs bear a striking resemblance to others which have proved themselves to be deadly poisonous. By buying ready packeted herbs such risks are done away with, and Health and Heather Ltd. Will send to anyone free on application their book of herbs.

In some of the recipes which follow the addition of raisins or wheat, or both, is recommended, while I would stress that their use is quite optional, I do strongly advise readers to use them where they are specified unless they know in advance that they prefer wines made without them. The use of raisins or wheat, or both, adds body and bouquet where these properties may be lacking. As you will have guessed, the herb gives only flavour-apart from its known medicinal properties-and some aroma, but does not give the same amount of bouquet as a fully flavored fruit; wheat and raisins help in this respect. As with root wines, the addition of acid is necessary and this way may be added as citric acid at the rate of a quarter-ounce per gallon or as the juice of two large lemons-whichever suits you best.

The amounts of sugar in the recipes are those generally used, but readers now know that they make their herb wines dry merely by reducing the amount of sugar according to their wishes.

It should be borne in mind that while we use a gallon of water, and while the sugar, occupies space at the rate of a quart to every four pounds, we shall arrive back at the gallon of wine aimed at because there will be some loss during boiling, lost of most of the sugar which will be fermented out and some small wastage when transferring to other bottles. A little less sugar is use in these recipes as compared with fresh fruit wines; this is because there is no acidity or astringency to balance, as is often the case where fruit wines are made.

The amount of herbs given in the recipes are the amounts usually used and I advise readers to use them to begin with.

Later, say when fermentation has nearly ceased, they may sample for strength of flavour; if they feel they would like it stronger, a little more of the herb may be added, but this should not be necessary.

On the other hand, if the flavour happens to be a little too strong a pint or two of boiled and cooled water may be added to dilute the strength or flavor. This will increase the overall amount of wine so that the amount of sugar added will not be enough for the increased amount. Therefore, when boiling the additional water, with it three to four ounces of sugar to each pint and then add this syrup slowly, taking samples until the strength of flavour is right. The recipes in this chapter have been given to me by friends. The trials I have carried out with them have proven most satisfactory and I know readers will be pleased with the results. As will be seen most recipes call for two ounces of herb, but it will be found that

the one-and-sixpenny packets of dried herbs from Health and Heather will suffice in all but exceptional cases, where, for example, a very strong flavour is required.

Where Kola nuts are used, a ten packet is enough.

All dried herbs may be obtained from most chemists, but sometimes their stock is likely to be a little old. Health and Heather deal in this field to such a large extent that their herbs can be relied upon to give the best results. Alternatively get them from a reliable herbalist if you have one in your locality.

The following method is suitable for all recipes in this chapter.

Lemons and oranges should be peeled, the fruit broken up and added and the peel discarded.

METHOD: Put all the ingredients (except sugar and yeast) in a polythene pail and pour on half a gallon of boiling water, leave for two or three hours covered as directed. Then boil half the sugar in a quart of water or two minutes and add this to the rest while still boiling. Mix well, and when cool enough add the yeast and nutrient. Cover again and ferment in a pail in a warm place for ten days, stirring daily and covering again at once.

After ten days, strain out the solids and wring out as dry as you can, and put the strained liquor into a gallon glass bottle. Boil the other half of the sugar in the remaining quart of water for two minutes. When cool add this to the rest. Cover as directed or fit with a fermentation lock and continue to ferment in a warm place until all fermentation has ceased.

BALM WINE

2 oz. dried balm leaves, 2 lemons, 3 lb. sugar, 1 gal. water, yeast and nutrient.

PARSLEY WINE

2 oz. dried parsley, 1 oz. dried mint, (or 1/2 oz., fresh mint), 1/2 oz. dried sage (red), 1 gal. water, 2 oranges, 2 lemons, 3 lb. sugar, (or 3 3/4 lb. invert), yeast and nutrient.

BROOM WINE

2 oz. dried broom flowers, 2 lemons, 1 lb. raisins, 2 ½ lb. sugar (or 3 1/4 lb. invert), yeast and nutrient.

DAMIKOLA WINE

2 oz. dried damiana leaves, 1 oz. kola nuts, 1/2 oz. dried red sage, 1 lb. raisins, 3 lb. sugar (or 3 3/4 lb. invert), 2 lemons, 1 gal. water, yeast and nutrient.

SAGE WINE

3 oz. dried sage, 1 lb. raisins, 1 oz. dried mint, 1 lb. wheat, 2 lemons, 2 1/2 lb. sugar (or 3 1/4 lb. invert), yeast and nutrient, 1 gal. water.

YARROW WINE

2 to 3 oz. of dried yarrow flowers, 2 lemons, 2 oranges, 3 lb. sugar (or 3 3/4 lb. invert), 1 gal. water, yeast nutrient.

CLARY WINE

3 to 4 oz. clary flowers, 1 lb. raisins, 2 lemons, 3 lb. sugar (or 3 3/4 lb. invert), 1 gal. water, yeast and nutrient.

BURNET WINE

3 oz. burnet herb, 1 lb. raisins, 1 lb. wheat, 2 oranges, 2 lemons, 3 lb. sugar (or 3 3/4 lb. invert), 1 gal. water, yeast and nutrient.

I do strongly advise you to experiment with half gallon lots of these and to add tiny amounts of aniseed or liquorice as fermentation nears completion. If you do this with varying amounts of herbs you must not let the total weight of the herbs exceed four ounces to the gallon of wine being made. I realize, of course, that a beginner cannot have any definite plan for blending because he will not be familiar with the flavors given to the wines by the various herbs. If you accidentally spoil the flavour of a wine by trying to improve it, you may dilute with sugar-water, and while fermentation is still going on, add other herbs to the flavour you are aiming at. If you happen to find that the flavour is not quite strong enough you may suspend a bag of herbs in the fermenting 'must' until you get the strength of flavour you want. And this may be tested at few-day intervals by tasting.

No matter how many years you may have been making wines and no matter how many different varieties you have made, it will be clear from

the number of recipes in this book that there are plenty you have not tried your hand at. However, do not be tempted to make thirty or forty different varieties on a grand scale. Make, say, half a dozen build lots with recipes and fruit you are familiar with, and experiment with half gallon lots. In this way you will always have a nice stock and if any particular experiment goes wrong or perhaps does not turn out quite as hoped, little will be lost.

WINES FROM DRIED FRUITS AND GRAIN

The making of wines from grain and dried fruits is a boom to the townsman who finds these ingredients easily obtainable and they make good wines. Mixtures of dried fruit and grains make for strong, fully flavored, but not too fully flavored wines which, when not made too sweet, are often likened to whiskeys and brandies. They need time to mature or reach their best-two years is not too long, though at one year old they are very excellent wines. As with root wines the addition of some acid is necessary here (see root wines), and this is put into the 'must' in the form of oranges and lemons.

Most dried fruit is heavily sulphited to prevent fermentation, and most wheat or other grain has been in contact with all sorts of dirt, dust and bacteria. Therefore they must be well cleansed before use. Break up the raisins and drop them into boiling water. As soon as the water boils again cut off the heat, strain the raisins and throw the water away. The raisins are then ready to use. Do the same with wheat or other grain, but use a separate saucepan; they are then ready to use.

A WORD ABOUT TANNIN

Most recipes for fruit wines allow for tannin in the fruits to be given into the 'must'. This tannin forms an important part of the flavour of the wine-though few people realize it. But they soon know when there is too much because the wine takes on the flavour or 'tang' of strong unsweetened tea. The little tannin given to fruit wines is usually just the right amount.

In the ordinary way there is no tannin present in dried fruit wines. Therefore it is as well to add one tablespoonful of freshly made tea-not too strong-to make good this deficiency. Special grape tannin is available, but tea is a cheap and handy source of which we might as well make use. The addition of tea is included in the recipes.

CANADIAN WHISKY

2 lb. wheat, 2 lb. raisins, 1 lemon, 4 oranges, 3 lb. sugar, 1 oz. yeast, 5 qts. water, 1 tablespoonful of freshly made tea.

Boil half the water with half the sugar for one minute and then pour on the wheat and raisins. Put the lot into the fermenting vessel and

squeeze in the juice of the lemon. Cut up the oranges and their peel and put these with the rest. Work the orange peel between the fingers to press out the oil-much flavour is obtained from this. When cool add the yeast and ferment for ten days. Then strain out the solids and wring out as dry as you can and put the strained liquor into a gallon jar with a tablespoonful of freshly made tea.

Boil the rest of the sugar and water for one minute and when this is cool add to the rest. Cover as directed or fit fermentation lock and leave until all fermentation has ceased.

BRAVERY'S OWN SCOTCH

This is another recipe that has become well known amongst wine makers throughout the country.

1 1/2 lb. wheat, 1 1/2 lb. raisins, 4 oranges, 3 1/2 lb. sugar, 1 oz. yeast, 9 pts. water, and 1 tablespoonful of freshly made strong tea.

Prepare the wheat raisins as already advised and put them in the fermenting vessel with the sliced oranges and their peel. Boil half the sugar in three quarts of water for two minutes and pour this over the material in the fermenting vessel. Mix well and when cool add the yeast. Cover as directed and ferment for seven days, stirring well each day and covering again at once. Strain and wring out dry and put the strained liquor into a gallon jar with the tea. Then boil the rest of the sugar in the remaining three pints of water for two minutes and when cool add to the rest. Cover again as directed or fit fermentation lock and leave until all fermentation has ceased.

RAISIN WINE

3 lb. raisins, 3 lemons, 2 lb. sugar, 9 pts. water, 1 oz. yeast, 1 tablespoonful of freshly made tea.

Less sugar than usual is required here because the large amount of raisins will give a lot of sugar to the wine - which will not be dry. For a dry raisin wine use only one and a quarter pound of sugar. Put the raisins and the sliced lemons and the tea in the fermenting vessel. Boil all the sugar in all the water (or half the water at a time if your saucepan is on the small side), and add the rest while boiling. When cool, add the yeast and ferment for fourteen days, stirring daily and covering again at once. Strain and wring out as dry as you can and put the strained liquor into a gallon jar. Cover as directed or fit fermentation lock and leave until all fermentation has ceased.

PRUNE PORT

6 lb. prunes, 2 lemons, 3 1/2 lb. sugar, 9 pts. water, 1 oz. yeast. (no tea in this one.)

Wash the prunes in water in which one Campden tablet has been dissolved and put them in the fermenting vessel. Boil two pounds sugar in seven pints water and pour over the fruit while boiling. Allow to cool and add the yeast. Cover and ferment for ten days, crushing well each day as soon as the fruit has become soft. After

ten days, crush well and strain out the solids. Wring out as dry as you can and put the strained liquor in a gallon jar. Boil the rest of the sugar in the remaining two pints of water and when cool add the rest. Cover as directed or fit fermentation lock and leave until all fermentation has ceased.

CURRENT WINE

No lemons are required here as currants contain sufficient acid, neither is tea required.

4 lb. currants, 1 lb. raisins, 2 3/4 lb. sugar, 1 oz. yeast, 9 pts. water.

Prepare the currants by the method given for prunes in the previous recipe, and put in the fermenting vessel. Boil half the sugar (or roughly half) in seven pints water for two minutes and pour on to the currants at once. Allow to cool and add the yeast. Cover as directed and ferment for twelve days, crushing and covering again each day.

After twelve days, strain out the solids and wring out as dry as you can and put the strained liquor into a gallon jar.

Boil the rest of the sugar in the remaining two pints of water for two minutes and when cool add to the rest. Cover as directed or fit fermentation lock and leave until all fermentation has ceased.

DRIED APRICOT WINE

This is a really delightful pale gold wine that most people like as a dry wine. See 'Low-Alcohol Wines for the Ladies'.

6 lb. dried apricots, w oranges, 3 1/2 lb. sugar, 9 pts. water, 1 oz. yeast, 1 tablespoonful of freshly made tea.

Put the apricots in the fermenting vessel with the cut-up oranges and their peel. Fold the orange peel and squeeze to get as much oil out of it as you can.

Boil two pounds of sugar in seven pints of water for two minutes and pour over the fruits while still boiling. Allow to cool and add the yeast. Cover as directed and ferment for ten days, crushing by hand each day and covering again at once.

After ten days, strain and wring out as dry as you can and put the strained liquor in the gallon jar. Boil the remaining sugar in the last two pints of water for two minutes and when cool add to the rest, and then add the tea. Cover as directed or fit fermentation lock and leave until all fermentation has ceased.

DATE WINE

This wine has very little flavour of its own, therefore lemons and oranges must be added to give a nice flavour, and the amount of oranges here will make it into a lovely wine.

However, if you want a wine of little flavour for some special purpose, say, blending with one that has too much flavor or for flavoring as you wish with an extract or whatever you may have in mind, use no oranges at all.

3 lb. of packeted or loose dates, 1 lemons, 6 oranges, 2 lb. sugar, 9 pts. water, 1 oz. yeast 1 tablespoonful of freshly made tea.

The method of preparing ingredients and for making this wine is identical to that given in the recipe for making dried apricot wine.

PRUNE AND RAISIN VINTAGE

3 lb. prunes, 1 lb. raisins, 1 lb. wheat, 2 lemons, 2 oranges, 3 lb. sugar, 9 pts. water, 1 oz. yeast.

Prepare the raisins, prunes and wheat as has already been advised and put them with the sliced oranges and lemons in the fermenting vessel. Boil half the sugar in seven pints water for two minutes and pour over the ingredients while still boiling. Allow to cool and add the yeast. Cover as directed and ferment the mixture for ten days, crushing well each day and stirring up the wheat and covering again at once. After ten days, strain out the solids, and wring out as dry as you can and put the strained liquor in a gallon jar. Boil the rest of the sugar in the remaining two pints of water and when cool add to the rest. Cover as directed or fit fermentation lock and leave until all fermentation has ceased.

IRISH WHISKEY

2 lb. wheat, 1 lb. raisins, 1 lb. potatoes, 2 lemons, 4 oranges, 1 oz. yeast, 3 lb. sugar, 9 pts. water.

Prepare the wheat and raisins as has already been directed and put them in the fermenting vessel with the sliced lemons and oranges.

Scrub, grate and boil the potatoes in five pints of water for not more than ten minutes, taking off all scum that rises. Boil gently for a little longer if scum still rises at the end of ten minutes until no more scum rises-taking off every bit of it.

Strain this hot liquid over the ingredients in the fermenting vessel and throw the potatoes away. Then boil half the sugar in two pints of water for two minutes and add to the rest. Allow to cool, add the yeast and ferment the mixture ten days covered as directed.

After ten days, strain and wring out dry and put the strained liquor into a gallon glass jar. Boil the rest of the sugar in the remaining two pints of water and when cool add this to the rest. Cover as directed or fit fermentation lock and leave until all fermentation has ceased.

CREATE YOUR OWN WINE

Imaginative readers will be quick to notice that varied amounts of ingredients make very different types of wines and they may wonder whether they can invent a recipe to suit themselves. They can.

Almost any recipe in this chapter may be varied to suit individual tastes, or it may be modified and other ingredients or flavorings added. Take care when altering recipes not to use too much of any particular kind so that your overall amount of ingredients would exceed six pounds, otherwise the wine will be spoiled.

WINES FROM GRAPES

In the ordinary way, recipes for wines made entirely from grapes are not a practicable proposition. This is because grapes are merely crushed and fermented without either sugar or water being added. Provided you have enough grapes, making wines from them is the simplest winemaking of all-that is, of course, provided they are fully ripe. Small unpruned bunches often contain a lot of small undeveloped fruits between the large juicy ones and these must be removed before the bunches are crushed.

The whole bunches, stalk as well, are used as these add something to the wine. The yeast forming the bloom on your grapes may be the kind that will make excellent wine, but we cannot be sure of this owing to the near-certainty that wild yeast and bacteria are present with it. As we have seen in previous chapters, we must destroy these yeasts and bacteria and add yeasts of our choice to make the wine for us.

You will need at least twenty pounds of grapes to be assured of a gallon of wine-and this amount may not make one gallon of wine, though it make one gallon of strained 'must'. Therefore the more grapes you have the better.

If enough grapes are available, the process is as follows:

METHOD: Put all grapes in a suitable vessel and crush them, making sure each grape is crushed. Measure as near as you can or judge as accurately as possible the amount of pulp you have and to each gallon allow one Campden tablet or four grains of sodium metabisulphite. Dissolve this in an egg cupful of warm water and stir into the pulp and leave for twenty-four hours.

After this, give the mixture a thorough mixing and churning and then add the yeast. The mixture should then be left to ferment for five days.

Following this, the pulp should be strained through a strong coarse cloth to prevent bursting and wrung out as dry as you can. The liquor should then be put into jars and fermented the same ways as other wines.

A good plan when doing this is to mix a quart of water with grape pulp and to crush this well to get as much from the skins as you can. If you do

this, you must add one pound of sugar and dissolve it by warming the juice just enough for this purpose. This thinner juice may be mixed with the rest but before the better quality juice is put into jars.

Where grapes only are used with water (as suggested above) it must be borne in mind that to get enough alcohol for a stable wine we must have between two and two and a half pounds of sugar to the gallon. Juice crushed from grapes rarely contains this much, therefore it would be wise to add one pound when the fruit is crushed and before the juice is put into jars. If the wine turns out dry, it may be sweetened.

We may use a hydrometer to find the sugar content so that we know how much to add to give the amount of alcohol we need, but this is not for beginners without previous experiences in this sort of thing. The better plan is to follow my suggestions above, and if the wine is dry to sweeten it and then preserve it with Campden tablets or metabisulphite as directed in chapter six.

Since the color comes from the skins, if we want a red wine from black grapes we ferment the skins as directed earlier in this chapter. A white wine from black grapes is made by crushing the grapes and pressing out the juice and fermenting the juice only. The difference in the process already described is that instead of fermenting the skin for five days, the juice is pressed out after it has been allowed to soak for twenty-four hours.

If you happen to be making some of the fruit wine such as elderberry, plum, blackberry or damson, at the same time as making grape wine, it would be a good idea to put the strained fruit pulp which would otherwise be discarded into the 'must' of the other fruit and let it ferment there. But do not alter the fermentation times of the other recipe that you are using for the other fruit.

If an abundance of grapes is not available the following recipes will be found especially valuable. The methods to use are those given for making the various fresh fruit wines in chapter two. Bear in mind that the grapes must be fermented when a red wine is required whilst the juice only is fermented when a white wine is required. This applies to black grapes, of course; you can do anything you like with those called amber or the green ones.

WINES FROM GRAPES - QUICK RECIPES

RECIPE 1

9 to 12 lb. grapes, 2 lb. raisins, 2 qts water, -lb. sugar, port yeast or burgundy yeast.

RECIPE 2

8 to 10 lb. grapes, 2 lb. prunes, 2 qts. water, 2 lb. sugar, port or burgundy yeast.

RECIPE 3

10 lb. black grapes, 1 lb. prunes, 2 lb. raisins, 1 1/2 lb. sugar, 4 qts. water, port or burgundy yeast.

RECIPE 4

10 lb. grapes, 2 lb. elderberries, 4 pts water, 2 lb. sugar, port or burgundy yeast.

RECIPE 5

8 lb. grapes, 6 lb. damsons or red plums, 2 lb. sugar, 2 qts. water, port or burgundy yeast.

NOTE: Owing to the difficulty in getting juice from Plums and damsons, the pulp must be fermented for a time, so it is not practicable to ferment the juice only in this recipe.

RECIPE 6

8 to 10 lb. grapes, 2 lb. blackberries, 4 pts. water, port or burgundy yeast, 2 lb. sugar.

NOTE: Nutrient is not needed because the grape juice provides sufficient.

LIQUEURS

In my grandmother's day brandy cost about fifty cents a bottle (now we know what is meant by "the good old days") and her recipes would have called for gallons of the stuff as casually as today's call for one measly bottle.

Nevertheless, one bottle of gin, whisky or brandy will give two bottles of the finished product with a high percentage of alcohol to half the cost of the commercial product.

Before going on to the recipes, let me explain that a homemade wine usually has alcohol content of fourteen percent by volume (approximately 24 proof). Such a wine will keep well because this amount of alcohol is usually high enough to destroy souring yeast and the bacteria which causes vinegariness immediately when it comes in contact with them. Thus it will be seen that a nice percentage of alcohol acts as its own preservative.

The alcohol content of commercial wines rarely exceeds twenty percent by volume (approximately 35 proof); more often they range between fourteen percent by volume (approximately 24 proof) and nineteen percent (approximately 33 proof), which is a high percentage of alcohol. Clearly, then, we could very well dilute the 70 proof gin (forty percent by volume) to 35 proof (twenty percent by volume) by making one bottle into two bottles and still have a very strong sloe gin. Whisky and rum could be similarly treated, while brandy might well be diluted even more owing to its higher spirit content. Bear in mind that it would be unwise to reduce the proof to below 30. The best plan to start with is to make one bottle into two as the recipes advise or make half a bottle into a whole bottle by using half of everything in the recipes.

You could make three or four bottles from one bottle of the spirit if you were proposing to use it up fairly quickly, such as at a party or over the three day Christmas.

Naturally, we shall be diluting the flavors of the spirits we are using, but we shall be adding the flavors of our choice to counter-balance this. In any case, the commercial spirits mentioned above are rarely drunk neat. Whisky is usually diluted with water (which in my opinion is nigh on a

crime) or ginger of soda, while rum is often diluted with peppermint or orange cordial. Gin is usually diluted with lemon or orange cordial to make the popular gin and orange, etc. And in most cases the spirit is diluted to one-third of its volume.

Therefore, the proof spirit content of the whisky and soda or gin and orange served over the bar has been reduced to about 23 proof. The sloe gin we shall be making with these recipes will be 35 proof while the cherry brandy will be 40 proof. Bear in this in mind while drinking them other wise you will finish up under the table in doublequick time.

If you happen to have some home-made sloe wine, damson wine, orange wine, cherry wine or some other sort of home-made wine, you may employ one bottle of the spirits to make more than two bottles of cherry brandy, sloe gin or whichever you have in mind. This point is covered fully further on in this chapter.

The following recipes produces wines which are neither sweet nor dry; if you like a slightly sweet wine increase the amount of sugar by half that given in the recipes. On the other hand, if you like wines drier than average reduce the amount of sugar by half.

In the recipes called liqueurs, the amount of sugar should remain as in the recipes.

NOTE: As we shall be using bottles as our means of measuring our materials, bear in mind that a bottle is a bottle and half a bottle is half a bottle. A bottle - the recognized standard wine bottle or the bottles containing spirits-hold five gills; this is one gill more than a pint. Many bottles containing imported wines hold one pint. Because we shall be making exactly two bottles from one bottle of the spirit we are using, be sure to at the second bottle you use holds the same amount as the bottle of spirit you are using.

If you are using White Horse whisky or Booth's gin, try to use a similar second bottle.

CHERRY BRANDY LIQUEUR

1 1/2 lb. black cherries, 8 oz. white sugar, 1 bottle brandy, 8 blanched almonds (these are usually added, but personal tastes must decide.)

Wash the cherries and let them drain. Pour the brandy into a four-pound Kilner jar (these are best), then stone and halve the cherries

carefully and add them to the brandy. Add the almonds if you like them.

Screw down tightly and put in a cool, preferably dark, place for six to eight weeks. Give the jar a good shaking twice a week. Strain and squeeze and put the liquid into a smaller jar then put away as before and leave to clear. Then pour or siphon into two wine bottles-putting exactly half into each. Then boil the sugar in one pint of water for two minutes. When this is cool, fill the bottles to within one inch of where the cork will reach. Shake well to ensure thorough mixing. Seal and keep for one month.

DAMSON GIN

1 lb. damsons, 3 oz. sugar, 1 bottle gin.

Wash, dry, stone and halve the damsons carefully and put them in a four-pound Kilner jar. Sprinkle the sugar over them and then pour in the gin. Screw down tightly and leave in a cool dark place for three months (or two months if you are in a hurry to use the product), giving a good shaking once or twice a week.

Strain and squeeze and put the strained damson gin into a smaller jar, screw down again and put it away to clear. Then pour carefully (or siphon) the clear gin off the deposit putting exactly half into two bottles. Then fill the bottles to within one inch of where the corks will reach with boiled water that has cooled naturally. Cork hard, seal and keep for one month.

SLOE GIN

1 lb. sloes, 5 oz. sugar, 1 bottle gin.

Wash the sloes and let them drain. Prick the sloes all over with a silver, or stainless-steel fork or large darning needle and put them in a four-pound Kilner jar. Sprinkle the sugar over them and then pour in the gin. Screw down tightly and put in a cool dark place for six weeks. Give the jar a good shaking once a week.

Strain and squeeze and put the strained sloe gin into a smaller jar, screw down tightly again and put away until clear. Pour carefully (or siphon) the clear sloe gin off the deposit and put exactly half into each of two bottles. Fill the bottles to within one inch of where the corks will reach with boiled water that has cooled naturally. Mix well by shaking, cork seal and keep for one month.

ORANGE WHISKY

4 oranges, 2 lemons, 2 seville oranges (or an extra ordinary orange and lemon), 4 oz. sugar, 1 bottle whisky.

Peel the fruits and remove all the white pith. Crush well and put the pulp in a four pound Kilner jar. Grate the rind of one orange (not a seville), avoiding any white pith, and add this to the pulp. Sprinkle in the sugar and pour on the whisky. Screw down tightly and

put the jar in a cool dark place for a week-giving it a shake every day.

Strain into another jar and squeeze the screw down again tightly. then put it away to clear. Pour or siphon the clear whisky into bottles, putting exactly half into each. Then fill the bottles to within an inch of where the corks will reach with boiled water that has cooled naturally. Cork hark, seal and keep for at least two months.

ORANGE GIN

6 oranges, 1 lemon, 2 seville oranges (or an extra ordinary orange and lemon), 5 oz. sugar, 1 bottle gin.

Proceed as for orange whisky.

FRUIT LIQUEURS

There is no need to give separate recipes for each fruit because the same process may be used for all suitable fresh fruit of your choice.

The following lists the most suitable fruits for liqueur-making and the amounts given usually produce sufficient flavour-though not enough juice-to make two bottles of liqueur when using one bottle of brandy. If not enough juice is produced from the amounts of fruit given, make up the amount required with boiled water, bearing in mind that half a pound of sugar occupies the space of a quarter-pint while one pound occupies half a pint space and so on.

All these liqueurs will have a spirit content of 40proof-which, as we have seen, is a high spirit content.

As we shall be using spirit of 80 proof, we could make two and a half bottles by using a little more juice, a little more water and an ounce or two more sugar and still have a product of 32 proof-which is a nice spirit content.

If at party time economy is essential, three or even four bottles of a liqueur-type wine could be made from one bottle of brandy or, say, cherry brandy, sloe gin or whatever you have in mind, if it were intended to use them up over a weekend or over a three day Christmas.
See making liqueurs from wines and making liqueurs from extracts.

One bottle of liqueur may be made by using exactly half the amounts listed below and a little water.

FRESH FRUIT	QUANTITY (lb.)	SUGAR (oz.)	BRANDY
Blackcurrants	1	4	1 bottle
Redcurrants	1 1/2	5	1 bottle
Strawberries	1 1/2	3	1 bottle
Cherries	2	4	1 bottle
Raspberries	1	5	1 bottle
Loganberries	1	4	1 bottle
Blackberries	1	5	1 bottle

Crush the fruit by hand, put in a basin and keep in a very warm place for twelve hours, well covered. Strain carefully through several thicknesses of fine muslin or other suitable material. Allow to drain rather than squeeze.

Put the strained juice into a bottle of the same size as the brandy bottle and fill with boiled water that has been allowed to cool. Mix well by shaking, cork hard and put in a cool place for one hour. By this time a deposit will have formed. Pour the clear juice off this deposit, leaving a little juice rather than allowing any deposit through. The deposit may cause permanent cloudiness if boiled with the clear juice.

Put the clear juice in a small unchipped enamel saucepan with sugar and boil gently for two minutes. When cool put exactly half into two bottles of the same size as the brandy bottle and then fill up with brandy. Add a few drops of boiled water if the liquid does not reach to within one inch of where the corks will reach. Then cork hard and seal after giving a good shaking to ensure thorough mixing and keep for a month at least. If a film of deposit forms at the bottom of the bottles, decant before serving.

LIQUEURS AND PARTY SPECIALS (FROM HOME-MADE WINES)

Most of us have stocks of home-made wine and, at party time or at Christmas, we often wonder how we can turn them into 'party specials' and do so inexpensively. The main question always is: How much spirit to add to get a given percentage of alcohol.

Firstly, and in the ordinary way, a well-made wine will not need doctoring of this sort because if fermentation was satisfactory the alcohol content will be in the region of fourteen percent by volume (24 to 26 proof). This is the alcohol content of most commercial wines; indeed, some are lower in alcohol than this while others are, of course, higher.

Come party time the question is often one of economy-how to make that one bottle of Scotch, or gin or rum, go farther without the economy being noticeable. As already mentioned, spirits are hardly drunk meat; additions of some sort are usually employed, such as ginger, orange or lemon cordial, and these reduce the alcohol content to about a quarter. For those who want to experiment a bit on their own accord, the table shows the relation between alcohol by volume and proof spirit, and the range covered by this allows for the limits within which they will be working.

Those not wishing to start from scratch will find the following guidance useful.

Let me begin with whisky, gin or rum of 70 proof. Wines made with the following fruits are ideal for mixing with gin, either sweetened or unsweetened-damson, sloe, lemon, orange.

We have a bottle of one or the other of these wines and a bottle of gin handy. The gin contains forty percent alcohol by volume and a bottle of wine fourteen percent. Mix the two and you have (for the sake of simplicity) twice as much of both. Therefore you have twenty percent by volume (the gin) and seven percent by volume (the wine), total of twenty-seven percent by volume.

To make it simpler:

The gin 40 percent by volume
The wine 14 percent by volume
54 percent

But because the volume (amount) has been doubled, the alcohol content has been reduced by half-twenty seven percent by volume. As we can get fifty-four percent of alcohol in this way we could use two bottles of wine and one of gin and get three bottles of a product containing eighteen percent.

NOTE: It is important to understand that when two bottles of wine at 14% of alcohol are put together you have twice as much wine still at 14%. But when you do this for the purpose of fortifying, the alcohol in each bottle must be accounted for. Therefore, three bottles of wine each containing 14% equals 42%, plus one bottle of gin at 40% = 82%. Divide this figure by the number of resulting bottles-in this case four bottles-and each will contain just over 20%.

Going further-5 bottles at 14% = 70%
1 bottle gin at 40%

Total 110%

In this case six bottles result, therefore 110 divided by 6 = 18% approximately. The same would apply when whisky or rum are used.

Wines more suitable for mixing with whisky are: Root wines (not beetroot). Root wines made with cereals such as wheat, and with raisins, or both, or with wheat or raisins alone added. Grain wines -- those made mainly with wheat or maize, etc. Orange. Dandelion.

Wines more suitable for mixing with rum:

Root wines with a rather higher than average acid content.
Other more acid wines such as rhubarb.
Orange.
Lemon.
Grapefruit.

Wines more suitable for mixing with port and other high alcohol red wines:

Elderberry and all of the red wines whether made from one fruit or a mixture of fruits, or mixtures of fruits and grains such as wheat or maize. White wines or the paler-color ones made from such fruits as raisins, raspberries, loganberries, red or white currants, etc, may be mixed with the higher-alcohol white 'ports' or high-alcohol white wines.

NOTE: Owing to the lower alcohol content of port as compared with spirits, the mixing should be confined to one bottle of wine to the bottle of port if they are required for keeping. Two to one mixing may be practiced where it is intended to use up the product within, say, three or four days.

WINES THAT ARE A HIT WITH THE LADIES - PRESERVED, SWEET OR DRY WINES WITH LOW ALCOHOL CONTENT

It is mostly men who want their wines to be knock-out drops and usually they take care to get them as strong as possible. But a high percentage of alcohol is not everything. Many-indeed, I would say most-continental wines are in the region of eight to eleven percent of alcohol. Ours, made with the recipes in this book, will be a good deal stronger than this as has already been explained. It is the ladies who like the milder-flavored, low-alcohol, dry to medium-dry or medium-dry to sweet wines, so let me explain how any recipe here may be quite easily turned into a 'wine for the ladies'.

Mentioned in earlier chapters is the fact that a good percentage of alcohol ensures that wines keep well, and that the lower-alcohol wines - those under twelve percent-might begin ferment again at any time. This is because a stray yeast spore, either left in the wine or one reaching it at some later stage, will begin to reproduce and live on any sugar present. Only the very driest of low-alcohol wines will keep and these must be so dry that no unfermented sugar remains at all.

However, not everybody likes bone-dry wines; most people prefer them medium dry to medium sweet or even sweet.

The wines made with the recipes in this book will keep well provided the maximum alcohol has been reached, and if all directions have been followed this will have been achieved. They will keep because they contain enough alcohol to destroy any yeast or bacteria that may reach them.

Our aim when making low-alcohol wines is to add just enough sugar to make the amount of alcohol required and to allow the wine to ferment right out, and this will do of its own accord. The wine will be dry if less than two and a quarter pounds of sugar are used for one gallon.

Now take a look at the short table. This shows the amount of sugar needed to produce the amount of alcohol required in one gallon of wine;

if two gallons are being made the amount of sugar required would have to be doubled.

Let us suppose we have decided on making a wine of ten percent of alcohol: The amount of sugar to add is approximately one pound fourteen ounces per gallon.

Very well then, take any recipe in this book (but not those containing dried fruit as these contain quite a lot of sugar) and instead of using the amount of sugar given in that recipe, use one pound and fourteen ounces instead.

As already mentioned, the resulting wine will be bone dry-to dry even for those fond of the drier wines. To reduce this dryness we may sweeten to taste either by adding dissolved invert sugar (which dissolves quite readily) or by dissolving household sugar in some of the wine in the following manner.

Care must be taken here to ensure that the wine does not come into contact with metals. One pint of wine from one gallon will do. Put this into a china jug or similar vessel and stand this in a saucepan of water. Add, say, one teaspoonful of sugar for each bottle (one per gallon, six bottles) and warm the water until the sugar in the wine is dissolved. Mix this with the bulk and sample. If this is not quite sweet enough, you will know that the may be repeated. If you are using invert sugar, the sugar itself may be dissolved in an enamel sauce pan and the resulting syrup stirred into the wine.

Very well, we now have a low-alcohol wine with sugar in it. To prevent it fermenting or some later date we may preserve it without harming it in any way.

Here again, Campden tablets play their part, but if the wine is crystal clear, Campden tablets might cloud it slightly. This should settle our, but it would mean that rebottling might be necessary when this had happened. It is better therefore to use four grains of potassium metabisulphite in place of one Campden tablet. This should be enough to preserve one gallon of wine.

Crush the bisulphite crystals, and dissolve them in a little warmed wine and stir this into the bulk immediately after sweetening. Make sure the crystals are quite dissolved. I have written that one Campden tablet (or four grains of bisulphite crystals) should preserve a gallon of wine-and so

it should, but under exceptional circumstances it might not. One more tablet (or four more grains of bisulphite crystals) may be added without harmful effects, except that it might give just a hint of flavour to the most delicately flavored wines-through it will not affect those with a good all-round flavor. Fortunately, there is a simple test that we may carry out to decide whether a second tablet is needed or not.

First, pour a little of the treated wine into a wine-glass and bung down the remainder. Cover the glass with a small piece of cloth and leave in a warm room (not a hot place), overnight or for eight to twelve hours. Note carefully the color when setting it out again the following morning (or compare this sample with a sample freshly drawn from the bulk). If darkening of the sample left overnight has occurred, then an extra tablet is needed. If darkening has not occurred, one tablet (four grains metabisulphite) has done the job, and you have a low-alcohol wine of required dryness or sweetness that will keep well.

Up to 450 parts SO₂ are allowed by law in 1,000,000 parts wine, and this is represented by approximately eight Campden tablets (or thirty-two grains potassium metabisulphite). Two tablets (eight grains) represents just over one hundred parts per million; so it will be seen that we are not, after all, using very much.

Dry wines finish fermenting sooner than wines of a higher alcoholic content because there is less sugar to be fermented out.

This preserving of wines may be carried out with all wines if you wish, whether they be high-alcohol wines or not.

SUGAR		POTENTIAL ALCOHOL
lb.	oz.	per cent
1	4	7.6
1	8	9.2
1	14	10.8
2	0	12.3

The above figures refer to the use of household sugar. If invert sugar is being used, it must be borne in mind that this contains some moisture, so that for every pound of household sugar one must use one and a quarter pounds of invert sugar. So that mistakes do not occur, I have included the amounts of each sugar to use so that you may choose for yourself which to use and know how much of either-not both.

Invert sugar is usually supplied in tins containing seven pounds or in blocks by whatever weight is ordered. If weighing this proves awkward, dissolve it and measure it by the pint, bearing in mind that one pint represents two pounds of sugar.

IF YOU HAVE ANY DIFFICULTY GETTING HOLD OF THESE...HERE ARE SOME IDEAL REPLACEMENTS

INVERT SUGAR

This can be made at home by the reader if he has difficulty obtaining same: Put 8 lb. of ordinary household sugar (white sugar) in a suitable pan with 2 pints of water and 1/2 ounce of citric acid (obtainable in drug stores), or use the juice of four lemons. Bring slowly to a boil, stirring all the time so that all sugar dissolves.

When all sugar is dissolved, allow to boil for half an hour very gently without stirring or stirring only occasionally. Allow this to cool somewhat and then make up to exactly 1 gallon by adding boiled water.

You now have INVERT SUGAR - the inversion being caused by the acid. To measure, use 1 pint to each lb. sugar called for in the recipe - 1 pint is equal to 1 lb. sugar. Store in suitable jars, tightly corked.

YEAST NUTRIENTS

These are blends of chemicals which stimulate yeast reproduction, thereby helping the yeast to make as much alcohol as it is capable of making. There are no actual substitutes.,

CAMPDEN TABLETS

A substitute is given in the book. Four grains of sodium metabisulphite is equivalent to one Campden tablet. Your druggist will probably think four grains too small an order, so ask him for an order of, say, ten packs of four grains each, and use one four-grain pack for each Campden tablet called for in the recipe. Do not buy by the ounce and try to measure four grains yourself.

RIBENA

If you cannot obtain this, try to substitute black-currant syrup instead. However, it is best to use RIBENA proper.

CONTAINERS

Good quality tin or stainless steel containers may be used quite safely, but do not use vessels specifically not recommended by the author, and do not use galvanized containers.

As we are at an end of this huge manual I hope you are excited about being able to make your own fine wines!

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