



How To Adjust Your Alcohol Strength To 40% A/V

Float a **Spirit Hydrometer** or **Alcometer** in the spirit to measure the alcohol content. Alcohol is thinner than water so the higher in strength the alcohol is, the further down the hydrometer floats. Read the line where the level of the spirit cuts across the hydrometer. Additives such as flavouring and liquid glucose will distort the hydrometer readings.

Spirit hydrometers should only be used to test spirit **before** any additives such as flavouring or liquid glucose are mixed and at the **calibrated temperature**. Still Spirits Spirit Hydrometers are calibrated at a temperature of 20°C (68°F) if the spirit is a different temperature to this then you can refer to the Temperature Correction Chart below. Taking readings of warmer liquids may damage your hydrometer.

Take good care of your Spirit Hydrometer as it is very fragile. Wash & sterilise with cold water only.

Temperature Correction

Your Spirit Hydrometer reads 50% A/V at a temperature of 25°C (77°F), look up the Correction Adjustment chart and you will see the value is minus 1.88. You then adjust your reading by that number – in this case subtract 1.88 from your reading of 50% A/V which will give you a realistic reading of 48.12% A/V.

20°C (68°F)	Alcohol % / Volume							
	30	40	50	60	70	80	90	98
Temp								
10°C (50°F)	4.12	3.98	3.67	3.42	3.19	2.92	2.45	2.06
15°C (59°F)	2.03	2.00	1.85	1.73	1.61	1.47	1.25	1.06
20°C (68°F)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25°C (77°F)	-2.01	-1.95	-1.88	-1.76	-1.65	-1.51	-1.31	-1.12
30°C (86°F)	-4.06	-3.94	-3.78	-3.55	-3.33	-3.05	-2.67	-2.31
35°C (95°F)	-6.15	-5.98	-5.82	-5.4	-5.13	-4.67	-4.07	-3.54
40°C (104°F)	-8.29	-8.05	-7.92	-7.41	-7.03	-6.35	-5.5	-4.8

Alcohol Strength Adjustment

After carbon purifying, the spirit should be watered down in strength to 40% A/V prior to drinking. **We strongly advise against making higher strength spirits.**

Calculation:

Litres (US Gallons) Collected multiplied by it's alcohol strength

$$\frac{\text{Litres (US Gallons) Collected multiplied by it's alcohol strength}}{\text{Alcohol Strength Desired (40\% A/V)}} = \text{Total Litres (US Gallons) to be made up to}$$

For Example: Calculation to convert 4.5 Litres (1.2US Gallons) of alcohol from 45% A/V to 40% A/V

$$4.5 \text{ Litres (1.2 US Gallons)} \times 45 / 40 = 5.06 \text{ litres (1.33 US Gallons)}$$

If you collect 4.5 litres (1.2 US Gallons) of spirit and this measures 45% after carbon purifying, then multiply 4.5 x 45. Divide this by 40% and you will need to make the total spirit up to 5.06 litres (1.33 US Gallons) with water. In other words add 590mls (20 US fl oz) of water. This is a rough guide only. Watering down the spirit to 40%, or less, is very important as people unused to high strength spirit can easily overdose resulting in nausea and in extreme cases death.