



HOW TO CALCULATE ABV OF A COCKTAIL

ABV stands for Alcohol by Volume which is a measurement of the alcohol contained in any given bottle of spirit. For example a bottle of 40% ABV vodka is 40% alcohol and 60% water. The American proof system is different but is easy to figure out. It is double the English ABV system. For example if a bottle of American vodka is 80 proof, that means it is 40% ABV.

The science behind making a cocktail doesn't stop at the ingredients!. When concerning only a single spirit all we need to do is calculate the amount of pure alcohol and divide by the total measurement of the drink.

Let's start with a simple gin and tonic consisting of:
50ml of a 40% ABV Gin
150ml of Franklin & Sons Premium Indian Tonic Water
5ml of lime juice
An average of 15ml dilution from the ice when stirred to mix.

The first step will be to multiply the 50ml measurement by 0.4 (40% ABV) which will equal 20ml of pure alcohol. This 20ml is then divided by 220ml (the total volume of the drink) which equals 0.09. Multiply this by 100 to get your ABV percentage which in this scenario is 9%.

If we are looking to calculate the ABV of a cocktail using various alcoholic ingredients you just need to calculate each value individually, adding the pure alcohol figure together before dividing by the total drink volume.

So, let's give a Mai Tai a go. First of all let's look at all the ingredients, 40ml of Rum, 20ml Orange Curacao, 25ml fresh lime juice, 10ml Orgeat syrup and an average of 50ml of dilution from shaking. Therefore, total volume of the drink will be 145ml

Now let's work out the pure alcohol content

40ml of 40% ABV rum - $40 \times 0.4 = 16\text{ml}$
20ml of 35% ABV Orange Curaçao - $20 \times 0.35 = 7\text{ml}$

Total pure alcohol content is 23ml

The final step is to divide the 23ml of pure alcohol by the total amount of liquid of the drink and multiply by 100; $(23 / 145) \times 100$ which will give you an ABV % of 15.9%

And there we have it, a Mai Tai with an ABV of 15.9%