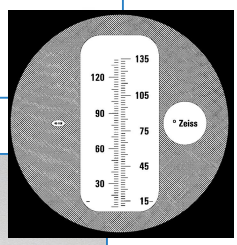
ABV Kit

Alcohol Measurement by Refractometer and Hydrometer



The alcohol content of a beer, wine and cider can be calculated from the readings of two instruments; an Eclipse Wine (ABV) refractometer and a standard hydrometer measuring specific gravity.

The alcohol content can then be read directly from a graph or after carrying out simple calculations, from a table supplied with the refractometer manual.

Only a few drops of sample are needed to make the refractometer reading, while the S.G. is measured in the usual way with the hydrometer jar. The process takes only a few minutes to carry out and an accuracy of about ±0.5% alcohol can be obtained using reasonable care in ensuring that both readings are made at the same temperature.

If the instrument is used with care and cleaned as recommended after use, it should give many years of accurate and trouble-free service.

Equipment required:

- Eclipse Wine (%ABV) refractometer with a "Zeiss scale" (Code 45-22)
- Hydrometer or Saccharometer
- Hydrometer jar
- Pipette or other suitable applicator

Measurement method:

1. Siphon off enough of the finished sample to fill the hydrometer jar to required level and leave all the equipment with it in a place free from draughts and direct sunlight for at least an hour to attain room temperature.
2. Measure the S.G. as accurately as possible and record.
3. Measure the refractive index of the sample in *Zeiss units* using the Eclipse Wine refractometer.
4. The alcohol content in %ABV can be read from a graph or alternatively, calculated from the R-D value as shown below to obtain %ABV from a table supplied with the instrument.

R-D = R (Refractometer reading) – D (S.G. value)
where D (S.G. value) = (S.G. – 1) x 1000

Examples

Light dry table wine S.G. = 0.993 & Refractometer reading = 37 D (S.G. value) = (0.993 – 1) x 1000 = -7 R-D = 37 – (-7) = 44 Alcohol content = 10.7%v/v
Sweet dessert wine or Sweet Cider S.G. = 1.015 & Refractometer reading = 72.5 D (S.G. value) = (1.015 – 1) x 1000 = +15 R-D = 72.5 – (+15) = 57.5 Alcohol content = 15.7%v/v

Order Codes

Order Code	Description
45-22	Eclipse Wine (%ABV) refractometer
44-839	Hydrometer 0.98 to 1.0 50 S.G.
44-838	Hydrometer Jar

Note: Due to the achievable accuracy of this measurement system, results may not be suitable for duty declaration.

- % ABV
- Cava fermentation
- Wine alcohol content
- Cider alcohol content
- Beer alcohol content
- Trading Standards

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