

Converting A Cosmetic Formula Into A Recipe

So you were browsing the internet, found this moisturizing body oil formula, and want to try it out. But you see all these percentage values, and you need to determine the weight of each ingredient you should add to make this product. So how do you get started?

We need to convert these percentage values into weight measurements. But how do we do that? Let's get into it! We will follow these steps to convert the formula into a weight-base recipe:

Step 1. Decide how much body oil you would like to make. You are testing the formula but still determining if you will like this blend, so you want to try a small batch. 4 oz (113.4 grams) is reasonable for a body oil test batch. So you have decided to make 4 oz of the moisturizing body oil from the formula you found online.

Step 2. Write out the moisturizing body oil formula

40% [Sweet Almond Oil](#)
20% [Rice Bran Oil](#)
19% [Coconut Oil](#)
10% [Jojoba Oil](#)
10% [Sunflower Oil](#)
1% [Vitamin E Oil](#)

Step 3. Do your calculations

The equation would be the ingredient percentage value divided by 100, then multiplied by the total batch size you want to make.

That is, Ingredient Percentage % Value / 100 X Total Batch Size

For example, to make a 4 oz batch, you will need the following:

40% Sweet Almond Oil - (40 divided by 100 multiplied by 4)

That is $40/100 \times 4 = 1.6$ oz

20% Rice Bran Oil - (20 divided by 100 multiplied by 4)

That is $20/100 \times 4 = 0.8$ oz

19% Coconut Oil - (19 divided by 100 multiplied by 4)

That is $19/100 \times 4 = 0.76$ oz

10% Jojoba Oil - (10 divided by 100 multiplied by 4)

That is $10/100 \times 4 = 0.4$ oz

10% Sunflower Oil - (10 divided by 100 multiplied by 4)

That is $10/100 \times 4 = 0.4$ oz

1% Vitamin E Oil - (1 divided by 100 multiplied by 4)

That is $1/100 \times 4 = 0.04$ oz

From our calculations, we have determined that we will need the following:

1.6 oz Sweet Almond Oil
0.8 oz Rice Bran Oil
0.76 oz Coconut Oil
0.4 oz Jojoba Oil
0.4 oz Sunflower Oil
0.04 oz Vitamin E Oil

Note: Using a digital scale, you will need to weigh each ingredient's amount. For quantities too low to be measured on a digital scale, you can convert them to milliliters (ml) and use a pipette to measure the amount.

To ensure that your calculation is correct, the sum of all the oil weights must be equal to the total batch size.

Therefore, $1.6 \text{ oz} + 0.8 \text{ oz} + 0.76 \text{ oz} + 0.4 \text{ oz} + 0.4 \text{ oz} + 0.04 \text{ oz} = 4 \text{ oz}$

So now you know how much of each oil to add to make your 4 oz test batch of moisturizing body oil.

Calculating Different Batch sizes

So now you have tested your formula, and you like the feel of the moisturizing body oil and want to make a bigger batch. We will follow the same steps as above:

Step 1. Decide the batch size. You want to fill 12 [\(4 oz\) bullet plastic bottles](#), so you decide to make a 48 oz batch of the moisturizing body oil.

Step 2. Write out the moisturizing body oil formula

40% Sweet Almond Oil
20% Rice Bran Oil
19% Coconut Oil
10% Jojoba Oil
10% Sunflower Oil
1% Vitamin E Oil

Step 3. Do your calculations

The equation would be the ingredient percentage value divided by 100, then multiplied by the total batch size you want to make.

That is, $\text{Ingredient Percentage \% Value} / 100 \times \text{Total Batch Size}$

For this example, we will be making a 48 oz batch of moisturizing body oil, therefore:

40% Sweet Almond Oil - (40 divided by 100 multiplied by 48)
That is $40/100 \times 48 = 19.2 \text{ oz}$

20% Rice Bran Oil - (20 divided by 100 multiplied by 48)

That is $20/100 \times 48 = 9.6$ oz

19% Coconut Oil - (19 divided by 100 multiplied by 48)

That is $19/100 \times 48 = 9.12$ oz

10% Jojoba Oil - (10 divided by 100 multiplied by 48)

That is $10/100 \times 48 = 4.8$ oz

10% Sunflower Oil - (10 divided by 100 multiplied by 48)

That is $10/100 \times 48 = 4.8$ oz

1% Vitamin E Oil - (1 divided by 100 multiplied by 48)

That is $1/100 \times 48 = 0.48$ oz

Using a digital scale, you will need to weigh out the following:

19.2 oz Sweet Almond Oil

9.6 oz Rice Bran Oil

9.12 oz Coconut Oil

4.8 oz Jojoba Oil

4.8 oz Sunflower Oil

0.48 oz Vitamin E Oil

To ensure that your calculation is correct, the sum of all the oil weights must be equal to the total batch size.

Therefore, $19.2 \text{ oz} + 9.6 \text{ oz} + 9.12 \text{ oz} + 4.8 \text{ oz} + 4.8 \text{ oz} + 0.48 \text{ oz} = 48 \text{ oz}$

So now you know how much of each oil to add to make your 48 oz of moisturizing body oil.

Adding Other Ingredients To The Formula

What if you wanted to customize the body oil with your favourite [watermelon fragrance oil](#)? How would you go about that? First, by following the fragrance oil general usage rate, you would decide how much fragrance you want to add. Fragrance oils are usually added at 1% of the total batch size. However, you may want to add more fragrance, say 2%. You would have to reduce one of the oils by the percentage of fragrance you want to add.

For example, by adding fragrance oil at 2% of the total batch size, you would need to rework your formula.

40% Sweet Almond Oil

20% Rice Bran Oil

17% Coconut Oil

10% Jojoba Oil

10% Sunflower Oil

2% Watermelon Fragrance Oil

1% Vitamin E Oil

Note: We have reduced the amount of Coconut Oil from 19% to 17% and added 2% of Watermelon Fragrance Oil.

Now let's do the calculation:

40% Sweet Almond Oil - (40 divided by 100 multiplied by 48)
That is $40/100 \times 48 = 19.2$ oz

20% Rice Bran Oil - (20 divided by 100 multiplied by 48)
That is $20/100 \times 48 = 9.6$ oz

18% Coconut Oil - (19 divided by 100 multiplied by 48)
That is $19/100 \times 48 = 8.64$ oz

10% Jojoba Oil - (10 divided by 100 multiplied by 48)
That is $10/100 \times 48 = 4.8$ oz

10% Sunflower Oil - (10 divided by 100 multiplied by 48)
That is $10/100 \times 48 = 4.8$ oz

2% Watermelon Fragrance Oil - (2 divided by 100 multiplied by 48)
That is $2/100 \times 48 = 0.96$ oz

1% Vitamin E Oil - (1 divided by 100 multiplied by 48)
That is $1/100 \times 48 = 0.48$ oz

So now you know how much of each ingredient to add to make your 48 oz of Watermelon Moisturizing Body Oil.

Points To Remember

1. The percentage value of all the ingredients in the formula **MUST** add up to 100%.
2. The sum of the ingredients' weight in the recipe **MUST** equal the total batch size.
3. To add more ingredients to the formula, you **MUST** reduce the percentage value of one or more ingredients that are a part of the original formula.

Congratulations! You are now a pro at converting a cosmetic formula into a recipe you can work with.