



## ELIQUID DIY KIT INSTRUCTIONS

Now let's get to the good stuff,

For the sake of clarity for the instructions let's assume the following:

|                                      |                                 |
|--------------------------------------|---------------------------------|
| Initial or starting nicotine:        | 48mg/mL nicotine solution in PG |
| Ending or desired nicotine strength: | 3mg/mL                          |
| Ending or desired volume:            | 60mL                            |
| Desired flavor percentage:           | 10% ejuice flavor               |
| Desired flavor:                      | Single flavor, Strawberry       |
| Desired VG/PG ratio:                 | 80/20 or known as 80%VG/20%PG   |

### Instructions for Volumetric Mixing

- Gather all the supplies from your DIY kit and place them within arm's reach on your table
- Select your container size, in this case a 60mL bottle
- Add your nicotine solution, VG/PG, and flavors, the order of addition is not important and can be interchanged if you so choose
  - o Determine what nicotine concentration you want your ejuice to be at, i.e. 3mg/mL, 6mg/mL, etc. For this instance, we will assume 3mg/mL Then add the volume of the nicotine solution to your container
  - o Formula to determine the volume of nicotine solution you require for your ejuice:
    - $\frac{\text{Target/desired nicotine concentration}}{\text{Starting nicotine concentration}} \times \text{Desired final volume of your ejuice}$
    - Example: want 3mg ejuice in a 60mL bottle and starting with 60mg liquid nicotine solution  
 $\frac{3\text{mg/mL}}{48\text{mg/mL}} \times 60\text{mL} = 3.75\text{mL}$  of 60mg/mL PG based starting nicotine solution is required
  - o Decide on what flavor your ejuice will be. Whether a single flavor or a combination of flavors, then add the desired amount to your container
    - $\text{Flavor percentage (\%)} \times \text{Final/Desired volume} = \text{volume of flavoring required}$
    - For this instance, we require 6mL of strawberry flavoring, following the above formula
      - $0.1 (=10\%) \times 60\text{mL} = 6\text{mL}$  of strawberry flavoring
  - o Lastly, choose the PG/VG ratio you desire for your completed, or final, ejuice. Add the volumes of PG/VG or both to your container
    - In this situation, we will assume an 80/20 ratio
    - Bare with us, this is where it might get a bit confusing:
      - Total ejuice volume is 60mL



| Ingredients            | Vol.   | %     |
|------------------------|--------|-------|
| 46mg PG based nicotine | 3.75mL | 6.25% |
| PG (100% PG, No Nic)   | 2.25mL | 3.75% |
| VG (100% VG, No Nic)   | 48mL   | 80%   |
| Strawberry flavoring   | 6mL    | 10%   |
| Ejuice Total           | 60mL   | 100%  |

- We want a 80/20 ratio therefore the VP/PG ratio will be as follows
  - $60\text{mL} * 0.8(=80\%) = 48\text{mL}$  of VG required
  - $60\text{mL} * 0.2(=20\%) = 12\text{mL}$  of PG required (DO NOT ADD YET)
- Remember that both the nicotine solution and flavoring are based in PG, thus we must subtract the nicotine solution and flavoring volume from the 12mL of PG we were going to add
  - $12\text{mL PG} - 3.75\text{mL (of 48mg PG based nic)} - 6\text{mL (of strawberry)}$
  - Which equals 2.25mL of just 100% PG needs to be added

- Once your bottle has the nicotine solution, VG/PG, and flavors, shake your bottle up
  - o You can go with a shake n' vape or let your ejuice steep for however long you desire. Shake n' vape is literally, shake your bottle then immediately start vaping. Steeping is all about giving the flavors time to mature with the other liquids
- If you desire to make a juice without nicotine then you can substitute the nicotine volume with either PG, VG, flavoring, or a combination of the 3 depending on your preference

## Instructions for Mixing by Weight

- To mix by weight, having a scale, knowing the correct specific gravities, and having a recipe calculator (like the one found on ELR) are keys to properly utilizing this method
- It is recommended to use a recipe calculator that include the specific gravities. In this case, go to [eliquidrecipe.com/create](http://eliquidrecipe.com/create) or go the [eliquid-recipes.com](http://eliquid-recipes.com) site and select the "create recipe" tab on the banner to open up the calculator to begin mixing using incorporated specific gravities
- A brief description of the calculator will be expanded upon
  - o "Amount to make" means the total volume that is to be made, i.e. 15ml, 30ml, etc.
  - o "Desired Strength" is the final nicotine strength that is desired, i.e. 3mg, 6mg, etc
  - o "Water/Vodka/PGA" these can be added to ejuices if desired or called for by the recipe
  - o "Desired PG" the amount of PG a recipe calls for or is desired
  - o "Desired VG" the amount of VG a recipe calls for or is desired
  - o "Max VG" indicates that a recipe will use the max amount of VG that is possible
  - o "Nicotine Strength" the starting nicotine eliquid concentration that will be used
  - o "PG Content of Nicotine" the ratio of PG in a nicotine solution
  - o "VG content of Nicotine" the ratio of VG in a nicotine solution
  - o "Add flavor" this button allows the addition of one or multiple flavorings at any desired ratio
    - Refer to flavor starting percentages to get an idea of how much should be used for each flavor
    - You can find the percentages by typing the flavor name into the search bar and reading the detailed flavor description
- When scrolling down a more detailed list of the final juice breakdown is shown and this table reveals the exact breakdown of ingredients used in a recipe in ml, grams and percentages
- Each component will be automatically calculated and adjusted based on how you decide to either add or not add parts. Should you exceed the final volume limitations, a red banner will reveal itself to inform you that the current blend will not be possible unless adjustments are made
- Just like mixing by volume, mixing by weight requires the knowledge of the weight of the volume you want to add, using the recipe calculator will aid in this process by automatically providing the weights of the volume you would like to add
- Once you are satisfied with the breakdown of your recipe, add your ingredients together, shake and then **done!**