

How to work out percentages for your label:

First let's look at the recipe:

Common Name	INCI Name	Weight (g)
Bicarbonate of soda	Sodium Bicarbonate	1000.0
Citric Acid	Citric Acid	500.0
Disodium Lauryl Sulfosuccinate (Plantapon)	Disodium Lauryl Sulfosuccinate	20.0
Rice Bran Oil	Oryza Sativa (Rice) Bran Oil	20.0
Polysorbate	Polysorbate 80	5.0
Fragrance oil (Iced Pineapple)	Parfum	30.0
Colour Green Apple	Sodium Sulfate, CI 19140, CI 42090	1.0
White Mica	Mica, Tin Oxide, CI 77891.	1.0

INCI names are obtained from the CPSR report. INCI names are what are required to place on your label.

This recipe has one fragrance, colour and mica for an example. Note some fragrances are allowed at up to 30g (around 2%), others are limited to 15g (around 1%).

To check go to your IFRA declaration, under class 9 products. For Iced Pineapple, in this example it looks like this (we've highlighted it yellow for clarity):



IFRA CONFORMITY CERTIFICATE

Product: ICED PINEAPPLE FRAGRANCE 813156

We certify that the above item is in compliance with the Standards of the INTERNATIONAL FRAGRANCE ASSOCIATION (IFRA - 48th Amendment / published June 2015), provided it is used in the following classes at a maximum concentration level of:

IFRA classes [see annex for detail]	Maximum level of use (%)
IFRA Class 1 Limit	Not approved
IFRA Class 2 Limit	1.5%
IFRA Class 3.A Limit	5.5%
IFRA Class 3.B Limit	5.5%
IFRA Class 3.C Limit	5.5%
IFRA Class 3.D Limit	5.5%
IFRA Class 4.A Limit	16%
IFRA Class 4.B Limit	16%
IFRA Class 4.C Limit	16%
IFRA Class 4.D Limit	16%
IFRA Class 5 Limit	8.5%
IFRA Class 6 Limit	Not approved
IFRA Class 7.A Limit	2.5%
IFRA Class 7.B Limit	2.5%
IFRA Class 8.A Limit	35%
IFRA Class 8.B Limit	35%
IFRA Class 9.A Limit	100%
IFRA Class 9.B Limit	100%
IFRA Class 9.C Limit	100%
IFRA Class 10.A Limit	100%
IFRA Class 10.B Limit	100%
IFRA Class 11 Limit	100%

As it says 100% so we may use it at around 2% in our formulation or 30g. If it had said less than 2% we would need to use 15g in our recipe or around 1%.

So your recipe should look something like this. In this example we have selected one colour, one mica and Iced Pineapple as a fragrance:

Common Name	INCI Name	Weight (g)
Bicarbonate of soda	Sodium Bicarbonate	1000.0
Citric Acid	Citric Acid	500.0
Disodium Lauryl Sulfosuccinate (Plantapon)	Disodium Lauryl Sulfosuccinate	20.0
Rice Bran Oil	Oryza Sativa (Rice) Bran Oil	20.0
Polysorbate	Polysorbate 80	5.0
Fragrance oil (Iced Pineapple)	Parfum	30.0
Colour Green Apple	Sodium Sulfate, CI 19140, CI 42090	1.0
White Mica	Mica, Tin Oxide, CI 77891.	1.0

INCI names are obtained from the CPSR report. INCI names are what are required to place on your label.

Add up all the weights

Common Name	INCI Name	Weight (g)
Bicarbonate of soda	Sodium Bicarbonate	1000.0
Citric Acid	Citric Acid	500.0
Disodium Lauryl Sulfosuccinate (Plantapon)	Disodium Lauryl Sulfosuccinate	20.0
Rice Bran Oil	Oryza Sativa (Rice) Bran Oil	20.0
Polysorbate	Polysorbate 80	5.0
Fragrance oil (Iced Pineapple)	Parfum	30.0
Colour Green Apple	Sodium Sulfate, CI 19140, CI 42090	1.0
White Mica	Mica, Tin Oxide, CI 77891	1.0
Total:		1577.0

To work out the percentage of each ingredient:

Sodium Bicarbonate = 1000 g

Total = 1577 g

Percentage = Ingredient weight / total weight x 100 = 1000 / 1577 x 100 = 63.412 (rounded up).

/ = divided by

X= multiply by

Do this for every ingredient.

Next, we need to work out the fragrance allergens.

Get your fragrance allergens declaration, for Iced Pineapple it should look like this, but each fragrance will be different.



ALLERGEN DECLARATION

Substances considered as fragrance allergens according to Cosmetic Regulation (EC) No. 1223/2009, Annex III, reference numbers 67-92.

ICED PINEAPPLE FRAGRANCE 813156

Ingredient Name	CAS	Concentration (%)
ALPHA-ISOMETHYL IONONE	127-51-5	n.d.
AMYL CINNAMAL	122-40-7	n.d.
AMYL CINNAMYL ALCOHOL	101-85-9	n.d.
ANISE ALCOHOL	105-13-5	n.d.
BENZYL ALCOHOL	100-51-6	n.d.
BENZYL BENZOATE	120-51-4	n.d.
BENZYL CINNAMATE	103-41-3	n.d.
BENZYL SALICYLATE	118-58-1	n.d.
BUTYLPHENYL METHYLPROPIONAL	80-54-6	n.d.
CINNAMAL	104-55-2	n.d.
CINNAMYL ALCOHOL	104-54-1	n.d.
CITRAL	5392-40-5	0.602%
CITRONELLOL	106-22-9	n.d.
COUMARIN	91-64-5	n.d.
EUGENOL	97-53-0	n.d.
EVERNIA FURFURACEA EXTRACT	90028-67-4, 68648-41-9, 68917-40-8	n.d.
EVERNIA PRUNASTRI EXTRACT	90028-68-5, 9000-50-4	n.d.
FARNESOL	4602-84-0	n.d.
GERANIOL	106-24-1	n.d.
HEXYL CINNAMAL	101-86-0	n.d.
HYDROXYCITRONELLAL	107-75-5	n.d.
HYDROXYISOHEXYL 3-CYCLOHEXENE CARBOXALDEHYDE	31906-04-4, 51414-25-6	n.d.
ISOEUGENOL	97-54-1	n.d.
LIMONENE	5989-27-5	1.431%
LINALOOL	78-70-6, 126-91-0	0.005%
METHYL 2-OCTYNOATE	111-12-6	n.d.

(n.d. = not detectable. Detection limit is 10ppm)

This declaration is a result of a calculated analysis of the formulation. These calculated concentrations do not replace chromatographic quantification on individual batches. Please note that the information contained herein is provided in good faith and is, to the best of our current knowledge, true and accurate at the time it is given, and may be subject to change. We are not liable for any damages that may result from the misuse of this data. It is the responsibility of the person(s) placing the finished product on the market to perform their own evaluation including with respect to finished product applications. Any Customer product, marketing or other claims are the Customer's ultimate responsibility.

We have:

Citral: 0.602%

Limonene: 1.431%

Linalool: 0.005%

n.d = not detectable, so we don't need to report these values.

This product is a rinse off product, so you will need to declare allergens **above 0.01%**.

To work out the % allergens

Percentage of fragrance in formulation / 100 x fragrance allergen percentage. You will need to do this for EACH ALLERGEN in the fragrance.

In this example:

$1.902 / 100 \times 0.602 = 0.011\%$ for citral. As it is **over 0.01%** it will need placing on the label.

$1.902 / 100 \times 1.431 = 0.027\%$ for limonene. As it is **over 0.01%** it will need placing on the label.

$1.902 / 100 \times 0.005 = 0.00009\%$ this is **under 0.01%** it will **NOT** need to be placed on the label.

You should end up with something like this:

Common Name	INCI Name	Weight (g)	Percentage % (w/w)
Bicarbonate of soda	Sodium Bicarbonate	1000.0	63.412
Citric Acid	Citric Acid	500.0	31.706
Disodium Lauryl Sulfosuccinate (Plantapon)	Disodium Lauryl Sulfosuccinate	20.0	1.268
Rice Bran Oil	Oryza Sativa (Rice) Bran Oil	20.0	1.268
Polysorbate	Polysorbate 80	5.0	0.317
Fragrance oil (Iced Pineapple)	Parfum	30.0	1.902
	Citral	/	0.011
	Limonene	/	0.027
Colour Green Apple	Sodium Sulfate, CI 19140, CI 42090	1.0	0.063
White Mica	Mica, Tin Oxide, CI 77891	1.0	0.063
Total:		1577.0	

For your labelling, you need to list in descending order (highest to lowest) all your ingredients which are 1% and above. Then follows the ingredients below 1% in any order.

Ingredients over 1% in order:

Sodium Bicarbonate, Citric Acid, Parfum, Disodium Lauryl Sulfosuccinate, Oryza Sativa (Rice) Bran Oil, Polysorbate 80,

If your fragrance was used at 1% it would be:

Sodium Bicarbonate, Citric Acid, Disodium Lauryl Sulfosuccinate, Oryza Sativa (Rice) Bran Oil, Parfum, Polysorbate 80,

For ingredients under 1% it will depend on your selection but for our worked example it would be:

Citral, Limonene, Sodium Sulfate, CI 19140, CI 42090, Mica, Tin Oxide, CI 77891.

So, the ingredients list in this example will be:

Ingredients

Sodium Bicarbonate, Citric Acid, Disodium Lauryl Sulfosuccinate, Oryza Sativa (Rice) Bran Oil, Polysorbate 80, Parfum, Citral, Limonene, Sodium Sulfate, CI 19140, CI 42090, Mica, Tin Oxide, CI 77891.

The word "Ingredients" must go before the ingredients. This is a legal requirement.

You may also place the colours (CI numbers) at the end of the ingredients list, so it might look like this if you choose to:

Ingredients

Sodium Bicarbonate, Citric Acid, Disodium Lauryl Sulfosuccinate, Oryza Sativa (Rice) Bran Oil, Polysorbate 80, Parfum, Citral, Limonene, Sodium Sulfate, Mica, Tin Oxide, CI 19140, CI 42090, CI 77891.

Some people list allergens at the end of the label, while this is not legally required, there is no impediment in the UK to label your cosmetics in this manner.