

CHOOSING SAFE INGREDIENTS

WHEN MANUFACTURING PERSONAL CARE PRODUCTS





The primary criteria for manufacturers when buying any ingredient or input has historically revolved around legal compliance, product quality, supplier reliability and cost. This is common to all industries, not just for manufacturing cosmetics. However, there is another consideration that has become more and more important, which is safety.

Of course, a lot of major risks are covered by the law, however many consumers look for companies that go over and above what is mandatory and are willing to call them out publicly, whether positively or negatively. In fact, some brands put safety and ethical behaviour at the core of their identity. Quest itself has undergone extensive supplier audits that focus on these areas.



What does “Safe” really mean?

We have identified four primary categories of safety. Practices and products that are safe for the consumer, environment, animals and employees. This study will do a deeper dive into all four categories.

Below is a summary that manufacturers might choose to evaluate when considering ingredient suppliers. It may be that manufacturers do not require a positive answer to all the questions raised below, however it is hoped that this discussion will help procurement teams to formulate their own criteria around safety.

Safe for the Environment

POLLUTION

There is a legal element to this, and it should certainly be verified that the supplier has relevant permits and does not exceed legally stipulated pollution levels. However, even if below legal limits, procurement teams might still wish to look at pollution levels and include this in their overall supplier assessment.

DESTRUCTION OF NATURAL HABITATS

If natural habitats have been destroyed or disturbed, manufacturers can ask what has been done to avoid this and if alternative methods or sources could be found.

GENETICALLY MODIFIED ORGANISMS (GMOS) AND GENETICALLY MODIFIED MICROORGANISMS (GMMS)

GMOs are commonly used to reduce the need for pesticides. However, they can potentially have negative environmental consequences, particularly if the inserted gene kills organisms that are not considered pests. This can affect the stability of the environment. Manufacturers may not require suppliers to avoid GMOs, unless mandated by their own clients, but might choose to make sure that Environmental Risk Assessments have been completed.

CHEMICAL MANAGEMENT PROCESSES

Understanding these processes is important for avoiding contamination in the final product as well as protecting employees and the community. Essentials are the inclusion of appropriate Health and Safety Risk Assessments and training for the safe handling of chemicals.

Another important check is making sure that chemical use is monitored and recorded and procurement may also mandate contingency plans for spillages, particularly when the manufacturing process involves hazardous chemicals.

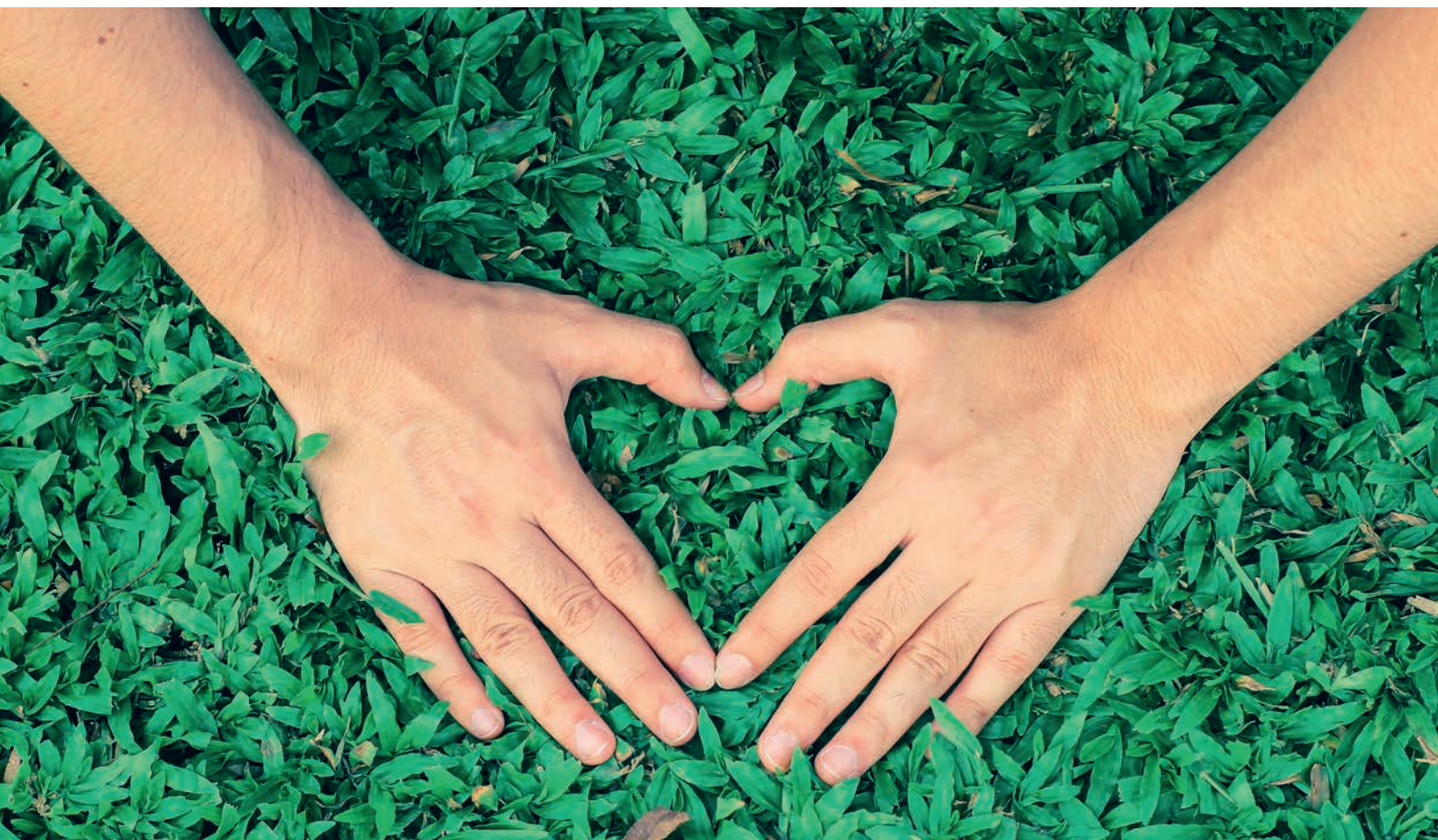
PESTICIDES AND SOIL MANAGEMENT

Cosmetic manufacturers may wish to stipulate the use of bio-pesticides, depending on claims that they themselves make. Even if not going that far, they may want to understand which pesticides are actually used, especially as this may form part of audits that they themselves need to undertake as contract manufacturers or as suppliers to specialty retail.

Soil management is important in order to ensure that the surrounding area is able to absorb any impact without sustaining permanent damage that can affect the stability of the local eco-system. This promotes environmental sustainability as well as responsible production.

LOCAL COMMUNITY

At its worst, mismanagement and a lack of consideration towards local communities can lead to bad press, boycotts and consequently supply chain disruption. Asking what suppliers are doing to mitigate things like noise pollution is important, alongside more obvious issues around waste management.



Safe for Animals

ANIMAL TESTING

This is a critical area for many brands and also consumers. Negative publicity around animal testing can cause irreparable damage to cosmetics brands and therefore it is important that they have audited their supply chain to understand testing processes.

Animal testing for cosmetic products is currently banned in many countries worldwide, including India and the entire European Union. Even if manufacturing outside of these areas without intention to sell inside them, it still shows that there is a strong trend towards legislating against animal testing

There are cases where some animal testing may be unavoidable in order to obtain safety certificates. This is particularly relevant in the USA. Manufacturers should be aware of requirements by jurisdiction when deciding on the animal testing criteria that they apply to prospective suppliers.





Safe for Employees

Cosmetics manufacturers are by necessity often working with chemicals, and therefore up to date chemical handling processes for employees must be implemented, as outlined above.

However, there are many broader concerns in regards to employee safety that touch all industries. Whilst there are regional differences in employee protection and legislation, it is advised that manufacturers are proactive in understanding how employees of their vendors are treated in ethical terms, not just by looking at legalities. This might be to ensure that practices are consistent with the values of the manufacturer, but is also relevant from a commercial perspective. Poor labour practices, even if they involve staff that have been sub-contracted to vendors, can cause huge reputational damage.

Some recommended red lines are:

- No bonded labour or slavery
- Allowing employees to organise and unionise
- Safe working conditions
- No child labour
- Legal minimum wage and legal benefits for employees

- Fair working hours (with a maximum to be determined)
- in line with the manufacturer's own labour contracts)
- Non-discriminatory recruitment processes

Safety for Consumers

This is a crucial area and the safety area that ultimately has the biggest bottom line impact. Aside from mitigating legal risk if safety laws are breached, manufacturers also run a huge commercial risk, whether manufacturing their own brands or contract manufacturing.

There is a large amount of data publicly available that allows consumers to make informed choices about cosmetic products, based on listed ingredients. Below are some of the key issues that concern consumers and how manufacturers can manage them:

CONTAMINATION

As discussed in the Environmental Safety section, contamination is a large risk that carries both commercial and legal risk. Making sure that the ingredient supplier has quality assurance and testing processes in place for their finished product is important, but it is also important to understand their safety processes during their production process. This includes chemical handling but also how they ensure good hygiene (of employees and equipment), the appropriateness of storage facilities, and the provision of adequate supervision.

SUITABILITY FOR VEGETARIANS AND VEGANS

If this is a claim made by the brand being manufactured, then it is important that the entire supply chain is sufficiently audited. In the case of cosmetics, it is understood that even though a particular product may not be ingested, it is still considered not suitable for vegetarians if it includes animal derivatives. Many vegetarians may still use cosmetics that contain animal products, however these products should not claim to be vegetarian or vegan friendly.

One example of a cosmetic product that has been customised for vegetarians and vegans is soap. Traditionally, soap was made with animal fats, whereas nowadays there are many vegetable soaps on the market as well as vegan options that use ingredients such as coconut oil.

Animal cruelty, specifically animal testing, is also a large reason why vegetarians or vegans might reject a specific product.

SKIN IRRITATION

Given that most cosmetics are applied topically, this subject is extremely important and minimising the risk of skin irritation is necessary to give products a chance to succeed.

There are different methods for testing ingredients without using animals. One such method is using cultured human cells to determine whether the ingredient will penetrate the outer layer of skin and cause irritation. This is commonly known as an RHE (Reconstructed Human Epidermis) test and in vitro tests such as this have improved and become more reliable and effective over time.

For ingredients that are present only in small quantities but for which there is insufficient testing data available, an approach that may be used relies on the concept of a Dermal Sensitisation Threshold (DST). DST essentially groups ingredients together dependent on their chemical structure and then based on this classification, identifies under which threshold of use there is no significant risk of skin irritation for a particular ingredient. This is constructed using data for ingredients with similar structures. This follows the same principle as TTC (Threshold of Toxicological Concern) which is primarily used for food ingredients.

ALLERGIES

Almost all water-based, commercially sold cosmetic products necessarily contain preservatives and it is these preservatives that are most likely to cause skin allergies. Chief culprits, and those that are best known and checked by consumers, are parabens and formaldehyde. However, other common preservatives include imidazolidinyl urea, Quaternium 15-, DMDM hydantoin, phenoxyethanol and methylchloroisothiazolinone.

Many consumers will look for products labelled “hypoallergenic” but, as many manufacturers will already know, this is not a term with any legal basis. In theory, it means that preservatives which are likely to cause allergies have been substituted for more gentle ingredients, however in practice almost any product can claim to be hypoallergenic. Therefore, end users that suffer from allergies or sensitivity have been forced to become more knowledgeable about specific ingredients and how they personally react to them.

Organicauthority.com have published a list of commonly used ingredients in cosmetics that might cause allergies and options that can be used instead: <https://www.organicauthority.com/energetic-health/how-to-avoid-toxic-cosmetic-ingredients-and-find-healthier-alternatives>

Final Thoughts

In summary, when assessing the safety of ingredients, manufacturers should not only look at the direct effect of ingredients on end users of their products, but should also look at the vendor and the overall impact of using those specific ingredients.

In practical terms, this can involve supplier questionnaires but should ideally also involve fact checking and verification in the form of supplier audits.

When considering the physical impact of ingredients on consumers, it is important to avoid getting sidetracked by fads and marketing claims, which often stretch the truth, and instead look at scientific data and testing methods. Advances in relation to in vitro testing and concepts such as Dermal Sensitisation Threshold make this data more relevant and accessible to manufacturers, thus allowing them to follow best practice. Meanwhile, increased consumer access to data around individual ingredients and potential substitutes will continue to force more pressure for transparency onto the entire supply chain, ensuring that the selection of appropriate and safe ingredients will continue to rise in importance.

