

Any other spirit and liqueur bottles can be used (Whisky, Gin, Amaretto, Cherry Brandy, Peach Schnapps etc), they do not need to be sterilised but must be thoroughly rinsed first with warm water to remove the smell.

Empty used wine bottles with crew tops can also be used, but will need more thorough washing with warm water before use (sterilisation is not required providing thoroughly washed out with warm water).

If you are concerned with presentation:

Purchased new wine bottles from a specialist Home Brew shop together with good quality waxed corks (be careful with the corks – all corks claim to be good quality and few actually are). Also you will at least need to purchase a hand-corking machine for a few pounds – bottling instructions will be given with the corker.

Wine bottles should be thoroughly washed out with warm water. Waxed corks do not require pre-soaking, but if not waxed then soak for 24 hours in warm water before use (the soaking softens the corks so they can be more easily forced into the bottles). Fill wine bottle, insert cork, using hand corker then label wine bottle. Labels can be purchased from specialist Home Brew shops.

Serving your wine

Before serving, it is best to leave your wine for at least 2-4 weeks to allow the maturing compound to do its job of mellowing / ageing the wine. The wine will continue to improve for the first 6-8 weeks and then will keep for several years providing correctly bottled. All wines should be served at normal room temperature – even the whites, because of the high alcohol content (white table wines should be chilled first).

Helpline

If you have any problems, comments or questions, please don't hesitate to speak to one of our staff on 01283 564161 between 9am and 4pm Monday – Friday. It would be helpful if you can quote the batch number on the side of the box.

A Final Word

Our apologies for the length of these instructions, we felt it was important to give a little more than just the basic 'cold' instructions.

We hope you enjoy your wine and would be most interested to receive any recipes you would recommend to other winemakers – each month names of these submitting recipes are "put into a hat" (actually a wastepaper bin because we don't have a hat!). The winner receives free wine kits for life (as many as they can use privately)!

If you wish to go onto our mailing list, send your address to us and we will be able to keep you up to date with new products, recipes and special offers.

For further information please contact us:

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4.5 Litre HEDGEROW WINE INSTRUCTIONS

You are about to make something rather special – more of a fruit schnapps / liqueur than a wine! This is made possible because of the improvements to the ingredients available for hedgerow winemaking, allowing up to 18% alcohol by volume to be made. You can still make lower strength 'table wines' using the same ingredients, by just reducing the amount of white sugar (see instructions).

Also, we have removed the need to sterilise any of the equipment used for winemaking – just make sure all the equipment is washed thoroughly.

ESSENTIAL EQUIPMENT (Items that would be found in almost every kitchen are not mentioned here).

5 litre demijohn fitted with bung and airlock: This will be used throughout the winemaking from the early stages where the fruit is first added, through to the final clearing of the wine. You will find it most useful to have a second demijohn after the wine is clear in instruction 9.

Scales: To weigh out the fruit and sugar used in the recipe.

Syphon Tube: Use at the end of winemaking (in instruction 9) to separate the clear wine from the sediment. Simple plastic tubing can be used but a specialist '4.5 litre syphon kit' can be purchased from a specialist home brew shop. This syphon kit will have a u-bend or cup on the end and a straight piece of rigid piping which prevents the sediment being drawn up.

USEFUL EQUIPMENT

Straining Bag: A straining bag makes it much easier to separate the fruit 3 days into the instructions (see instruction 4).

Thermometer: If your temperature is wildly wrong, you will fail to make wine at all. But what many do not realise is that if your temperature is only a little wrong, than although you will make wine, the quality will be reduced. The best temperature to make wine at in between 22°-27°C. See instruction 6 for more about temperature.

Hydrometer: This will tell you when fermentation (the name given to the conversion of sugars into alcohol and carbon dioxide gas by yeast) is finished. It can also be used to calculate alcohol levels (see good Home winemaking book for more about Hydrometers – or phone the helpline desk and ask for a free booklet). These instructions will not require the use of a hydrometer.

UNDERSTAND WHAT IS ABOUT TO HAPPEN

You are about to mix together the following ingredients:

THINGS YOU PROVIDE:

Fruit – The main reason you add the fruit is to give the wine its flavour and bouquet (smell). Fruit also contributes natural sugar and also natural acidity.

White Sugar – Add before fermentation begins to increase the alcohol level. But added at the end (after stabiliser) to increase sweetness of the wine (see instruction 10).

THINGS PROVIDED IN THIS KIT

Pectinase – To break down the fruit cell walls to release the fruit juices inside. The enzyme does much more besides including giving improved colour, better clearing as well as improved taste. This same enzyme is added to all commercial wines and also to clear fruit juices – it is entirely safe. Indeed, this is a natural enzyme found in many micro-organisms which use the enzymes to break down plant material for food.

Wine Yeast – To convert all the sugars (natural sugars from the fruit and the white sugar added) into alcohol. The type of yeast chosen for winemaking is very important. The type of yeast contained in this kit is a genuine wine yeast strain, which will produce good wine flavour and also produce high levels of alcohol. One of the biggest mistakes of home winemaking is to use cheaper bread making yeast strains – they don't make good wine.

Nutrient – To help the yeast work. Yeast (like man) works best if given a balanced diet, complete with all the Amino Acids, Vitamins and Minerals needed. The nutrient contained in this kit is rather special because its recipe has been carefully selected to suit wine yeasts individual nutritional need whilst it is fermenting / making wine.

Citric Acid – To add to the final wine if not 'sharp (lemony)' enough. 10g sachet is included, 1/3 of the sachet should be added at a time and the wine tasted before further amounts are added – see instruction 10.

Stabiliser – To stop your wine 'going off' after it is made (do not add until the end! – see instruction 7).

Fining (3 types) – To clear your wine, but also help to smooth / mature your wine.

Oak Barrel Extract – A natural blend of real oak extract, real wine concentrate, oak tannins and soft fruit concentrates. Once added to your wine it promotes rapid maturation and mellowing of the wine – allowing the wine to mature within 3-4 weeks instead of 6-12 months.

We guarantee that the ingredients provided in this kit are the very best quality available nationwide. No compromise has been made with any of the ingredients we have chosen for this kit. If you use good quality fruit and follow the recipe carefully you will make superb wine.

IMPORTANT

A word about experimenting with recipes, it is good to experiment with the fruit recipe (see table later) – you will make even better wines where fruits are mixed together. But please do not experiment with the instructions or the contents of this kit – we have done a tremendous amount of work on how best to use these sachets and on the sachet ingredients themselves. Please be careful to follow the instructions very carefully.

THE SCIENCE BIT

The fruit is crushed or sliced to help the enzyme to reach all parts of the fruit – the enzymes job is to break down the cell walls inside the fruit to release the 'precious' fruit juice. Natural acids and natural sugars are also released from within the fruit cells. The Yeast eats the sugar (natural and / or added), and it makes no difference to the yeast) and makes alcohol and carbon dioxide gas as waste products (as far as the yeast is concerned anyway!). The nutrient provides the other food the yeast needs to work efficiently (things like trace minerals and extra nitrogen).

After all the sugar has been used up, you add stabiliser to stop the wine oxidising in storage and also to stop any bacteria or moulds / yeasts from contaminating the wine.

Clearing agents are then added to remove all the solid matter from the wine (yeast cells and very small pieces of remaining fruit). Once the wine is clear, there may need to be a slight increase to the wine acidity by adding Citric Acid sachet to make the wine more acidic /

The "4.5 litre Syphon Kit"

Think of this as having an extra pair of hands! Basically it is still one long syphon tube, with a stiff end that goes into the demijohn. Then there is a U-bend or cup at the end which first goes into the wine, this stops sediment being sucked up so you don't have to tilt the demijohn nearly so much to get all the wine out.

Anyone who has tried to syphon clear wine off sediment using an ordinary length of plastic syphon tube....now has a 4.5 litre syphon kit!

10. Once you have clear wine with no sediment, now you will probably need to make some adjustments to sweetness and acidity. It's best to adjust the sweetness before the acidity.

How to adjust the sweetness (most wines will need to be sweetened).

Taste the wine, try not to think of how "sharp (like lemons" or how "watery" the wine is, just consider whether the wine is sweet enough. If it is sweet enough, then proceed to adjust acidity (see below). If the wine is not sweet enough (this is normal) then add a ½ cupful of white sugar, stir until fully dissolved then re-taste. Continue to add ' ½ cupfuls' of sugar until the wine is sweet enough.

Do not be afraid to add the first ½ of a cup of sugar to your wine – it is important that the wine has enough sweetness to balance the strength and weight / body of the wine. Also, do not judge the quality of your wine until after the sweetness (and acidity below) have been adjusted and the Oak Barrel Extract have been added – it will taste totally different when everything has been added and the wine stored for 3-4 weeks!

How to adjust the acidity

Taste the sweetened wine and decide whether it is sharp enough for your taste. It not, then add about 1/3 of the sachet of Citric Acid, stir well to ensure completely dissolved and leave for 5 minutes before re-tasting. Add further 1/3 or 2/3 of the sachet if required (don't forget to wait for 5 minutes after each addition has been added and stirred thoroughly).

It is quite normal if you find you do not need to add the citric acid sachet – fruit already contains natural acid and some years there will be plenty of natural acid in the wine (especially when it has been a cold year). Equally, don't be afraid to add 1/3 of the sachet if you are not sure whether the wine is sharp enough – trust your taste buds! Adding 1/3 of the sachet will only increase the acidity of your wine by a small amount, so don't worry, it won't ruin your wine.

11. Now add the Oak Barrel Extract, stir well. This maturing compound will allow your wine to mature within only 3 to 4 weeks instead of between 6-12 months.

Now your wine can be bottled.

HOW TO BOTTLE YOUR WINE

If you are not too concerned about presentation:

Empty used Yodaka bottles are best because they need no sterilising and don't even need to be washed out! Just syphon the wine directly into the bottles, leave a 1" (20mm) airspace at the top, then tighten the top. Your wine can be stored for years in these bottles.

because of the colour. The only way is to take a sample of the wine from $\frac{3}{4}$ the way down the demijohn using a syphon tube.

- Now comes the tricky part – **syphoning**. This is the process of separating the clear wine from the sediment at the bottom of the demijohn. It's best to practice with water if you have not done this before.

Syphoning is made much easier if you purchase a "4.5 litre Syphon Kit".

How to Syphon – using a simple syphon tube (i.e. if you don't have a 4.5 litre syphon kit – and all you do have is a simple plastic syphon tube).

This is where a second demijohn really comes in handy. The original 5 litre demijohn should be at least 0.5m off the ground (see inst. 6)

Using a clean (rinsed with hot water) syphon tube, place one end approx. $\frac{1}{3}$ the way down into the clear wine. Leave the other end 'dangling freely' in the empty demijohn (cleaned first with hot water).

The trick is not to hold the 'dangling free' end of the syphon tube once the wine starts flowing – you will need both hands free for the end of the syphon tube in the wine!

So, here's how to do it: Hold the 'wine end' of the syphon tube so it stays $\frac{1}{3}$ down into the wine. The easiest way to do this is to hold the mouth of the demijohn and the syphon tube together both in one hand – 'clamped'.

Now bend down to the 'dangling end' of the syphon tube, and whilst looking up at the top of the syphon tube, continue to suck hard until you see the wine approach you down the syphon tube! As soon as you see the wine flowing down the syphon tube, stop sucking and quickly place the 'dangling end' into the second demijohn. All the time your other hand should have the syphon tube 'clamped' to the mouth of the demijohn so it does not move.

The wine should now be flowing into the second demijohn. If it didn't work, then you probably did not suck for long enough. You need to keep sucking (one long continued suck) until the wine is clearly visible, flowing towards you rapidly!

Once the wine is flowing, you should be able to forget about the dangling end (providing of course the dangling end is some way into the demijohn – so you won't have a spillage). Now, you should have one hand on the mouth of the demijohn – holding the syphon tube and the other hand free (for the moment anyway).

As the level drops in the top demijohn, slowly lower the syphon tube further down into the wine so that it is always a few centimetres (an inch or so) below the wine's surface. This is the easy part of syphoning, enjoy it whilst it lasts! But as the level drops further, the sediment comes closer to the end of the syphon tube and you run the risk of sucking up sediment instead of clear wine. The next bit requires some expertise.

Slowly and carefully tilt the top demijohn (without disturbing the sediment much) to increase the distance between the clear wine surface and the sediment. This will prevent sediment being sucked up. You will only be able to do this if you have both hands free for the top bucket.

Don't worry if you accidentally suck up some sediment with the bright wine. In fact some people intentionally take some sediment to make sure they don't lose any wine. Just leave the second demijohn to clear for 24 hours and then repeat the syphoning process (don't forget to place it at least 0.5m off the ground).

sharp. The wine would then be bottled after a couple of days, but not before adding the special 'Oak Barrel Extract' to make it taste like it's been stored in Oak for 6 months!

WHAT TYPE OF FRUIT AND HOW MUCH TO USE?

The table below shows in the first column which fruits are suitable for making good home wines, then goes on in the remaining columns to show you how much to use for a 5 litre fermentation, how much white sugar to add and what 'extra fruits' to add for that 'something special' occasion.

Don't worry if you do not have the 'extra fruits' given in the last column of the table below (it's OK to add just one where two are given, e.g. it's OK to add 0.15kg Raisins for the Blackcurrant wine even if you don't have the 0.4kg Redcurrants). If you don't have the extra fruits, but still want to improve the quality, then 1kg of raisins can be added instead of the extra fruits. If you do not have any raisins an equivalent amount of **white grape concentrate** can be added as an alternative.

If you want to make **lower strength 'table wines'** then reduce the sugar addition to 0.86kg sugar. No reduction to the amount of fruit added is needed and the 'extra fruit' additions should still be added.

WHAT TO DO IF YOU DON'T HAVE ENOUGH FRUIT

First work out what weight is missing, then add half this weight of raisins (or white grape juice).

Example – say you have only 1kg Plums, the recipe says you need 1.6kg Plums so you are 0.6kg short. So you need to also add 0.3kg raisins (half of 0.6kg) or white grape juice. It is also absolutely OK to mix fruits together if you don't have enough of one fruit, in fact this usually produces an even better wine! Use your instinct to decide how much of each fruit to add – just don't go mad!

Suitable Fruits you can use	How much fruit? (before preparation)	How much White sugar?	Extra Fruit
Apple (sour)	2kg	1.3kg	0.1kg Blueberries
Blackcurrant	0.8kg	1.3kg	0.4kg Redcurrants + 0.15kg Raisins
Blackberry	1.2kg	1.3kg	0.1kg Blueberries
Cherry (black or red)	2kg	1.3kg	0.1kg Blueberries
Crab Apple	2kg	1.3kg	0.2kg Raisins
Damson	2kg	1.3kg	Nothing else!
Elderberry	0.8kg	1.3kg	0.4kg Raisins
Gooseberry	1.4kg	1.3kg	0.1kg Blueberries
Greengage	2kg	1.3kg	0.15kg Raisins
Loganberry	0.8kg	1.3kg	0.2kg Blueberries + 0.1kg Raisins
Pear	1.6kg	1.3kg	Nothing else!
Plum	1.6kg	1.3kg	0.15kg Raisins
Raisin	0.8kg	1.3kg	Nothing else!
Raspberries	0.8kg	1.3kg	0.15kg Raisins
Redcurrant	0.8kg	1.3kg	0.4kg Blackcurrants + 0.15kg Raisins
Rosehip	0.1kg	1kg white + 0.4kg brown	0.3kg Raisins + 0.6kg Rosehips
Rowanberry	1kg	1.3kg	0.15kg Raisins + 0.1kg Blueberries
Strawberry	1kg	1.3kg	0.1kg Raisins

FRUIT PREPARATION

Once you have decided upon which recipe to make from the table above, the fruit must be prepared as below. Wash your hands and rinse away all soap thoroughly before preparing fruit.

For Small Currants and Berries (Blackcurrants, Blackberries, Elderberries etc) - Remove stems and wash fruit in warm water. Add to clean bucket then crush (no need to remove stones) using a potato masher or some other kitchen implement.

For Hard Fruits (Apples, Pears etc) - Remove stems, wash with warm water then slice into bucket leaving core and any bad fruit. The skin is important for flavour, so the fruit should NOT be peeled.

For Soft Fruits (Damsons, Plums, Cherries etc) - Remove stems, wash with warm water. Add to bucket then crush (remove stones if possible - but not essential).

Others -

Greengages - Remove stems, wash in warm water then slice into a bucket

Gooseberries - Remove stems, wash in warm water then slice into a bucket

Raisins - Soak for 2 hours in lukewarm water (large pieces should be cut up)

Rosehips - Wash in warm water then add to bucket

Old winemaking recipes included the addition of Campden tablets into the fruit - this is not necessary provided you process the fruit quickly from the time after washing to when boiling water is added to the fruit in instruction 2 below.

INSTRUCTIONS

We would recommend using a 10 litre plastic bucket instead of a demijohn (especially up to instruction 4(ii)). Whilst the instructions have been written for use with a demijohn, all you have to do is follow the same instructions, but where the demijohn is mentioned use the bucket. Remember to leave the lid in place but not pushed down during fermentation. This allows the fermentation gases to escape. If you have a demijohn then this will be preferable at 4(ii) to transfer the liquid from the bucket into the demijohn.

1. Clean a 5 litre demijohn with plenty of hot water (do not use boiling water, but only hot water from a domestic hot water supply).
2. Add prepared fruit (see table above and "Fruit Preparation") into the demijohn - this should be done as quickly as possible to ensure the fruit does not go off. Add 1 litre of very hot tap water, swirl demijohn contents (if using glass do not put your hand over the top as this can cause the glass jar to act as a pressure container). Now add **0.4kg sugar** and swirl for 2-3 minutes to dissolve the sugar. Add just enough cold water to cover the fruit - make sure you do not add too much cold water (better to add less if in doubt). Stir well, then leave to cool to 50°C, add the **Pectinase** sachet contents and stir well. Now leave for 1 hour - stir occasionally.
3. After 1 hour, top up to 3.5 litres (demijohn three quarters full), with cold water (it may already be 3.5 litres or above already depending upon the fruit you added), swirl well - do not proceed until the liquid temperature has dropped below 30°C (it usually will be below 30°C at this point). Now add the **Wine Yeast**. Leave for 1 hour and add the **Nutrient** sachet contents and stir well.
4. (i) Wash the bung and airlock in hot water, half fill the airlock with cold water, then fit it to the demijohn. Now leave to ferment for 3 days (fermentation is just the name people use to describe the conversion of sugar into alcohol and carbon dioxide gas by the yeast).
(ii) After 3 days, remove the fruit by pouring off the entire demijohn contents (slowly) through a straining bag or sieve - pouring into another clean rinsed container - ensure fruit is gently squeezed to retain precious juices. DO NOT

squeeze the fruit too hard otherwise you will introduce a bitter, harsh flavour into your wine from seeds and other fruit components. Once you have poured off the entire contents, rinse out and discard any remaining fruit from the demijohn using warm water, then return all the liquid.

5. Separately dissolve the rest of the sugar (usually 0.9kg, see table) into 0.8 litres hot water (from hot water tap is fine). Once dissolved, wait until the temperature drops below 40°C before adding to the demijohn. Top up to 4.5 litre with cold water if necessary.
You may have a problem getting all the ingredients into the demijohn depending upon the fruit used and how the instructions have been followed. It is important that the extra sugar from instruction 5 is added, even if some of the demijohn contents needs to be thrown away to make room for all the sugar solution to be added.

6. Now replace the airlock (airlock may need re-washing and re-filling) and leave to ferment for 3 weeks at between 22°C - 27°C until fermentation stops (this will be when no more bubbles of carbon dioxide gas are rising through the airlock). The demijohn should be placed 0.5 metre or more off the ground for easy syphoning later.

The temperature is important - if it's much too high (above 28°C) then you will end up with a wine too sweet and also the quality will be poor. If the temperature is a little too low (i.e. 15-21°C) then that's OK, the wine quality will be fine but it will take twice as long for fermentation to finish (6 weeks instead of 3). Below 15°C should be avoided. DO NOT use a brewer's or a brewer's or any other direct form of heating unless thermostatically controlled - between 22-27°C is the best temperature (this is 'warm room temperature' to most people).

Keep an eye on the airlock, re-wash and re-fill if contents froth during fermentation.

7. After fermentation, add the contents of the **Stabiliser** sachet, stir well and leave for 2 days. The wine is left for 2 days so that it loses its dissolved carbon dioxide gas (otherwise you can get clearing problems). If you remember, it is good to stir the wine a few times during these two days - but don't worry if you forget!

8. After the wine is free from dissolved gas, add **Chitosan** sachet directly to the wine. Stir gently for 30 seconds (its OK that the sediment gets mixed up!), and then leave for 2 hours.

After the 2 hours, add **Finnings 2** sachet and stir gently for just 10 seconds. Then immediately add **Finnings 3** sachet and again stir gently for just 10 seconds. Now leave the wine to clear - do not continue to instruction 9 until absolutely crystal clear / 'water bright' - this usually takes about 1 day, but leave for 2-3 days to be sure.

It's important to add clearing sachets 2 and 3 gently into the wine. Delicate bonds are formed between the clearing agents and the solid matter (including yeast cells) in your wine - vigorous stirring breaks these bonds and your wine will not clear so well. Pretend you are adding a blue coloured dye into water and only want to mix it enough to evenly distribute the blue colour throughout the water - this is how little you need to mix in the clearing agents 2 & 3.

For white wines it is easy to tell whether the wine is clear by simply looking into the demijohn. You should be able to clearly see through the wine in the demijohn and the sediment at the bottom should be clearly visible - just as if water were on top of the sediment. For red wines it's obviously not possible to look through the wine