

SUGARS

HYDROMETER:

- Checks progress of fermentation
- Measures initial sugar content of must, from which alcohol can be calculated
- Provides indication of sweetness of finished wine

Calibrated normally at 60 or 65 deg F.

SG is weight of volume of liquid cf weight of equivalent volume of water.

SG of water = 1.00; SG of alcohol = 0.794. SG of wine depends on sugar/alcohol.

2lb of sugar occupies 1 pt of water. 2lb sugar in 1pt water gives 2pts sugar syrup.

SUGAR TYPES:

Glucose, Fructose, Starch, Sucrose, Maltose and Lactose are all sugars.

Fructose and Glucose are fermented with ease – fructose is twice as sweet.

Granulated, caster and Demerara/brown sugars are all the same substance – caster sugar dissolves more easily and brown sugars contain impurities.

Honey can be used in part or in full (Mead). 5lb honey = 4lb sugar; 5lb raisins/sultanas = 3lb sugar; fruit contains 8-10 % sugar.

Sorbitol and glycerol sweeten and smooth the wine.

Fermentation

1lb sugar in gallon gives gravity 1036 and potential alcohol of about 5.5%.
3lb sugar is about the maximum normal yeasts can ferment.

Percentage of alcohol is gravity drop/7.4. If gravity drops from 1080 to 990, then you have $90/7.4 =$ just over 12 % alcohol

Process – Sucrose + water (in presence of acid) = glucose + fructose
Glucose/fructose (in presence of yeast) = ethyl alcohol + carbon dioxide

Finishing Gravity of Wine Styles

Judging levels of sweetness is all down to taste and it is an individual thing. The following table gives a rough guide as to the range of hydrometer readings applicable to wine styles, but it will depend upon fruit, acidity and alcohol so you need to adjust the sweetness in stages and taste the wine.

Style	Gravity
Dry	992 – 996
Medium Dry	999 – 1002
Medium	1008 - 1012
Medium Sweet	1015 – 1025
Sweet	1025 – 1035
After Dinner	1040 - 1050

Table Sweet White Wine Characteristics

- ❑ Drunk with fruit or dessert
- ❑ Flavour richer than for dry table
- ❑ Good acidity to balance sweetness and prevent a cloying finish
- ❑ Alcohol up to 14%
- ❑ Bouquet – complex and vinous
- ❑ Colour up to golden

Commercial examples - Sauternes,
Coteaux du Layon, German Auslese

Constructing Recipes

For these wines, you need to use fruit to give sufficient body.

Apples, gooseberries, peaches and apricots are good fruits to use. They give body, flavour and acidity to the wine without being too overpowering in flavour.

Parsnips and Carrots make quite a good sweet wine too, although you will need to boost the acid.

A mix of fruits is a good idea too as it gives more complexity and avoids a particular fruit being too dominant.

RECIPES

SWEET GOOSEBERRY WINE RECIPE (1st place at National Show 2000)

Ingredients: 5lb gooseberries; 2lb peaches; 12 oz apricots; 1 lb pears; 1 ½ lb bananas
8 oz sultanas; 1ltr white grape juice; 1ltr apple juice; nutrient, pectic enzyme, B1 tablet
Gervin No 3 yeast

Chop up all the fruit except for gooseberries and just cover with boiling water. Add juice from previously frozen gooseberries and other juices + Campden tablet. Leave for a day and then add yeast. Leave for 5 days and then strain off fruit and place in demijohn.

Add 2lb sugar in 4 oz stages over a period of a few weeks. This included 4 oz soft brown and 4 oz golden caster sugar.

Then add Campden, and when settled add further Campden tablet and sorbate.

Add about 1lb sugar in stages to sweeten to taste. This wine ended up at gravity of 1040.

Bottle and leave to mature for a few months.

SWEET WHITE TABLE

1 lb. crab apples; 2.5 lb. cooking apples; 8 oz rose hips; 2lb bananas; 3lb pears

2 lb. Tinned Peaches; 1lb gooseberries; Zest of 1 orange; 0.25 oz oak granules (optional)

Yeast suitable for high alcohol/dessert wine; Nutrient; Pectic enzyme; 250 gm white grape concentrate; 1.5 lb. Sugar (+ sugar to sweeten)

Method: Chop (and core where appropriate) all fruit, and crush rosehips. Cover with water (not too much) in a bucket and add Campden tablet. Leave for 24 hours. Add zest, nutrient, yeast, enzyme and oak granules. Ferment on the pulp for 7-10 days, then strain into gallon demijohn, add concentrate and 8 oz sugar. Add remaining sugar in 8-oz portions at weekly intervals. Allow to ferment out, then add Campden, leave to settle and rack.

Add another Campden and Sorbate/Wine stabiliser. Then add sugar to sweeten, finishing at gravity of about 1030, or to suit your taste.

PARSNIP TOKAY

Ingredients:

4.5lb young parsnips	1.5tbs glycerine	1lb ripe rosehips
1oz acid blend (citric, tartaric, malic)		1lb ripe bananas
Pectolytic enzyme, nutrient, tokay yeast		500ml grape conc
Vitamin B1 tablet	2lb sugar	Campden tablet

Method: Top, tail, scrub and dice parsnips. Wash and crush rosehips. Peel and slice bananas. Boil them together in 4 pints water for 30 minutes and leave to cool. Pour into fermentation jar, add two-thirds of acid, pectic enzyme and one Campden tablet. Leave for 24 hours. Add grape conc, water, yeast, nutrient and vitamin B tablet and ferment for one week. Add half sugar and half remaining acid and continue fermentation. Add remaining sugar, acid and glycerine and continue fermentation until finished. Store for a year, sweeten to taste before bottling.

Table Medium Sweet White - Peach & Apricot

Ingredients

2 lb peaches; 1lb 8 oz apricots; 4 oz dried apricots; 4 oz clear honey
1 ltr white grape juice; 1 ltr apple juice; nutrient; pectic enzyme, bentonite; yeast; 1lb 8 oz white sugar; 8 oz soft brown sugar

Wash, stone and chop fruit. Place in bucket, cover with water, add Campden tablet and leave for 24 hours. Add other ingredients (only 1lb white sugar) and leave to ferment for 5 days. Strain off solids, add brown sugar and ferment to dryness. Add Campden tablet and leave for a few days before racking. Add a further Campden tablet, some wine stabiliser and the last 8 oz sugar to sweeten. Taste to see if further sugar needed (Final gravity should be in range 1020-1025).