

## Allergens

The 7th amendment to the Cosmetics Products (Safety) Regulations 2004 now requires allergens of certain listed varieties to be included in the list of ingredients on cosmetic products.

The amendment reads - Amendment 38 Article 1, Point 6 A (new), Annex III - Part I (Directive 76/768/EEC) - it is mandatory that 26 chemicals found in Essential Oils are listed as "sensitisers" on cosmetic product labels, among the following: Benzyl Alcohol; Benzyl Benzoate; Benzyl Salicylate; Cinnamyl Alcohol; Cinnamal; Citral; Coumarin; Eugenol; Geraniol; Isoeugenol; Anise Alcohol; Benzyl Benzoate; Benzyl Cinnamate; Citronellol; Farnesol; d-Limonen; and Linalool.

Now what on earth does this mean? Let us explain .....

Most essential oils and fragrance oils contain allergens. Allergens are skin sensitisers which may cause an allergic reaction. Although there are many allergens, there are 26 of them that must be listed on your label if they occur in your product in quantities greater than 0.01% (for wash off products such as soaps and shampoos) and 0.001% (for leave on products such as creams and perfumes). You do not need to list the % that is in your product, just listing them is enough to indicate that they are present.

### ***How To Calculate the % of Allergens In Your Product***

You can calculate the allergens for a product batch by using the following equation:

Let's say that the recipe you are using contains:

980g clear melt and pour soap base (98% of the total ingredients)  
10g lavender essential oil (1% of the total ingredients)  
10g lemon essential oil (1% of the total ingredients)

Using the allergen chart found on the following pages, the allergen breakdowns are:

#### ***Lavender essential oil***

Linalool 45%  
Geraniol 1.1%  
Limonene 1%

#### ***Lemon essential oil***

Limonene 73%  
Citral 3%  
Linalool 0.3%  
Geraniol 0.2%

For soap, if the total weight of any one of the allergens is over 0.01% (soap is a wash off product) then it needs to be included as part of the ingredients list on your label.

For the recipe above 100% = 1,000g    10% = 100g    1% = 10g    0.1% = 1g    0.01% = 0.1g



(this is the % we need to use as we are referring to a wash off product)

As our batch is 1000g, then each 0.01% is equal to 0.1g

So let us convert the % of allergens to actual weight for each of our 10g lavender and 10g lemon essential oils to see if they each weigh over 0.1g (or 0.01%)

#### *Lavender*

Linalool 45%	45% where 1% = 0.1g therefore 45 x 0.1g = 4.5g
Geraniol 1.1%	1.1% where 1% = 0.1g therefore 1.1 x 0.1g = 0.11g
Limonene 1%	1% where 1% = 0.1g therefore 1 x 0.1g = 0.1g

#### *Lemon*

Limonene 73%	73% where 1% = 0.1g therefore 73 x 0.1g = 7.3g
Citral 3%	3% where 1% = 0.1g therefore 3 x 0.1g = 0.3g
Linalool 0.3%	0.3% where 1% = 0.1g therefore 0.3 x 0.1g = 0.03g
Geraniol 0.2%	0.2% where 1% = 0.1g therefore 0.2 x 0.1g = 0.02g

As our recipe contains both Lavender and Lemon, we need to add up the allergen amounts in the recipe.

Limonene	0.1g + 7.3g = 7.4g
Linalool	4.5g + 0.03g = 4.53g
Geraniol	0.11g + 0.02g = 0.13g
Citral	0.3g

As ours is a wash off product, any allergen being greater than 0.1g (which is 0.01%) needs to be included on the ingredients list. This means that all of them required listing.

#### **Numbers not your thing?**

If the calculations used here are completely baffling and bewildering, please don't worry. Go by the rule that if the allergen is present in the essential oil or fragrance oil, then you will list it on the label regardless. That way you can't go wrong - better to have it included, than to miss it off due to incorrect calculations.