

SoapMaker

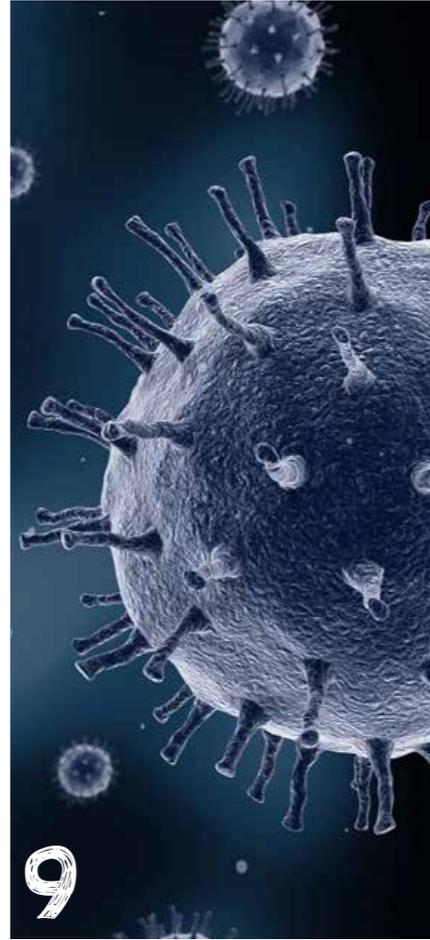


Issue Four | April 2017



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Latest News • *Introduction to Preservatives* • *Plastic Mould Design & Production* • *Diary of a Maker* • *Essential & Fragrance Oils*



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WOULD YOU LIKE TO CONTRIBUTE...

Soap Maker

Welcome to the fourth issue of Soap Maker our quarterly newsletter.

The aim of Soap Maker is to introduce you to our ingredients, products and our expert knowledge on soap, cosmetics and toiletries.

Help make the Soap Maker blog better...

If there is a recipe you would like to share, information on a subject not yet covered or you have something else you want to contribute to Soap Maker then contact

kirsty@thesoapkitchen.co.uk

Expiry Dates & Certificates of Analysis

We are often asked about the problem of expiry dates on all the many and varied products we have and there seems to be a great deal of confusion over this subject, so it would seem extremely useful to explain the process of expiry dates in cosmetic products and the difference from those used for food products.

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Firstly, and very importantly, there is no connection between an expiry date of an ingredient you use to make a finished product and the eventual expiry, or 'best before/best-after-opening' date you would put on your finished product. If you use an oil to make a lotion that has 3 months left until expiry on its certificate of analysis you do not apply that date to your 'best before' or 'best after opening' date for your finished product.

Also, very important to understand is that Food products have different rules to cosmetic products so where products used as cosmetic ingredients are also used for food there can be much confusion. As an example, we will regularly receive large consignments of oils or butters such as Olive oil or Palm oil, which are widely used in both food and cosmetics and the date on the outer packaging for food purposes might

suggest they 'expire' in just 2-3 months, BUT, this is a food date and does not apply to cosmetics. In the world of cosmetics there is no date applied to outer packaging but rather we rely on a separate document called a Certificate of Analysis (CofA for short) and this is the certificate that is sent to us after the most recent testing of that product by the manufacturer/refiner and that is likely to have quite different information on it. It's common for a CofA to have an expiry date many months further ahead and this is why....

A CofA is exactly what it suggests it is, it's providing the latest results of analysis of that product. In the text of that document it may also have wording to suggest that rather than the date being a fixed 'expiry date' it will refer to a re-test and this is because it's not the expiry of the product it's referring to, it's the expiry of the period since the product was last tested and found to be in perfectly good condition. In many instances, where the manufacturer still has some of that batch reserved for re-testing, a new CofA can be issued extending the so-called expiry date a further number of months, often 6 or even 12 months after testing their

reserved sample and finding it still in good condition.

In these days of huge amounts of controversial food waste, much of which is based around over-zealously applied expiry dates we should actually be more pragmatic about how we deal with dates put on packaging. In recently highlighted instances there has seen to be huge amounts of milk simply thrown away because it passed the expiry date on the bottle, but a simple 'sniff test' will usually demonstrate that the milk would seem fine for drinking many days after that date, and as such we should be applying different rules to milk, and many other food products to reduce unnecessary waste. It would seem sensible then, that in cosmetics, we are already practicing a far more reasonable method.

Now... aside of the original manufacturer or refiner, companies and consumers further down the line don't have the ability to test and issue CofA's, so it's not uncommon for a product to be sold with a fairly short period remaining on the CofA and this presents a problem, BUT, as I've already mentioned, if you're using that product as an ingredient in the making of another product

there is no link between the expiry date of an ingredient and the best before or best-after-opening date you apply to that product. As a more understandable example of this, if you make a cake and the eggs you use are due to 'expire' the next day it does not mean that the cake is not safe to eat after just 1 day and this would make perfect sense to most people. In the same way, if you add an oil to a soap or a lotion it's being further processed and at that time the new product becomes that which needs to have any required testing applied.

Most people who need to understand this information are those making products for re-sale, as they are compiling records for their product files as they're required to, and they will see the dates on the CofA's and often get unnecessarily alarmed. It's important to realise that the Safety Assessment (CPSR) you will have had to have on your formula will give guidance for best before or best-after-opening dates that should be applied to that product and you will also notice that there will be NO variations to this based around any expiry dates on the CofA's of ingredients, so the lesson here is... Just because your ingredient says it's going to 'expire' quite soon does not mean it's not perfectly good to use in making your finished products.

Now... there are many and varied rules for different types of product use and I'm only attempting to explain those for cosmetic ingredients here because that's the primary reason most of our customers are buying

product from us. I acknowledge that there are many other uses for the products we stock and some customers will be buying them for different applications but to cover all other options would be impossible in this short article and also out of my own area of expertise.

There is immense misunderstanding over expiry dates in general and it's widely acknowledged that these types of dates are a direct cause of huge amounts of waste in our modern society, so my advice in general would be to trust your judgement. If a product looks or smells 'off' then it is 'off' but otherwise please don't simply throw it away, as it's likely to still be in fine condition for much longer than you might think.

Finally, if the regulations don't call for any best before or other type of date to be applied to your product, don't use one. As an example, bar soaps have an expected period where they're safe to use over 30 months from their production and this means they do not require any dating as the purpose of dates is safety. The high pH of natural soaps means they are self-preserving, as bacteria cannot propagate on them. It is true that the fragrance (if you add one) might diminish over time and mean that the soap might be considered 'better' if used after maybe just 6 months, but it's not unsafe until possibly years later and might never actually become unsafe to use because of its self-preserving nature, so why put a date on it and encourage waste? Better not to if you don't have to.





Diary of a Maker Sarah Harper

The idea behind the Clovelly Soap Company started life in 2004 when I decided to change the pace of my busy life in the city and heal the negative effects that commercial skin and cleaning products were having on my health and well-being.

From dabbling in perfumery as a child (mixing rose petals in jam-jars in Grandad's garden) and being bought up with a holistic understanding of humanity and nature, it made sense to learn the science behind it and eliminate all the toxins. And having been born in beautiful, rural North Devon, it had always been a dream for me to return to live and work there.

Making soap felt like the right way. I wanted to use traditional methods, the best natural ingredients and introduce others to the difference that handmade soap can make to your skin.

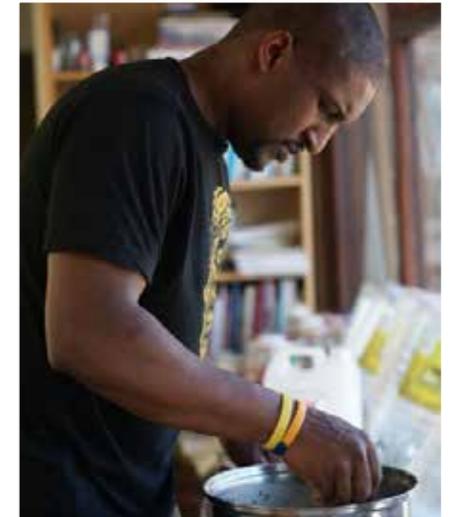
Healing my skin and relieving its allergies and sensitivities by using my own natural products, together with receiving a timely birthday gift of a book on soap-making and a desire to make my fortune by helping others to find wellness too all inspired me. I sealed

the fate on my city-career, exchanging high-flying for happy-grounding!

Studying hard, I became a massage therapist and learnt the art of Aromatherapy along the way. Myriad massage treatments, dog-walking and pet-sitting sessions, and many experimental bars of soap later, the business was launched in North London, selling at craft fairs and in local shops. My husband Casie joined me in the dog-walking and soap-making and the business expanded, making bespoke ranges for boutique shops. When one of my oldest customers asked if I would like to teach soap-making in her new craft studio, a new branch to the business was born.

Three years later and with an additional member of the family in the form of our first daughter, Rowan, we decided to make the leap back to a rural life. We were wonderfully lucky and found the perfect new home for the family and the business on the famous and unique Clovelly Estate in beautiful Devon. The old village Granary was renovated in perfect time for us to move in, with a purpose built studio for classes and old stone workrooms for soap-making. The estate also gave the business its new name and The Clovelly Soap Company was born.

Our new home continues to give us the space, time and inspiration to grow the company and you can now find us in many beautiful shops, boutiques, National Trust properties and hotels throughout the country. In March 2014 we opened our own little soap shop in Clovelly, allowing us to meet and get to know many more of our customers in person. And in September 2014 my



first book *The Natural and Handmade Soap Book* was published by David & Charles. I also continue to teach the secrets of traditional soap making to hobbyists as well as those keen to start their own soapy empire at our sister-company, Rowan Tree Studio.

We are blessed that our business has given us the lifestyle we always dreamed of and working from home has allowed my husband Casie and I to share care of our 2 girls. It is a juggle between running the shop, teaching courses, making soap and running herd on the girls and the chickens, ducks, dog, cat and pony that we share our lovely home with. We do find time to smell the Lavender in the garden and pop to beach for a quick surf before heading home to do what we love. Our business is truly a family affair and in 2015 my cousin Natalie joined us and has since become an expert candle maker and keeps us all organised whilst running the shop and wrapping soap.



Playing Shop

Several years ago we took the terrifying plunge into the unknown with our own retail premises. Switching from the relative safety of online sales, craft fairs and trade to the very grown up step of having a shop with overheads and lots of space to fill was in equal parts daunting and exhilarating.

Clovelly rather sensibly decided to do this whilst pregnant and in the middle of writing a soap making book which in hindsight wasn't ideal but we managed to keep it stocked up and learnt a lot about managing stock levels and what sold in our little tourist village on the hillside. We have since moved to a prettier shop at the top of the historic Clovelly Cobbles and rub shoulders with the famous donkeys and the other Clovelly artisans in the Silk Shop and Pottery.

It is this time of year that we prepare to open our seasonal shop which runs from Easter to Late October open 7 days a week to cater for the tourists, walkers and local people that visit Clovelly. Our winter months are

spent making lots and lots of soap so that we are ahead for the opening of the shop which is also our busy time for wholesale orders with many of our stockists in the same position. Those of you that make soap to sell know the challenges of predicting demand and making sure you have enough soap cured without having too much sitting around for months. Our shop has all of our soaps plus matching candles, bath bombs, Balms, melts, Reed Diffusers and lots of gift sets as well as selected complementary items from local makers and artisans. We love to work with local companies and have beautiful soap dishes made for us as well as organic Hamman towels and lovely local dog biscuits to match our popular dog products. It is hugely important to us to source as much as we can from the local artisans and businesses like The Soap Kitchen.

A quick decorate and lick of paint to brighten and refresh the interior as well as hanging baskets and planters made up in pretty spring colours



designed to match our colourful packaging. Stocking up on tissue, bags and gift wrapping items as well as staff training on our new till system and we are ready to go! It is an exciting time for us anticipating a new season and planning lots of new stock items to keep regulars coming back as well as tempting visitors. Having increased our range of soaps to almost 30 scents this year we have lots of options for gift sets as well as exciting new Felted Soaps and Soap on a rope which I think will be a strong item for the coming year and will showcase our newer soaps with swirls and gorgeous natural colours. For us having a seasonal shop is ideal as it gives us a break in the winter to make and spend time with the children and enjoy Devon. We love being able to speak to our customers and get direct feedback on our products, packaging and new ideas.

Clovelly is a beautiful home for our business and we look forward to seeing you soon!

An Introduction To Preservatives and Product Preservation



An introduction to Preservatives and Product preservation by Scott Grainger of Cosmetic Safety Consultants Ltd

Why preserve cosmetics?

Many cosmetic formulations can support microbiological growth by providing the two main conditions required – a source of food (fats, carbohydrates, proteins etc.) and a source of water. 'Microbe' is the general name given to microscopic organisms such as viruses, bacteria and moulds (which include fungi and yeasts). The presence of microbes in cosmetic products should be avoided for two important reasons

- **Spoilage** – the physical and chemical integrity of the product can be compromised. This can mean changes in viscosity, colour, odour, pH changes etc. resulting in a final product that is no longer suitable for the purpose it was created.
- **Safety** – in some cases, the microbes that contaminate cosmetics are pathogenic – in other words they are potentially harmful to human health. If used by vulnerable users, applied to broken or damaged skin or mucous membranes, there is a real risk of infection to the end user – in some cases very serious infection can result.

What sort of products need preservation?

Any cosmetic product that provides an environment which is capable of supporting microbial growth should be preserved. Specifically, all products that contain water (and do not possess other chemical or physical properties that prevent microbial growth) should be preserved appropriately.

Self-preserving formulations

These are products that by the nature of their ingredients / compositions do not support microbial growth. The simplest example of a formulation for which preservation is not required is one in which there is no water – zero water content (anhydrous) simply means no microbial growth – all microbes need water to survive, and without it, there can be no proliferation. One disadvantage of this method of formulation is if a product is to be used in an environment where there is the potential for water to enter the product – for example, an anhydrous, oil or butter based scrub used in the shower – if water does enter the product during use, then, depending on the formulation, there is subsequent potential for microbial growth.

Water activity

Some products that contain water can be self-preserving because they contain substances that reduce the ability of microbes to access / use the water that is present to proliferate. These substances include humectants such as glycerin, salts and sugars, some gums and alcohols.

pH

This is a measure of how acidic or alkaline a product is – Below pH 7 is acidic, above pH 7 is alkaline and pH 7 is described as being pH neutral. Most microbes prefer around neutral pH to grow, so it follows that it is possible to limit or eliminate growth potential by controlling the pH of a product. pH below 4 and pH above 9, generally produces an environment that limits microbial growth – there may still be requirement for additional preservation when using this method, depending on the product type / formulation.

Detergents (and soaps)

The presence of detergents can help to preserve a cosmetic formulation by reducing surface tension at and damaging the outer surface of the microbes – the outer surface protects and keeps the microbes intact and able to survive.

Alcohol (fragrances) and solvents (nail polishes)

It should be noted, that the properties described above to create self-preserving products are generally used in combination for best results. For example, a liquid soap with pH above 9 and a high concentration of soap salts is effectively self-preserving – providing it isn't neutralised or over-diluted.

Types of preservatives

Very generally, most preservatives work by affecting the outer surface of microbes – they may compromise the structure or inhibit reactions that are



vital to cell metabolism. Preservative choice is limited to those detailed in Annex V of REGULATION (EC) No 1223/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 30 November 2009 on cosmetic products. The Annex lists the preservatives that are approved for use in product manufactured in the EU, and provides details of concentration limits and product categories, where appropriate.

The preservative systems that are used most regularly in products produced on an artisanal scale are the following - Phenoxyethanol, Sorbates, Benzoates, Salicylates, Benzyl Alcohol and Dehydroacetic acid. These preservatives are universally approved and have a long established safety profile. When choosing a preservative system it is important to check the supplier information and make sure that it is suitable for your product. For example

– does the preservative function properly at your product pH? Is the preservative water or oil soluble? Is the preservative affected by the presence of surfactants? Is it broad spectrum - i.e. does it control all categories of microbes or is it specific to bacteria? In this case you would need to include a second preservative that is effective against moulds, for example.

All of this information is readily available from the preservative manufacturers, and suppliers generally take these factors into account when selling preservative mixtures to their customers.

Natural and alternative preservatives

There are many naturally occurring substances that have anti-microbial properties - Essential oils, fragrance compounds (synthetic and naturally derived), fatty acids and more recently, by-products of fermentation of natural plant and vegetable matter are a few examples. Most of these substances are not actually included in the Regulation Annex, so there can be some discussion about whether or not they are present in a formulation specifically as a preservative, or if they are present in the formulation as an anti-microbial agent and hence producing a product that is effectively “self-preserving”. As the only preservatives legally permitted are those detailed in Annex V of the regulation, the latter must be assumed in order for these products to be used legally.

From a marketing point of view, term such as “naturally-preserved” or “free from x, y, z” can be useful – The

labelling name of many fragrance derived “preservatives” is simply “Parfum” – this does have appeal of course but care should be taken not to mislead the consumer by using claims such as “chemical free” or “preservative free” as these are quite specific claims and could lead to further investigation by a competent authority.

Challenge Testing (CT) or Preservative Efficacy Testing (PET).

If a product is preserved, usually there is a requirement for this test. Contrary to popular belief, CT/PET is not primarily a test of the microbiological purity of your finished product – this can be done cheaply and quickly with basic microbiological testing such as TVC (Total Viable Counts) and SPT (Specific Pathogen Test). Instead, CT/PET is a measure of how well your chosen preservative can deal with the introduction of microbial contamination during use.

When you place even the cleanest of fingers into a jar of face cream, for example, you transfer micro-organisms that occur naturally on the skin and in the environment to the product. The preservative system needs to be adequate to prevent any of these incidental microbes from growing and contaminating the product. This is why CT/PET is such an important test – it verifies that your product is microbiologically safe during

continued use and the end user is protected.

In some special cases, CT/PET might not need to be performed – if the product is packaged into sterile, single-use containers, then CT/PET is not required – the product is used entirely in one application and hence there is no need to study how the preservative system copes over time and subsequent use. The second feasible way in which CT/PET can be avoided is by the use of sterile, airless pump style containers – the design and use of these containers means that there is negligible potential for the introduction of microbial contamination during continued use.

Vitamin E

A final word on Vitamin E. As safety assessors, we see numerous formulations submitted that include Vitamin E as the sole “preservative”. Whilst it is true that tocopherols do show some anti-microbial activity, their primary function in cosmetic formulations is antioxidant. They are useful in preventing oils and fats becoming rancid due to oxidation from contact with air (oxygen) but they are not reliable preservatives with regard to controlling microbial growth.



Essential & Fragrance Oils



Our sense of smell is a powerful ability and it conjures up emotions and memories. It also affects our brain which has an effect on our stress levels, hormones, breathing, heart rate and blood pressure. Fragrance is highly subjective and we don't all like the same scents and smells. What you like might not be what someone else likes!

What you need to keep in mind is the final application, as with certain products you will need to be accurate when mixing and blending. Mixing your own blend of oils can be a fun way to experiment. With so many essential oils to choose from it might seem a bit overwhelming.

Understanding Scent Notes

Scents have been separated into three distinct classes, top notes, middle notes and base notes. Determined by the volatility of the oil, lighter molecules evaporate quicker than heavier one. One note can influence the perception of the others notes. A well-rounded balanced fragrance should aim for a combination of all three notes.

- **Top/Head Notes** – The small light molecules of the top notes are strong, very volatile and evaporate quickly. They form the first impression of a perfume and are very important when selling.
- **Middle/Heart Notes** – This scent emerges prior to the top notes dissipating and is usually more mellow and rounded. They often mask the initial unpleasant base notes, which become more pleasant with time.

- **Base Notes** – This is made of large heavy molecules that evaporate slowly. Deep and rich they are the main theme of a perfume and are usually not perceived until 30 minutes after application or drying of the perfume.

This is guide to essential oils and their perfumery notes, though this again can be subjective.

Pre-made Blends

You might feel a bit overwhelmed at the thought of blending your own oils and there is a wide range of pre-made blends already mixed together for you.

It is not recommended that you try to mix or add to these blends, as the exact quantities can only be guessed and the outcome will be unpredictable. You are better off blending your own.

Blending Oils

A good starting point when considering blending your own oils is to look at popular blends and their ingredients. The simplest approach is to start with a 1:1 ratio of the same amount of oil drops, and adjust from there.

Carriers

If you are applying your blend to skin you will want to dilute your blend into a carrier to reduce the reactions essential oil can cause (see the important notes). Aloe Vera gel and unscented body lotions are commonly used to carry the oils to your skin, hence the name.

Additional tips on blending oils

- Make sure you store you blend correctly.
- Leave air space in the bottle so oil can breathe.
- If using carrier, fill the container half way, and then add the blend of oils. Add the rest of the carrier and turn it several times to mix.
- It's important to use good quality ingredients throughout your products. It doesn't make sense to use good quality oils and put them into poor quality gels, creams or lotion bases.

Want to keep it simple

If this all sounds a bit too confusing and you want to keep things simple

the Soap Kitchen offers a range of basic bases that you can choose the colour, fragrance or essential oil and make them up yourself.

These basic bases have been partly assessed that with your added choices you can get a low cost assessment that only takes a couple of weeks, compared to a full assessment that take about 6 weeks.

Once assessed you can package, label and sell them as you would any other product. They are a good starting point if you are considering starting a business.

There is more information on the choices available for each base on the Low Cost CPSR pages.

What percentage of Fragrance and Essential Oil should be in products?

This is the amount we use in our Soap Kitchen recipes, other recipes may call for different amounts. The allergen content of some Essential and Fragrance Oils may limit inclusion levels to less than these recommended amounts in some instances, especially cinnamon based ones for example. Some bases may differ and the manufacturer's suggested maximum inclusion levels should be on the individual products.

- Bath Bombs – 3% (3ml per 100g)
- Bath Crystals – 1% (10ml per 1kg)
- Bath Foams & Bodywashes – 0.75% (7.5ml per 1kg)
- Candles – Essential 5% / Fragrance 8-10%

- Cold Process Soap – 2% (20ml in 1kg)
- Creams – 0.5% (5ml per 100g)
- Lip Balms (flavours) – 5% (5ml per 100g)
- Melt and Pour Soap Bases – 2% (10ml in 1kg)
- Shampoo & Conditioner – 0.75% (7.5ml per 1kg)
- Shaving Soap – 1% (10ml per 1kg)

Important Notes

Essential oils are highly concentrated and some individuals and skin types may have allergic reactions to them, so it is important to always be safe and careful with them.

For more information visit www.thesoapkitchen.co.uk



What is Going Natural and what does it mean?



Sabai Soaps is a natural skincare company that uses only 100% natural ingredients in our products.

We are based in the UK and provide a range of exotic soaps that are handmade in Thailand, taking advantage of the natural tropical ingredients that are available there.

We also have a strong ethical business practice and donate 20% of all our profits to charity. Come say hello at www.sabaisoaps.com.

No we are not suggesting that you whip all your clothes off and head straight to your nearest speciality beach, although if that's your thing you go right ahead! We are talking about going natural when making soap, not the kind of natural where you have to make sure you are extra careful when mixing your lye! But going natural in terms of the ingredients that you use in your soap making.

The organic and natural movements have become an everyday part of life and are familiar to all of us but why should we consider using only natural ingredients when making our soap or buying our cosmetic and household products? In this article we look at four of the big reasons why.

1. Your skin, it is estimated that over the course of a year your body will absorb over 5lb of chemicals from the products that we use on it. This means that we need to consider not only what goes onto our body but also what goes into our body. Whilst the chemical ingredients that are used in the beauty products that we use or the soap that we make may make us feel, look or smell better we also need to consider the potential long term effects that they can have on our skin. Keeping youthful, moisturised and soft skin is hard enough as it is and we should be giving our body all the help that we can by using, where we can, only the natural ingredients which will improve its condition and not take anything away from it.

2. The risks of using chemicals, chemicals are an everyday part of the majority of household products that we buy and whilst we trust the products and brands that create them, the scientific community often do not know what the long term effects of synthetic ingredients on us will be, and the motivation for using them is often related to cost or ease of use. One recent example of this is with antibacterial products, which have been banned in the US, after the companies who produce them were unable to show that there was any benefit from using them compared to normal soap and water. In fact the study found that one of the main chemicals used in them, Triclosan, could pose a long term health risk to those who regularly use it.

3. The environment, we've only got one environment so we should take care of it as best we can! Synthetic or chemical ingredients need to be produced in factories and often the run-off and waste from these is released into our rivers or the atmosphere and can cause a great deal of damage to the animals and plants that we share our planet with. It may seem like a small action, but our choice to use natural products can help to keep out wonderful natural environment flourishing.

4. The richness of nature, the variety of natural ingredients that are available to us are almost unlimited, the huge range of natural oils, essential oils, butters, herbs, spices, fruits, vegetables, seeds and salts mean that we have an almost unlimited menu of ingredients to choose from, and whether you are making your own soap or simply thinking about what skin care product to purchase next nature has provided us with a wonderful bounty of ingredients to try. Which means that you do not have to feel limited by deciding to use only natural ingredients, in fact it may encourage you to try even more exciting recipes!

Plastic mould design and production at The Soap Kitchen



Meet Colin Fox the Mould Designer (aka Clive)

In this article Colin talks us through and describes the way vacuum-formed moulds are designed and produced for sale at The Soap Kitchen. These moulds are suitable for melt-and-pour soap production.

Our “in-house” mould designs, are identified by a number of influences: these can be current and future trends, seasonal items, development of previous moulds, ideas that come from “brainstorming” meetings from Creative Suite design team, or indeed suggestions from any of the Soap Kitchen staff.

This is how the moulds are designed and made

Initially, I will draw the image, my preferred software being Adobe InDesign, but I also use IronCad by Inovate and Blender. In some cases I will draw a design freehand using a pen. Fig 1.

Once happy with the image, it is loaded into 3d imaging software which will give a clear representation of how the mould model will appear. The model size and scale can be adjusted at this stage. The software will give indication of how long the model will take to print and how much material will be used. Fig 2.

The model is then set to print. Fig 3.

I also produce 2d models which are more basic in form. These are drawn a similar way but put through a different software package, which will, in turn drive a desktop CNC machine. The CNC mills the model by cutting into a block of plastic-based composite material.

Once the 3d model has been printed, it needs to be re-produced in resin. This is because the heat used on the forming machine is higher than the 3d plastic can tolerate and it would begin to melt during the vacuum process. Fig 4.

So, a silicone mould is made from the 3d model. Once cured, the plastic model is extracted from the silicone

and after trimming, resin can be mixed and poured into the cavity. Once the resin has cured, which is usually within 10-15 minutes, the model is extracted from the silicone, and cleaned off using sandpaper or a Dremil to give it a fine smooth finish. Fig 5 & 6.

Models which are produced using the CNC, do not need the silicone/resin procedure. The model is ready for the vacuum-forming machine once it has been sprayed with a clear laquer.

The model is then placed on the vacuum-forming machine bed. When heated, the plastic sheet is vacuumed around the shape of the model. After cooling, the model is popped out and the mould is trimmed ready for sale. Fig 7, 8 & 9.

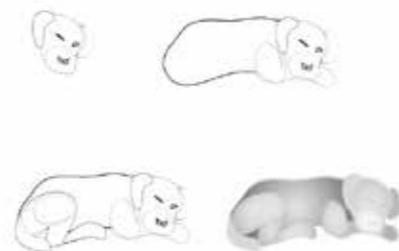


Fig 1

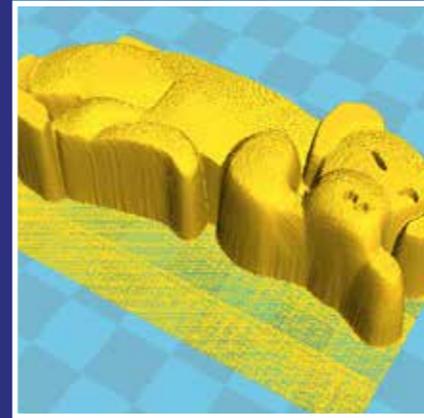


Fig 2

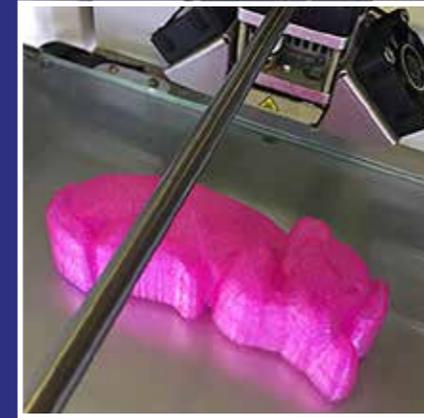


Fig 3

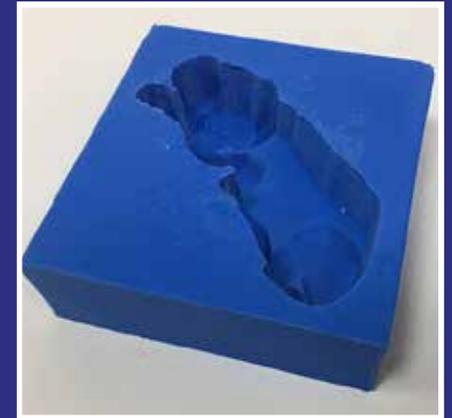


Fig 4



Fig 5



Fig 6

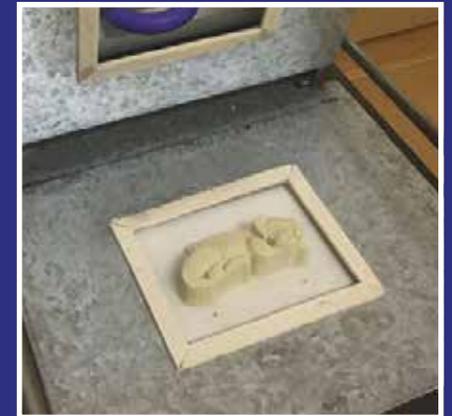


Fig 7

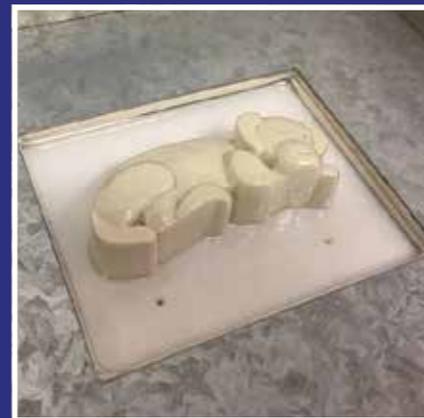


Fig 8



Fig 9

How to set up a business?

You have decided that you want to turn your hobby into a business or you realise that you are earning some money from your hobby. Either way you need to know how to set up a business. But where do you start?

Register your business with HMRC

What you need to do to set up depends on the type of business and if you want to employ people. Most businesses register as a sole trader, limited company or partnership. What's the difference?

Sole Trader – It is simple and easy to set up as a sole trader. You are personally responsible for your business's debts and have some accounting responsibility. Find out more about being sole trader and how to register with HMRC.

Limited company – The benefit of forming a limited company is it finances are separate from your personal finances. There is more paperwork and management responsibility that you might like to seek help from an accountant. Find out more about setting up a limited company.

Partnership – If you want to work with a friend or partner this is the simplest way to run a business together. You share the responsibility for your business's debts and have accounting responsibility. Find out more about registering to be in a partnership.

Choose a business name

You might have some firm ideas of what you want to call yourself. Some just use their name but others come up with a creative name, like the Soap Kitchen came from the business starting from soap being made in the family kitchen.

You will want to search Google and Companies House to see if the name you want to use is available. Once you have completely decided you can think about your brand materials. It's also worth buying the website domain name but you don't have to host and set up a website until you are ready.

Set up a business bank account

If you are setting up as a company you legally need to have a separate account. If you are a sole trader it's not strictly required as yet but with HMRC wanting to make tax digital it's certainly worth doing.

Start accounting for everything

If you need to, appoint an accountant or set-up your own simple book-keeping system. You need to keep a clear record of your expenses and incomings. You might find it worth looking into an online book-keeping system that will help you track your accounts and help you with any tax and national insurance payments you have in the future.

If you earn over the Personal Allowance band of tax then you will have to pay tax. You can find out more about the current Income Tax rates and bands.

Register for VAT

Depending on the type of business or where you are selling to, you might need to register for VAT. You can find out more information on the current VAT thresholds.

Where you work

You need to consider what responsibilities you have if you plan to run your business from home or rent somewhere.

If you plan to run your business from home then you might need permission from your landlord or mortgage provider and the right type of insurance as home insurance may not cover your business.

When renting a business property many responsibilities will depend on the lease. You will need to carry out a health and safety risk assessment and may have business rates to pay.

Become an employer

If all goes well you might need to get help and need to take on employees. There are several things you need to do if you are going to employ staff.

Good Manufacturing Practice (GMP)

It's important to adhere to Good Manufacturing Practices (GMP) during the manufacture of products. This ensures that your products are manufactured in a clean, hygienic environment and no contamination of your products occurs.

The Cosmetics Regulation (EC) 1223/2009 requires that all cosmetic products placed on the European market comply with Good Manufacturing Practices (GMP) set by the ISO 22716 standard.

What is GMP?

A written statement of Good Manufacturing Practices is a set of guidelines you follow that ensures the reproducibility and the quality of the manufacturing process of your products. It demonstrates you have

considered the potential health and safety issues in every stage of the manufacturing of your products. It also outlines in detail all the steps you take to ensure your products are safe and manufactured in a hygienic and professional manner.

There are several sets of guidelines available to help you write your own statement of GMP.

Council of Europe '**Guidelines on Good Manufacturing Practice of Cosmetic Products (GMPC)**' can be obtained from The Stationery Office ISBN 92-871-2849-9

GMP Guidelines are available to purchase from the Cosmetic Toiletry and Perfumery Association www.ctpa.org.uk/publications.aspx?pageid=277

You GMP will need to include detailed information about:

- **Personnel** – everyone should have the appropriate training, documentation and skills to produce, control and store products with a defined quality.
- **Premises** – should be of a standard to minimise the risk of product contamination.
- **Equipment** – should be suitable for its intended use with regular calibration and maintenance.
- **Raw materials and packaging materials** – should meet the accepted criteria relevant to the finished product.
- **Production** – each stage of the

manufacturing process follows the procedure in place to ensure the product meets the required standards.

- **Finished products** – should meet the required standards, stored and shipped correctly to maintain the quality of the finished product.
- **Quality control** – defined to ensure the finished product meets the required standards.
- **Waste** – should be disposed of correctly.
- **Subcontracting** – a written contract should be established between the parties to ensure the quality of the finished product.

Please note:

This a non-exhaustive list, to get all the necessary information, please refer to the official publication of ISO 22716 standard.



You may also be able to discuss your GMP with your **Safety Assessor as part of the Cosmetic Product Safety Report.**

- **Complaints and recalls** – all complaints related to the products should be reviewed and dealt with appropriately. Steps should be taken if a recall is required and the correct procedure followed.
- **Change control** – any changes need to be approved to ensure the quality of the product.
- **Internal audit** – this ensures the guidelines are being followed.
- **Documentation** – each company should have its own system of documentation to define and prove the GMP in place.

More information For lots more useful information about setting up a business visit www.gov.uk/set-up-business



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