

# DENSITY MEASUREMENT

## SACCHAROMETERS FOR BREWERS & DISTILLERS

Saccharometers are hydrometers designed for use in sugar solutions such as wort. Accurate saccharometer readings will let you calculate the alcohol content of your beer or wash. You can use them to follow the progress of fermentation, and they will also let you keep track of the consistency of other processes in the brewery such as mashing. They will keep their accuracy for many years without needing to be checked. We supply every professional saccharometer with a certificate of accuracy valid for three years from its date of calibration.

Our professional brewing saccharometers give a direct reading of degrees of specific gravity at 20°C, where the scale is based around a reading of 1000° indicating a solution with the same density as water at 20°C. They are available with graduations as fine as 0.1° (one part in ten thousand), an accuracy comparable to electronic densitometers costing many times the price of a set of saccharometers.

### B3010 SERIES

**Range:** 10° gravity in 0.1° graduations

**Size:** 305mm long x 38mm wide

These are our most precise saccharometers. They let you read gravity to the nearest 0.1° and have a certified accuracy of 0.2°, so they are perfect if you need to keep accurate records for SIBA accreditation. These are the easiest way to get the best gravity readings for accurate ABV determination and are suitable for HMRC declarations of the alcohol content of your beer or wash. These are also suitable for use as reference instruments if you want to check the accuracy of other saccharometers when supplied with UKAS calibration certificates or our own works certificates with precise correction values at two or three points on the scale.

**ACCURACY:** ★★★★★

**PRICE: £62.00**

Product Code	° Gravity Range	Product Code	° Gravity Range
B3010/.990	990 to 1000	B3010/035	1035 to 1045
B3010/.993	993 to 1003	B3010/040	1040 to 1050
B3010/.995	995 to 1005	B3010/045	1045 to 1055
B3010/000	1000 to 1010	B3010/050	1050 to 1060
B3010/005	1005 to 1015	B3010/055	1055 to 1065
B3010/010	1010 to 1020	B3010/060	1060 to 1070
B3010/015	1015 to 1025	B3010/065	1065 to 1075
B3010/020	1020 to 1030	B3010/070	1070 to 1080
B3010/025	1025 to 1035	B3010/080	1080 to 1090
B3010/030	1030 to 1040	B3010/090	1090 to 1100



### BREWERS:

Best for ABV determination of beer.  
Suitable for SIBA and HMRC.

### DISTILLERS:

Best for ABV determination of wash.  
Suitable for HMRC.

### CERTIFICATION:

Come with a certificate of accuracy to 0.2° gravity, valid for 3 years. Also suitable for UKAS or works certification showing even more precise corrections (see page 16).

### USE WITH:

Hydrometer jars of at least 50mm diameter. We recommend a wider jar so that you can take simultaneous temperature readings – the BJ3363 jar is ideal (see page 17).

Thermometers with an accuracy of 1°C or better. Our saccharometer jar thermometers on page 19 are ideal.

Correction chart BS15G (see page 16) to allow for corrections when readings are not taken at 20°C.

Our hydrometer stand with 38mm fittings (see page 18) will let you keep a few of these handy on the bench while you are using them. Don't forget to wash and safely store them after use.

### ALSO CONSIDER:

You may not want to use the most precise and fragile saccharometers at every point in your process, and you may want to keep a spare set in case of breakages. Consider the B3030 series (see page 7) for times when a less accurate reading is good enough.

Products shown are held in stock. We can make any other range not shown to order.

## B3020 SERIES

Range: 20° gravity in 0.2° graduations

Size: 305mm long x 38mm wide

These are very precise saccharometers and have graduations to a certified accuracy of 0.2° gravity. You will need to keep records this precise for SIBA accreditation, and these will show that you are producing a beer with consistent quality and ABV. They are suitable for HMRC declarations of the alcohol content of your beer or wash. These are also suitable for use as reference instruments if you want to check the accuracy of other saccharometers when supplied with UKAS calibration certificates or our own works certificates with precise correction values at two or three points on the scale.

ACCURACY: ★★★★★

PRICE: £60.00

Product Code	° Gravity Range
B3020/990	990 to 1010
B3020/000	1000 to 1020
B3020/010	1010 to 1030
B3020/020	1020 to 1040
B3020/030	1030 to 1050
B3020/040	1040 to 1060
B3020/050	1050 to 1070
B3020/060	1060 to 1080
B3020/080	1080 to 1100

## SC2520 DISTILLER'S SERIES

Range: 10° gravity in 0.2° graduations

Size: 250mm long x 38mm wide

Typically used by distillers, these are based on the old specification from Customs and Excise Notice 39 for Distillers and are shorter than the typical brewer's saccharometer. They are very precise saccharometers and have graduations to a certified accuracy of 0.2° gravity. They are suitable for HMRC declarations of the alcohol content of your beer or wash. These are also suitable for use as reference instruments if you want to check the accuracy of other saccharometers when supplied with UKAS calibration certificates or our own works certificates with precise correction values at two or three points on the scale. Stocked in ranges suitable for wash fermentations rather than beer.

ACCURACY: ★★★★★

PRICE: £60.00

Product Code	° Gravity Range
SC2520/993	993 to 1003
SC2520/055	1055 to 1065
SC2520/060	1060 to 1070
SC2520/065	1065 to 1075



### BREWERS:

Best for ABV determination of beer.

Suitable for SIBA and HMRC.

### DISTILLERS:

Best for ABV determination of wash.

Suitable for HMRC.

### CERTIFICATION:

Come with a certificate of accuracy to 0.2° gravity, valid for 3 years. Also suitable for UKAS or works certification showing even more precise corrections (see page 16).

### USE WITH:

Hydrometer jars of at least 50mm diameter. We recommend a wider jar so that you can take simultaneous temperature readings – the BJ3363 jar is ideal (see page 17).

Thermometers with an accuracy of 1°C or better. Our saccharometer jar thermometers on page 19 are ideal.

Correction chart BS15G (see page 16) to allow for corrections when readings are not taken at 20°C.

Our hydrometer stand with 38mm fittings (see page 18) will let you keep a few of these handy on the bench while you are using them. Don't forget to wash and safely store them after use.

### ALSO CONSIDER:

You may not want to use the most precise and fragile saccharometers at every point in your process, and you may want to keep a spare set in case of breakages. Consider the B3030 series (see page 7) for times when a less accurate reading is good enough.

Products shown are held in stock. We can make any other range not shown to order.

# DENSITY MEASUREMENT

## B3030 SERIES

Range: 30° gravity in 0.5° graduations

Size: 305mm long x 34mm

These are precise saccharometers and have graduations to a certified accuracy of 0.5° gravity. These are ideal for checks at any point in the brewing process. A set of two covering up to 1060° will cope with normal strength brews, and a set of three covering up to 1090° will cope with high strength brews as well. They are suitable for HMRC declarations of the alcohol content of your beer or wash.

ACCURACY: ★★★★★

PRICE: £50.00

Product Code	° Gravity Range
B3030/000	1000 to 1030
B3030/030	1030 to 1060
B3030/060	1060 to 1090
B3030/090	1090 to 1120

## B2320 SERIES

Range: 20° gravity in 0.5° graduations

Size: 230mm long x 26mm wide

These are precise saccharometers and have graduations to a certified accuracy of 0.5° gravity. These are ideal for checks at any point in the brewing process and are shorter than our standard saccharometers, so you only need to take a small sample for testing. A set of three covering up to 1060° will cope with normal strength brews, and a set of four covering up to 1080° will cope with most high strength brews as well. They are suitable for HMRC declarations of the alcohol content of your beer or wash.

ACCURACY: ★★★★★

PRICE: £47.00

Product Code	° Gravity Range
B2320/000	1000 to 1020
B2320/020	1020 to 1040
B2320/040	1040 to 1060
B2320/060	1060 to 1080



### BREWERS:

Good for ABV determination of beer and for checks throughout the brewing process. Suitable for HMRC.

### CERTIFICATION:

Come with a certificate of accuracy to 0.5° gravity, valid for 3 years. Also suitable for UKAS or works certification showing even more precise corrections (see page 16).

### USE WITH:

The B3030 series needs hydrometer jars of at least 50mm diameter, such as the BJ3351. The B2320 series only need a jar of at least 40mm diameter, so the SJ2540 is ideal (see page 17).

Thermometers with an accuracy of 1°C or better. Our saccharometer jar thermometers on page 19 are ideal.

Correction chart BS15G (see page 16) to allow for corrections when readings are not taken at 20°C.

Our hydrometer stand with 34mm fittings for the B3030 or 26mm fittings for the B2320 (see page 18) will let you keep a few of these handy on the bench while you are using them. Don't forget to wash and safely store them after use.

### ALSO CONSIDER:

If you want SIBA accreditation, then you will need a more precise saccharometer, so consider the B3020 series (see page 6) for keeping more accurate records of fermentation.

Products shown are held in stock. We can make any other range not shown to order.



## WIDE RANGE SACCHAROMETERS

Range: 50° or 60° gravity in 1.0° graduations

Size: 305mm long x 26mm wide

These saccharometers cover a wide range and have graduations to a certified accuracy of 1.0° gravity. These are ideal for checks at any point in the brewing process where the greatest accuracy is not required.

ACCURACY: ★★★★★

PRICE: £44.00

Product Code	° Gravity Range	Product Code	° Gravity Range
B3050/000	1000 to 1050	B3050/100	1100 to 1150
B3050/050	1050 to 1100	B3060/000	1000 to 1060

## SHORT SACCHAROMETERS

Range: 30°, 40° or, 50° gravity in 1.0° graduations

Size: 230mm long x 26mm wide

These saccharometers for use with small sample volumes have graduations to a certified accuracy of 1.0° gravity. These are ideal for checks at any point in the brewing process and are shorter than our standard saccharometers, so you only need to take a small sample for testing. Measurements below 1000 are suitable for wash or cider making.

ACCURACY: ★★★★★

PRICE: £42.00

Product Code	° Gravity Range	Product Code	° Gravity Range
B2340/990	990 to 1030	B2330/000	1000 to 1030
B2340/030	1030 to 1070	B2330/030	1030 to 1060
B2350/000	1000 to 1050	B2330/060	1060 to 1090
B2350/050	1050 to 1100		

## RANGEFINDER SACCHAROMETERS

Range: 80° gravity in 2.0° graduations

Size: 230mm long x 22mm wide

These saccharometers for use with small sample volumes have graduations to a certified accuracy of 2.0° gravity. These are ideal for a quick check on the progress of mashing or fermentation when you do not need to record the value measured. Measuring below 1000 makes them suitable for wash or cider as well as beer.

ACCURACY: ★★★★★

PRICE: £38.00

Product Code	Gravity Range
B2380/990	990 to 1070



### BREWERS:

Use for quick checks throughout the brewing process. Not usually suitable for HMRC.

### DISTILLERS:

Use for quick checks throughout the brewing process. Not suitable for HMRC.

### CERTIFICATION:

Come with a certificate of accuracy to 1.0° or 2.0° gravity, valid for 3 years. Also suitable for works certification showing corrections (see page 16).

### USE WITH:

These 26mm wide hydrometers need a jar of at least 40mm diameter, so the SJ2540 or SJ3340 are ideal depending on the length of the hydrometer (see page 17).

Thermometers with an accuracy of 2°C or better. Our saccharometer jar thermometers on page 19 are ideal.

Correction chart BS15G (see page 16) to allow for corrections when readings are not taken at 20°C

Our hydrometer rack with 26mm fittings (see page 18) will let you keep a few of these handy on the bench while you are using them. Don't forget to wash and safely store them after use.

### ALSO CONSIDER:

If you only make and sell beer on premises, then these may be all you need to satisfy regulations. If you distribute your beer in bottles, cans or kegs you should use more accurate saccharometers to determine the alcohol content of your beer. Use the B3030 series (see page 7) or better.

Products shown are held in stock. We can make any other range not shown to order.

# DENSITY MEASUREMENT

## CALCULATION OF ALCOHOLIC STRENGTH

### (ACCORDING TO HMRC NOTICE 226)

You may determine the alcoholic strength of your beer by measuring the specific gravity before and after fermentation. The difference between the two values is the attenuation, and you can calculate the alcohol content by multiplying this by a factor (f). In order to make sure that your calculations are accurate, it is essential that the original gravity (OG) be established as soon as possible after taking a sample and before fermentation commences, which will normally be within one hour of completion of filling the fermenting vessel.

### MEASURING THE SPECIFIC GRAVITY

Use a saccharometer graduated in degrees of specific gravity at 20°C and adjust for temperature using the correction chart BS15G (see page 16). A positive correction on the chart should be added to the saccharometer reading, and a negative correction should be subtracted. This adjusts the reading to show the correct gravity of the wort at 20°C.

If the wort is not close to room temperature it may not have a stable temperature, so you should check that both the saccharometer and thermometer readings are stable before recording the value.

### CALCULATING THE ALCOHOLIC STRENGTH

Measure the OG within one hour of taking the sample.

Wait until fermentation is completed - for cask-conditioned beer this will be after secondary fermentation in the casks.

Then take a sample and measure the present gravity (PG) (also known as the specific or final gravity)

When you've taken your readings, calculate the alcoholic strength using the formula:

$$a = (OG - PG) \times f$$

a is the beer's alcoholic strength in %ABV at 20°C

OG is the original gravity of the beer corrected to 20°C

PG is the present gravity of the beer corrected to 20°C

f is the factor connecting the change in gravity to alcoholic strength.

Typical value of factor 'f' for various alcoholic strengths

(OG - PG)	% ABV	FACTOR (F)
173 - 26.1	2.2 - 3.3	0.128
26.2 - 36.0	3.3 - 4.6	0.129
36.1 - 46.5	4.6 - 6.0	0.130
46.6 - 57.1	6.0 - 7.5	0.131

The value of 'f' isn't constant because the yield of alcohol isn't constant for all fermentations. In lower strength beers, more of the 'sugars' available for fermentation are consumed in yeast reproduction than in producing alcohol. The table, produced by the Laboratory of the Government Chemist, shows the changing value of 'f' depending on the alcoholic strength of the beer.

## HYDROMETERS FOR DISTILLED SPIRITS

These hydrometers are only suitable for use in mixtures of water and ethanol such as distilled spirits. If the mixture contains anything else such as sugar, you cannot determine alcohol content using a hydrometer reading. In order to accurately determine alcohol content of spirits, you will need to take accurate hydrometer and thermometer readings and use the official tables to calculate the % alcohol content. It is not possible to get an accurate measure of alcohol content direct from a hydrometer reading. All are calibrated specifically for use in ethanol solutions. Alcohol Hydrometers are graduated to read liquid density at 20°C, while alcoholometer and spirit safe hydrometers are graduated to read % ethanol by volume at 20°C. Please note that since the density of the liquid decreases as the percentage of ethanol increases, alcoholometers reading % ethanol have scales going in the opposite direction to other hydrometers!

### BS5470 ALCOHOL HYDROMETERS

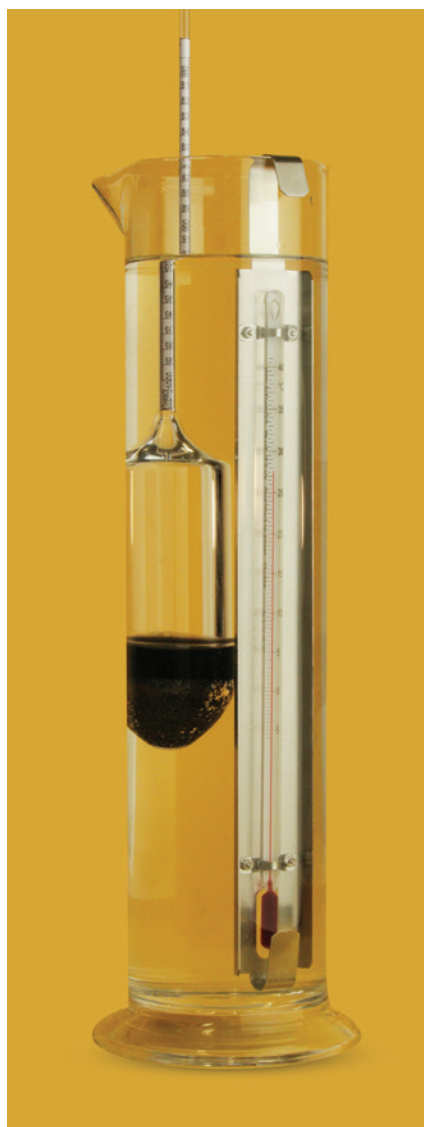
**Range:** 20 kg/m<sup>3</sup> density at 20°C in 0.2 graduations  
**Size:** 305mm long x 38mm wide

These are very precise alcohol hydrometers and have graduations to a certified accuracy of 0.2 kg/m<sup>3</sup> density. They are made to the official BS5470 specification and are kitemarked giving an assurance that our hydrometers always meet that high standard. They are suitable for HMRC declarations of the alcohol content of spirits according to The Spirits Regulations (1991). These are also suitable for use as reference instruments if you want to check the accuracy of other alcohol hydrometers when supplied with UKAS calibration certificates or our own works certificates with precise correction values at two or three points on the scale.

**ACCURACY:** ★★★★★

**PRICE: £62.00**

Product Code	Density Range	Approx. ABV
AB3030/780	780 to 800	Over 97.8%
AB3030/800	800 to 820	92.7% to 97.8%
AB3030/820	820 to 840	86.6% to 92.7%
AB3030/840	840 to 860	79.7% to 86.6%
AB3030/860	860 to 880	72.2% to 79.7%
AB3030/880	880 to 900	64.0% to 72.2%
AB3030/900	900 to 920	55.0% to 64.0%
AB3030/920	920 to 940	44.7% to 55.0%
AB3030/940	940 to 960	31.7% to 44.7%
AB3030/960	960 to 980	14.1% to 31.7%
AB3030/980	980 to 1000	Up to 14.1%



### DISTILLERS:

Best for ABV determination of spirits.  
Suitable for HMRC.

### CERTIFICATION:

Come with a certificate of accuracy to 0.2 kg/m<sup>3</sup> density, valid for 3 years. Also suitable for UKAS or works certification showing even more precise corrections (see page 16).

### USE WITH:

Hydrometer jars of at least 50mm diameter. We recommend a wider jar so that you can take simultaneous temperature readings – the BJ3480 jar is ideal for use with these and our accurate B0446 thermometers (see page 17 for the jar and page 20 for the thermometer).

Thermometers with an accuracy of 0.5°C or better (Accuracy 4\* or better).

Use the Practical Alcohol Tables Volume 2 (see page 16) for alcohol determination.

Our hydrometer stand with 38mm fittings (see page 18) will let you keep a few of these handy on the bench while you are using them. Don't forget to wash and safely store them after use.

### ALSO CONSIDER:

You may not need to use precise and fragile hydrometers at every point in your process. Consider using alcoholometers graduated in % alcohol during production when a simple consistent measurement is more important than an accurate determination of alcohol content.

# DENSITY MEASUREMENT

## SPIRIT SAFE HYDROMETERS

These are short alcoholometers graduated in % Ethanol by Volume at 20°C. They are sized to fit in traditional Scotch Whisky spirit safes and are used for monitoring the progress of your distillation.

### LOW ALCOHOL RANGES

**Range:** up to 8% abv in 0.1% or 0.2% graduations

**Size:** 170mm long x up to 38mm wide

These are very precise alcoholometers used to determine when to finish your distillation once you have taken off the good spirit, and make sure as little of your alcohol goes to waste as possible. They are sized to fit in a typical spirit safe, but the wide body makes them unsuitable if you are taking measurement in a still with a parrot's beak.

**ACCURACY:** ★★★★★ **PRICE: £50.00**

Product Code	% Alcohol Range
AC1706/00	0 to 3% in 0.1%
AC1716/00	0 to 6% in 0.2%
AC1718/00	0 to 8% in 0.2%

### CUTTING RANGES

**Range:** up to around 80% abv in 0.5% or 1.0% graduations

**Size:** 175mm long x 19mm wide

These accurate alcoholometers ideal for giving an indication of the progress of your distillation and when to make your cuts

**ACCURACY:** ★★★★★ **PRICE: £46.00**

Product Code	% Alcohol Range
AC1734/55	55 to 80% in 0.5%
AC1835/50	50 to 80% in 0.5%

**ACCURACY:** ★★★★★ **PRICE: £44.00**

Product Code	% Alcohol Range
AC1742/50	50 to 80% in 1.0%
AC1744/40	40 to 85% in 1.0%
AC1746/30	30 to 80% in 1.0%



### DISTILLERS:

Use to track distillation during the production of spirits. Not suitable for HMRC declarations.

### CERTIFICATION:

Come with a certificate of accuracy to one scale division, valid for 3 years. Also suitable for UKAS or works certification showing even more precise corrections (see page 16).

### USE WITH:

Use these in a traditional Scotch Whisky spirit safe. Narrower hydrometers can also be used in small craft stills with a parrot's beak style overflow jar.

Use with a spirit safe thermometer (see page 23) and Practical Alcohol Tables Volume 1 (see page 16) if you need to know the actual % alcohol content rather than just the hydrometer reading.

### ALSO CONSIDER:

Ranges shown are held in stock. We can make alcoholometers to your exact specification if the ones shown are not suitable for your process.

### USING ALCOHOLOMETERS:

An alcoholometer reading will not indicate the correct % alcohol by volume without correcting for temperature. A variation of 0.5°C in the temperature of the spirit will lead to an error of up to 0.2% ABV if uncorrected.



## WIDE RANGE ALCOHOLOMETERS

Range: Various % abv ranges in 1.0% or 2.0% graduations

Size: 19mm wide in 300mm or 175mm lengths

Use these hydrometers for checks during the production of spirits or as a rangefinder to determine which of your more accurate hydrometers you need. Any of them should fit in a typical parrot's beak found on small stills, and the shorter hydrometers are suitable for use in a traditional Spirit Safe.

ACCURACY: ★★★★★

PRICE: £43.00

Product Code	% Alcohol Range	Length
AC1759/00	0 to 60% in 2.0%	175mm
AC1744/60	60 to 100% in 1.0%	175mm
AC3056/00	0 to 100% in 1.0%	300mm



## SPIRIT SAFE BOWLS

We can produce replacement bowls for your spirit safe. These are made to order, so we will need the shape and dimensions. A typical bowl of the type shown has a cylindrical base outlet of diameter 70mm, a bowl diameter of 220mm and a cut out of diameter 170mm.

PRODUCT CODE: AC00/BOWL

PRICE: ON ENQUIRY



## SPIRIT SAFE TUBES

We can produce replacement tubes for your spirit safe. The spirit safe tubes have an external diameter of 70mm and glass thickness of 5mm. We usually stock a standard length of 200mm. If you require other lengths, just let us know and we will produce the size you need.

PRODUCT CODE: AC00/TUBE

PRICE: £44.00



# DENSITY MEASUREMENT

## PRECISION ALCOHOLOMETERS

Range: 20% Ethanol by Volume at 20°C in 0.2% graduations

Size: 300mm long x 26mm wide

Use these for alcohol determination of spirits where the highest accuracy is not required. These are also suitable for use when you are doing a distillation analysis of beers, wines or liqueurs (see the Thorpe Still on page 41).

ACCURACY: ★★★★★

PRICE: £54.00

Product Code	% Alcohol Range
AC3030/00	0 to 20%
AC3030/10	10 to 30%
AC3030/20	20 to 40%
AC3030/30	30 to 50%
AC3030/40	40 to 60%
AC3030/60	60 to 80%
AC3030/80	80 to 100%

## ISO4801 ALCOHOLOMETERS

Range: 10% Ethanol by Volume at 20°C in 0.1% graduations

Size: 340mm long x 26-34mm wide

These are very precise alcoholometers and have graduations to a certified accuracy of 0.1% ABV at 20°C. When used with a suitable thermometer they will provide a determination of ABV similar to the BS5470 alcohol hydrometers. An uncorrected reading from the hydrometer can easily be out by around 1%, so you should never use the direct hydrometer reading as a determination of alcohol content.

ACCURACY: ★★★★★

PRICE: £79.00

Product Code	% Alcohol Range
AC3413/00	0 to 10%
AC3413/10	10 to 20%
AC3413/20	20 to 30%
AC3413/30	30 to 40%
AC3413/40	40 to 50%
AC3413/50	50 to 60%
AC3413/60	60 to 70%
AC3413/70	70 to 80%
AC3413/80	80 to 90%
AC3413/90	90 to 100%



### DISTILLERS:

Use for ABV determination of Spirits. Suitable for distillation analysis. Not recommended for HMRC spirits declarations.

### CERTIFICATION:

Come with a certificate of accuracy to one scale division, valid for 3 years. Also suitable for UKAS or works certification showing even more precise corrections (see page 16).

### USE WITH:

The AC3030 precision alcoholometers need hydrometer jars of at least 40mm diameter. Use a wider jar if you want to keep a thermometer in the jar alongside the hydrometer for more reliable temperature readings (see page 17).

The AC3413 precision alcoholometers should be used hydrometer jars of at least 50mm diameter. Use a wider jar if you want to keep a thermometer in the jar alongside the hydrometer for more reliable temperature readings (see page 17).

Thermometers with an accuracy of 0.5°C or better (Accuracy 4\* or better).

Use the Practical Alcohol Tables Volume 1 (see page 16) for alcohol determination.

Our hydrometer stands (see page 18) will let you keep a few of these handy on the bench while you are using them. Don't forget to wash and safely store them after use.

### ALSO CONSIDER:

The alcohol hydrometers to BS5470 (see page 10) are the instruments generally accepted by HMRC for measuring the strength of spirits.

We can produce plain for hydrometers to any specification, for example alcoholometer to Australian Standard AS 2371.

### USING ALCOHOLOMETERS:

An alcoholometer reading will not indicate the correct % alcohol by volume without correcting for temperature. A variation of 0.5°C in the temperature of the spirit will lead to an error of up to 0.2% ABV if uncorrected.

## SACCHAROMETERS WITH SUGAR SCALES

Sugar scale saccharometers are commonly used on the continent for beer and wine making. They are scales based on the percentage of dissolved sugar in water. The Brix and Plato scales were determined from different studies of the density of sugar solutions, but the difference between the two scales at 20°C is never more than 0.002%; this is far less than the smallest division of a saccharometer so the two scales can be used interchangeably.

### PRECISION PLATO SACCHAROMETERS

**Range:** 4° Plato at 20°C in 0.05° graduations - **Size:** 305mm long x 38mm wide

These are very precise saccharometers and have graduations to a certified accuracy of 0.05° Plato. Use these when you want the highest accuracy from a saccharometer with a sugar scale.

**ACCURACY:** ★★★★★

**PRICE: £60.00**

Product Code	Plato Range
SP3004/00	0 to 4
SP3004/04	4 to 8
SP3004/08	8 to 12
SP3004/12	12 to 16
SP3004/16	16 to 20

### 10° BRIX SACCHAROMETERS

**Range:** 10° Brix at 20°C in 0.1° graduations - **Size:** 305mm long x 26mm wide

These are precise saccharometers and have graduations to a certified accuracy of 0.1° Brix. These are ideal for wine-making if you want a saccharometer with a sugar scale.

**ACCURACY:** ★★★★★

**PRICE: £42.00**

Product Code	Brix Range
SB3013/0/-5	-5 to +5
SB3013/00	0 to 10
SB3013/10	10 to 20
SB3013/20	20 to 30

### 20° BRIX SACCHAROMETERS

**Range:** 10° Brix at 20°C in 0.2° graduations

**Size:** 305mm long x 26mm wide

These saccharometers have graduations to a certified accuracy of 0.2° Brix.

**ACCURACY:** ★★★★★

**PRICE: £38.00**

Product Code	Brix Range
SB3030/00	0 to 20
SB3030/20	20 to 40

### BREWERS:

Useful if you are used to continental brewing methods.

### CERTIFICATION:

Come with a certificate of accuracy to one scale division, valid for 3 years. Also suitable for UKAS or works certification showing even more precise correction (see page 16).

### USE WITH:

The SP3004 saccharometers need a hydrometer jar of at least 50mm diameter, such as the BJ3351. The SB3013 and SB3030 saccharometers only need a jar of at least 40mm diameter (see page 17).

Thermometers with an accuracy of 1°C or better.

Correction chart BX15G (see page 16) to allow for corrections when readings are not taken at 20°C.

Our hydrometer stand with 38mm fittings for the SP3004 or 26mm fittings for the SB3013 or SB3030 (see page 18) will let you keep a few of these handy on the bench while you are using them. Don't forget to wash and safely store them after use.

### ALSO CONSIDER:

These are usually made to order, since we do not hold stock of these saccharometers. We can make plain form Brix or Plato hydrometers to your exact specification if the ones shown are not suitable for your process.



# DENSITY MEASUREMENT

## BAR SPIRIT TESTING KIT

This kit is for testing opened bottles of spirits to make sure there has been no evaporation of alcohol or watering down. It is suitable for any pure spirits which contain no sugar, such as Vodka, Whisky and Gin. It is not possible to test liqueurs with this kit, and some Brandy and Rum will also contain enough sugar to give an incorrect reading if tested with this kit. Simply put a 50ml measure of the spirit in the jar, take hydrometer and thermometer readings, and the provided chart will show you the alcohol content of the spirit.

PRODUCT CODE: B0141

PRICE: £102.00

## HYDROMETERS FOR BAR TESTING KIT

The standard hydrometer included with the kit (B0141/H1) tests normal strength spirits. It covers a density range of 940 to 960 kg/m<sup>3</sup> in 1 kg/m<sup>3</sup> divisions. For higher strengths up to 55% an extra hydrometer is needed.

ACCURACY: ★★★★★

PRICE: £36.00

Product Code	Density Range	Approx. ABV
B0141/H1	940 to 960	33% to 45%
B0141/H2	920 to 940	45% to 55%

## THERMOMETER FOR BAR TESTING KIT

This is a short red spirit filled thermometer, measuring the range 0 to 40°C in 1°C graduations.

PRODUCT CODE: B0141/T1

PRICE: £10.00

## SAMPLE JAR FOR BAR TESTING KIT

This glass sample jar lets the hydrometer float in a 50ml sample to take a reading.

PRODUCT CODE: B0141/J50

PRICE: £10.00

## CHART FOR BAR TESTING KIT

The chart tells you the alcohol content of the spirit when you look up the hydrometer and thermometer readings.

PRODUCT CODE: B0141/CH

PRICE: £5.50

## CASE FOR BAR TESTING KIT

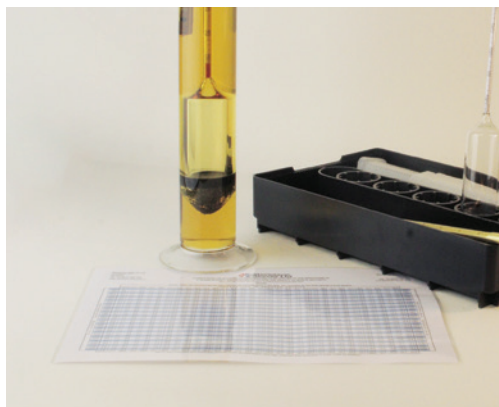
The smart case keeps the kit protected when not in use and can also be used as a base when you are using the kit to keep everything safe and stable.

PRODUCT CODE: B0141/LC

PRICE: £46.00







## CORRECTION CHART FOR GRAVITY SACCHAROMETERS

Use this chart with any of our saccharometers reading degrees of specific gravity at 20°C (see pages 5 to 8). Provides corrections for temperatures from 2 to 32°C.

**PRODUCT CODE: BS15G**

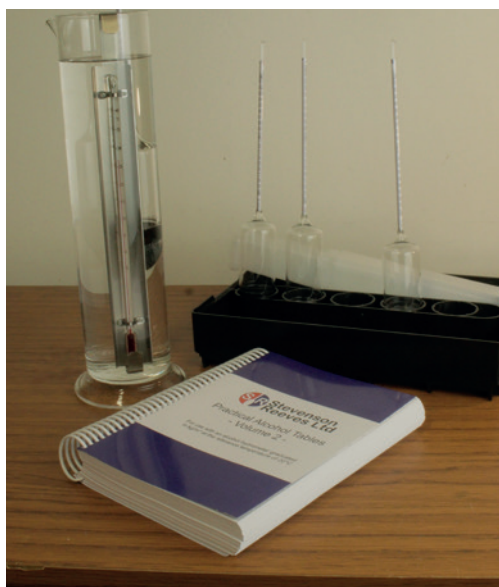
**PRICE: £5.00**

## CORRECTION CHART FOR SUGAR SCALE SACCHAROMETERS

Use this chart with our sugar scale saccharometers reading Brix or Plato (see page 14). Provides corrections for temperatures from 10 to 32°C.

**PRODUCT CODE: BX15G**

**PRICE: £5.00**



## ALCOHOL TABLES FOR ALCOHOL HYDROMETERS - kg/m<sup>3</sup>

Practical Alcohol Tables, Volume 2 - use with BS5470 Alcohol hydrometers measuring kg/m<sup>3</sup> (see page 10) to determine the strength of spirits. Suitable for use for temperatures from 10 to 45°C. Also provides a table to correct bulk volume measurements of spirits for different temperatures.

**PRODUCT CODE: B0260**

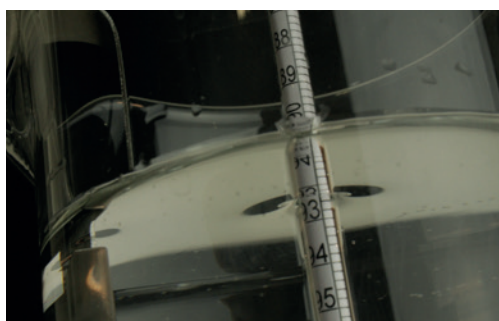
**PRICE: £27.00**

## ALCOHOL TABLES FOR ALCOHOLOMETERS - % Volume

Practical Alcohol Tables, Volume 1 - use with Alcoholometers measuring % ethanol by volume (see pages 11 to 13) to determine the strength of spirits. Suitable for use for temperatures from -20 to +40°C. Also provides a table to correct bulk volume measurements of spirits for different temperatures.

**PRODUCT CODE: AC00/TABLE**

**PRICE: £27.00**



## CERTIFICATION OF HYDROMETERS

All our professional hydrometers and saccharometers are supplied with a certificate confirming that they are accurate to within their specified tolerances. Since hydrometers are very reliable measuring instruments, these are valid for three years from the date of manufacture. After three years, if you send the instrument back to us, we can retest it and issue a further certificate valid for three years. It is a good idea to check hydrometers regularly for damage or any build-up of solids, since these will affect the hydrometer reading.

If you want a calibration certificate with corrections in order to make a better estimate of readings of fractions of a division, we can provide works certificates showing corrections at two or three points.

For the best assurance of accuracy, or if you are using a hydrometer as a reference, we would recommend a 4-point calibration certificate from a UKAS certified testing lab.

B/CC	Stevenson Reeves Certificate of Conformance	£24.50
B/C2	Stevenson Reeves 2-Point Calibration Certificate	£31.50
B/C3	Stevenson Reeves 3-Point Calibration Certificate	£36.00
B/CK	UKAS 4-Point Calibration Certificate	£180.00



# DENSITY MEASUREMENT

## HYDROMETER JARS

A variety of jars are available suitable for taking hydrometer readings. Glass jars without graduations make it easiest to take a reading, and graduated measuring cylinders can also be used. The measuring cylinders are usually taller than our clear glass jars, so you will need a larger sample to use them. Our plastic cylinders are made from clear PMP – this is a very clear and chemically resistant plastic, though over time and regular use they may get fine scratches and some yellowing unlike glass which will last for many years if not broken.

### 80mm DIAMETER JARS

Ideal for hydrometers up to 38mm wide when used with the B0446 steel backed spirit thermometer. Ideal for the AB3030 series of Alcohol Hydrometers which must be used with an accurate thermometer. Sample volume of over 1500ml required.

Product Code	Jar Height	Type	Price
BJ3480	340mm	Glass Ungraduated	£49.90
BJ3480/NL	340mm	Glass Ungraduated, No Lip	£59.30
B1524/T/2000	520mm	Plastic Graduated	£80.80

### 50mm DIAMETER JARS

Ideal for hydrometers up to 34mm wide. If you need to use 38mm hydrometers you should take temperature readings before and after the hydrometer reading, since they will not fit alongside a thermometer.

Product Code	Jar Height	Type	Price
BJ2551	250mm	Glass Ungraduated	£23.40
BJ3351	330mm	Glass Ungraduated	£28.70
BJ3650	350mm	Plastic Ungraduated	£37.00
B1524/0500	360mm	Glass Graduated	£33.80
B1524/T/0500	350mm	Plastic Graduated	£34.10

### 65mm DIAMETER JARS

Ideal for hydrometers up to 38mm wide, these jars are wide enough to fit a slim thermometer in the jar to take simultaneous readings. Use along with the B0509/HJS thermometers or digital probes if better accuracy is needed

Product Code	Jar Height	Type	Price
BJ3363	330mm	Glass Ungraduated	£40.20
B1524/1000	440mm	Glass Graduated	£56.20
B1524/T/1000	420mm	Plastic Graduated	£47.50

### 40mm DIAMETER JARS

Ideal for hydrometers up to 26mm wide when you do not want to take a large sample for testing.

Product Code	Jar Height	Type	Price
SI3340	330mm	Glass Ungraduated	£21.00
SI3040	300mm	Glass Ungraduated	£20.00
SI2540	250mm	Glass Ungraduated	£19.00
B1524/0250	310mm	Glass Graduated	£21.60
B1524/T/0250	300mm	Plastic Graduated	£21.70



## HYDROMETER STAND

Our new hydrometer stands have been designed to hold your hydrometers while you are working with them. They consist of a wide base (300mm x 200mm) with inserts suited to each different size of hydrometer bulb. The wide base ensures the stability of the stand, and the sturdy plastic can easily be washed along with your hydrometers.

**PRICE: £45.00**

Product Code	Size	Holds	Use With
B4138	38mm	Up to 5	B3010, B3020, AB3030
B4134	34mm	Up to 5	B3030
B4126	26mm	Up to 7	B3050, B2320
B4122	22mm	Up to 7	B2380

## EXTRA INSERTS

The holders are engineered to exactly fit one size of hydrometer and will hold them stable by the base. This means you can lift the hydrometers in and out by the large bulb rather than the fragile stem – you should only hold a hydrometer by the stem when lowering it into a liquid to take a reading or lifting it out again.

**PRICE: £13.00**

Product Code	Size	Holds	Use With
B4038	38mm	Up to 5	B3010, B3020, AB3030
B4034	34mm	Up to 5	B3030
B4026	26mm	Up to 7	B3050, B2320
B4022	22mm	Up to 7	B2380

## CARRYING CASE FOR ALCOHOL HYDROMETERS

This is a sturdy lockable flight case with a foam lining designed to hold six AB3030 alcohol hydrometers (see page 10) and one B0446 thermometer (see page 20). It provides more protection than our standard packaging for storage and transport of a set of these hydrometers.

**PRODUCT CODE: B0270**

**PRICE: £252.00**

## SPARE FOAM INSERTS

**PRODUCT CODE: B0270/L**

**PRICE: £79.00**

