

Everything

YOU NEED TO KNOW ABOUT

Lab-created and Natural Ingredients

FOR INDIE BEAUTY BRANDS



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Our indie beauty guide on lab-created and natural ingredients will give you industry insights on:

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Who We're Talking To

Institute of Personal Care Science (IPCS)

Talking about the inspiration that led her to set up the Institute of Personal Care Science, Director, Belinda Carli, shares: "*I wanted to provide correct information for those who are serious about learning cosmetic formulation. I also wanted to teach people how to use materials properly so that chemists could be innovative and creative using a strong foundation of science specific to the personal care industry.*"

"We are government registered and audited too, which is important to me—to have training that is not just more 'hearsay', but registered by the government and recognised by industry," Belinda adds.

Alchimie Forever

Ada Polla, CEO of Alchimie Forever explains that her family's Swiss skin care brand first started when her father Dr Luigi L. Polla, a leading dermatologist in Switzerland, was looking for a calming skin care product. Treating children with port wine stains and hemangiomas, he was searching for a product that would heal the skin following laser treatment.

"Not being able to find the right product, he created what is now known as our Kantic brightening moisture mask," shares Ada Polla, CEO, Alchimie Forever.

What's In My Jar (WIMJ)

Starting life as a hobby project in 2019, artificial intelligence (AI) indie skin care brand, What's in My Jar (WIMJ), began consultations in February 2020. Describing the inspiration behind the brand's launch, Maria Semykoz, Co-Founder of WIMJ says: *"The main reason was to bring transparency into the skin care industry, especially to make it easier for consumers to understand what's true, what's basically marketing fluff, and to enable them to make better decisions for their skin."*

When the brand launched, its clear focus was to produce a high quality, industry-ready algorithm that can read and classify ingredients, assess the overall effectiveness or efficacy of a product and determine each product's potential irritation risk.

Although consumers embraced WIMJ's value proposition, Maria and the team realised: *"If we are to fulfil our mission to make transparency easy, it is important brands can launch without personally needing to have a PhD in chemistry or biomedical science,"* explains Maria. *"If we want to make it easier, we actually need to take an extra step by looking for solutions that make the process even simpler, because consumers are not only interested in buying the best product."*

Johnson & Johnson Consumer Health

In his role as Director of Product Stewardship at Johnson & Johnson Consumer Health, Homer Swei is directing consumer health brands on ingredient policies. Spending a significant amount of his time and involvement outside of Johnson & Johnson Consumer Health. Homer talks to suppliers, non-governmental organisations (NGOs), people in government, regulators, retailers and consumer groups to gauge an all-round understanding of what the current ingredient conversation is in the beauty and personal care (BPC) industry.

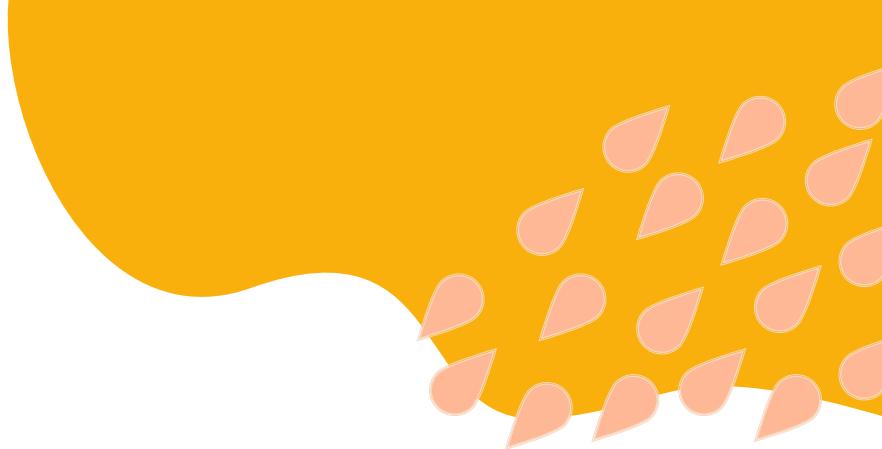
Describing his role as that of an *"external voice inside a corporation"*, Homer explains his ultimate aim is to contribute to the awareness and understanding of ingredients to enable smart science.

The most important attribute to have for the role is a strong moral compass, Homer relays: *"In my role, I try not to see dollars and cents in the way we make decisions. It is all about doing the right thing for the company, the consumers and society."*



“In the case of personal care, ingredient transparency will be a must.”

Alex Fisher,
Associate
Director of Beauty
and Personal
Care at Mintel,
emphasised at
Croda’s Digital
Sustainability
Conference 2020



“There are relatively few ingredients that are pure synthetics and there are relatively few ingredients that are pure naturals.”

Homer Swei, Director of Product Stewardship at Johnson & Johnson Consumer Health

The
'Cleanical'

Trend in

Beauty and

Personal

Care

(BPC)

Today

Introduction

Setting the Scene

Over the past two decades, the sustainability conversation has gathered in pace, support and transparency. Plans, actions and initiatives are evolving to define a new era in sustainability—one that goes far beyond environmental aspects to incorporate ethical, social and economical considerations.

For years, the widely accepted definition of sustainability has been, and remains: “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs”.¹

The Covid-19 pandemic has prompted even greater emphasis on the ingredients consumers actively look for in their formulations. The health of consumers, communities and our planet has emerged as a top priority for all. For beauty and personal care (BPC) consumers, this conscious approach applies to the ingredients contained within their sought-after products.

1 Brundtland Report commissioned by United Nations, 1987





To preserve the present and focus on the future, the BPC industry is now turning to the entire supply chain and whole product lifecycle. It's focusing on social and environmental responsibility, ethical wellbeing, fair trading, cruelty-free claims, local knowledge and distribution, trust and transparency, and resource scarcity. It's fusing science and nature to provide the answer.

Brands will need to consider everything they do. From raw material sourcing to manufacturing, positively impacting local communities as well as ways of application and transportation—consumers want to know the full lifecycle behind their chosen products and favourite brands.

When searching for BPC products, conscious consumers' needs are ever-evolving. Consumers are now starting to look for brands that provide the following:



Details of the countries and specific regions their raw materials are sourced from

Research to support claims labelling

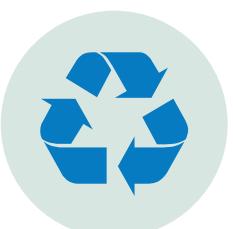
Integrity and provenance of ingredients



Efforts to guarantee biodiversity retention

Efforts to actively avoid deforestation

Support of certification bodies



Assurance of free from animal testing methods

Packaging materials

Level of equitable sharing

What are Natural and Lab-created Ingredients?



Let's look at what natural means in BPC ingredients.

In recent years, the growth of BPC labels and trends—namely natural, organic, green and clean—have entered into the everyday lexicon of consumers, brands, manufacturers and suppliers as consumers seek ingredients and products that are appealing to their health and our wider planet. While there remains no standardised global definition of what natural is, legislative efforts and industry standards are present and continue to develop.

Natural ingredients are defined under the [ISO standard 16128-1:2016](#) standard on natural and organic cosmetic ingredients and products as:

“Cosmetics ingredients obtained only from plants, animals, microorganisms... obtained via physical processes, fermentation or other procedures without intentional chemical modification.”

In November 2019, US Representative Sean Patrick Maloney introduced the [Natural Cosmetics Act](#)—hailed as the landmark Cosmetics Reform Bill—in a bid to complete a major update of cosmetics regulations for the first time in over 80 years. The Natural Cosmetics Act would define the terms “natural” and “naturally-derived ingredient” in relation to personal care products.

Under the Act and defined by the bill, cosmetic products that are sold, labelled or represented as “natural” would be required to contain at least 70% natural substances, excluding water, to comply and enable the use of the term. It would also place emphasis on carbon-14 testing, which suppliers would have to complete and submit to manufacturers. In March 2020, the health committee passed the bill, indicating its move to cosmetics legislative reform, and creating standard definitions for natural and naturally-derived ingredients.

Detailing the definition of a natural ingredient that resonates with IPCS, its founder and chemical chemist Belinda states: “*Under a true chemical definition, a ‘natural’ substance is one that could be obtained from nature without any sort of chemical changes; such as cold pressed oils. However, this definition would not enable us to have many of the essential ingredients that we need to make consumer pleasing products with varying performance and aesthetic properties.*”

In the cosmetics industry, there are a number of acceptable indicators of what is natural, IPCS’s Belinda continues:

- We accept materials as ‘natural’ where they may also be extracted from a natural starting source using ethanol or water, such as extracts and essential oils.
- We also accept gums or materials created using fermentation.
- We also accept materials where there has been a chemical reaction using heat, pressure and/or catalysts, where there is no remaining trace of a synthetic substance. Examples of this include esters that are derived from wholly natural starting sources, which give a cosmetic chemist a dramatically larger library of materials from which to create great formulas.





"Certifiers of natural and organic products often broaden this definition a little further, to include nature-identical substances such as several vitamins and preservatives, as they don't exist in sufficient quantities to make them obtainable for our industry," says Belinda. "In this case, they will accept substances as 'natural' even when created from synthetic sources, where their chemical structure is identical to that which is found in nature," Belinda shares.

A natural substance goes beyond these definitions too. *"A natural substance should also be sustainable, and respect the environment from which it came,"* adds Belinda. Sustainable farming and mass balance certification is one way to help ensure this practice continues.

On using this understanding of what is natural, IPCS's Belinda confirms: *"I like to use these definitions in guiding my choice of materials when formulating 'natural' products so I have the opportunity to use ingredients that will give a great result and stable formula."*

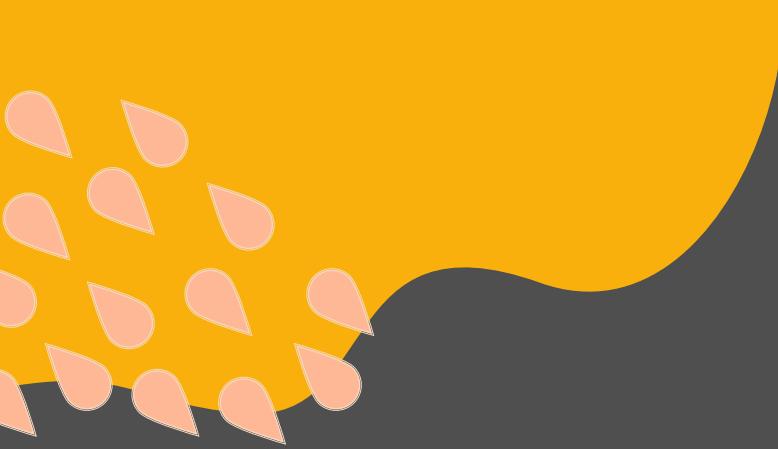
Now let's turn our attention to lab-created ingredients.

Synthetic ingredients—commonly known as lab-created, lab-based, lab-made or lab-grown ingredients—are those that have been developed or enhanced to improve the overall experience, efficacy, stability and performance of the finished product for the user. Lab-created ingredients have a long history of safety, reliability and applicability. Over decades of use, a wide variety of lab-created ingredients have been studied, tested and proven safe and efficacious.

As the growth of natural ingredients has resonated strongly in recent years and led to their increasing popularity, familiarity with these ingredients has also risen. Beauty consumers can today easily recognise natural products on an INCI (International Nomenclature of Cosmetic Ingredients) list.

Synthetic lab-created ingredients, however, are less well-known to consumers and are typically missing from communication campaigns. Therefore, unsurprisingly, consumers have been confused about the role of synthetics and fearful of their presence in BPC products. But now, brands and consumers are seeing the benefits of natural and lab-created ingredients in their favourite, efficacious products.





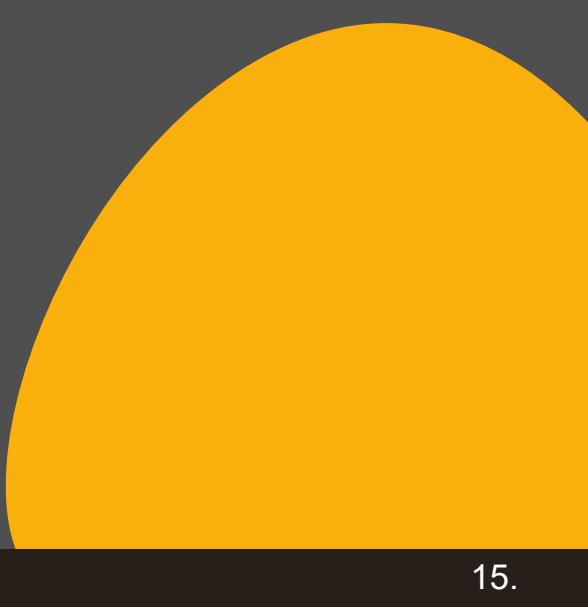
What does this mean for BPC formulation using natural and lab-created ingredients?

“The synthetic part is quite interesting because in reality there are relatively few ingredients that are pure synthetics and there are relatively few ingredients that are pure naturals,” shares Homer Swei, Director of Product Stewardship at Johnson & Johnson Consumer Health.

Therefore, *“most of our ingredients are in the middle somewhere”*, Homer adds. When we look at ingredients in basic terms, he goes on to say: *“Most are either enhancing naturals, mimicking nature, or are nature identical.”*

“*Consumers want naturals that perform like synthetics,*” Johnson & Johnson Consumer Health’s Homer relays. “*It’s very difficult to hit, but I’m confident through industry, retailer, and government collaborations, that we’ll get there,*” he adds.

The “clean” beauty trend that once saw consumers specifically looking for beauty products with natural ingredients is now shifting to the “cleanical” trend, marrying consumers’ needs for clean beauty with clinical standards to create popular and powerful formulations. As “clean” becomes “cleanical”, beauty brands and formulators are delving deeper into what ingredients are used in BPC products. The shift to “cleanical” will be even more pronounced as we enter the post-pandemic era, with brands creating formulations that contain the benefits that both natural and lab-created ingredients—together—provide.



Today, consumers seek out beauty that is clean, sustainable and conscious of people, communities and the wider environment. Brands are choosing ingredients for their formulations based on their environmental impact, rather than prioritising natural or synthetic selections.

Providing transparent information on the environmental impact of sourcing specific ingredients is key to conveying to consumers the reasons behind ingredient choice.

For example, producing one pound of lavender essential oil can require approximately 250 pounds of lavender. Equipped with this information may lead formulators, brands and consumers to consider the associated environmental impact of using lavender.

The “cleanical” beauty trend is meeting this industry-wide call for enhanced consciousness by combining nature with science, and communicating these trusted and effective beauty formulations to consumers.



"Clean Beauty" trend shifting to "Cleanical"



1

Where Did it Begin?

Discussing the influences impacting the turning point for free-from claims entering the BPC narrative, IPCS's Belinda recalls: "*I remember even 20 years ago there were a few brands that had 'free from sulphates, PEGs and parabens' as their catchphrase. This somehow got intermingled with 'natural', so they both grew in popularity together.*"

The idea of free-from claims and positioning is still gaining traction with consumers as the synonymy with health, quality, safety, transparency and responsibility grows.

"It is quite fascinating to me because as a BPC consumer, while I do care what's not in the product, what I do care more about is what is in the product," Johnson & Johnson Consumer Health's Homer shares.

Describing the free from age of beauty as "a shortcut approach", Homer adds: *"It is quite clever because it's very easy communication for consumers to get."*

The problem, though, is that while we are familiar with these claims, confusion and ambiguity prevail as consumers don't fully understand what synthetics are, why they are there and what free from synthetics means.



Consumers perceive natural ingredients as safe and lab-created as unsafe. But this is not the case. Yet, communicating the difference between what constitutes safe and what amounts to unsafe is challenging. For consumers, “we have to simplify the message”, says Johnson & Johnson Consumer Health’s Homer. “There is a tension between scientific and simple, and consumers will generally default to something that’s simple, but not scientific,” he adds.

If naturals are assumed safe and synthetics are deemed unsafe, these two ingredients are now on different levels, different dimensions. “It puts established responsible companies in a difficult situation as it is difficult to rely on assumptions to substantiate safety,” says Homer.

Turning our attention to the most common claims that lead to misinformation around the safety of lab-created ingredients, IPCS’s Belinda explains: “It definitely started with ‘no PEGs, no sulphates’ claims. These were largely from 1,4-dioxane related claims, which is limited to 10ppm as a quality limit in personal care—so it was totally unfounded.”

“There has been long term misinformation stating that silicones clog pores and coat the hair too. Somehow, silicones got an undeservedly bad rap in the ‘free from’ peak,” says Belinda. “They are now considered ‘okay’ under ‘clean’ beauty, but technically all of these materials we use are safe and clean,” Belinda advises.

Overcoming confusion around natural and lab-created ingredients is key. “That is where I see some consumer pushback already happening in the marketplace,” says Johnson & Johnson Consumer Health’s Homer.

There are considerable variations in how BPC brands are approaching and using lab-created ingredients.

The approach adopted “depends on what is important to their consumer—some brands really focus on the natural ingredients they are using because the use of natural ingredients is still attractive to consumers”, says IPCS’s Belinda. “They may or may not mention the synthetic ingredients used besides needing to in their ingredient list,” she adds.

Looking at how brands are approaching and using synthetics now, Johnson & Johnson Consumer Health’s Homer reveals:

“*What you see is a reduction in synthetics but not a complete avoidance.*”

There has been “a long progression” to this reduction in using lab-created synthetic ingredients, he adds.

One reason for this is that BPC trends, movements and developments take inspiration from the food and beverage world. Yet, these are two very different landscapes. The cosmetics ingredients are used differently and may undergo additional steps compared to the food industry. “*There’s a lot of things you can eat that I would not recommend for use in skin care products,*” adds Homer.



Benefits of Lab-created Ingredients



Sustainability

Lab-created ingredients are responsible, as in the lab scientists can replicate ingredients and their properties from the natural world. They help brands limit and manage their carbon footprint, water usage, waste management, and respect resource scarcity, by removing the need to use and potentially waste land and resources. Palm oil, vanilla and floral extracts are just some of the natural ingredients lab-created ones are replicating.

The sustainability of an ingredient is more than what it's made from; it's the entire lifecycle and process that an ingredient takes from the start of conceptualisation to the finished product, when it's ready for consumers to purchase and use.



Safety

Lab-created synthetics play a vital role in safety by minimising the risk of causing an irritant reaction or allergic reaction. It does this by “*making it easy for consumers, who are sensitive to this ingredient, to pinpoint the problem*”, highlights WIMJ’s Maria. Managing skin sensitivities in this way is made a lot easier with the use of lab-created ingredients as manufacturers can control the formulation content. “*You know the exact chemical formula of the ingredient and you can control the concentration with 100% accuracy,*” Maria explains.



Science-backed

Respect for scientists and smart technology is seeing consumers shift towards responsible lab-created ingredients that deliver credible and trustworthy results. Recognising and communicating the benefits of using both natural and lab-created ingredients is vital. “*As a dermatologist-formulated brand, it is very reasoned for us to embrace synthetics,*” says Ada. “*We have always positioned ourselves as clean and clinical—“clean-ical” as we say. We are very transparent about our ingredient strategy and clearly communicate the power of blending the safest botanicals and the safest synthetics,*” she adds.



Stability

Lab-created ingredients are an important component of a beauty formulation as they maximise its stability. In beauty formulations, stability measures how well it remains unchanged over the product’s shelf life, Belinda Carli notes in [Cosmetic Formulations: A Beginner’s Guide](#). Since lab-created ingredients are more controlled, they reduce varying conditions and therefore, the level of volatility within the formulation. Stability testing is a crucial stage of beauty manufacturing, which sees products assessed to ensure they meet their intended quality standards as well as functionality and aesthetics when they are placed in relevant conditions.



Performance

Formulations with lab-created ingredients help to ensure the product performs well. “*Brands and consumers should be focusing on performance and what the products can do for them,*” says IPCS’s Belinda. “*Zinc oxide, for example, has a synthetic portion—so you can’t create a sunscreen without using a synthetic ingredient,*” she explains.

Often, consumers want to know: How do I take care of my skin? How do I solve my skin concerns? What is the solution that will answer my skin worries? “*That is the angle they are taking, and we need to meet them there, rather than just at the point of product purchase,*” adds WIMJ’s Maria.



Consistency

By using scientific processes in a laboratory, lab-created ingredients guarantee the accuracy of ingredient content and batch-to-batch consistency.



Certainty

For specific claims, lab-created ingredients provide complete certainty over the exact contents in the formulations. For example, the Economist named 2019 as the Year of Vegan and 2020 continued to see its favourability in BPC products rise. The vegan claim is an example of where lab-created ingredients assure ethically-conscious consumers that the origin of ingredients is non-animal-based. Lab-created ingredients can produce these alternatives and remove the need for animal by-product use, in turn, protecting wildlife and appealing to consumers conscious of biodiversity.



Adaptable Ingredient Choice

“If you produce something in the lab, you can always select raw materials that are accessible and that are in abundance,” says Maria. “Often, we can switch between raw materials,” she adds. If there is a bad year for cane sugar harvest, for example, you may be able to opt for a different raw material the following year to minimise the use of cane sugar.

Debunking Lab-created Ingredient Myths

Myths around lab-created ingredients are impacting how brands approach and use science to develop their product concepts and finished items. We take a look at the most common myths surrounding lab-created ingredients in today's BPC space.



Myth 1: All synthetics are bad, all naturals are good

“That doesn’t make sense. There are good and bad naturals, and there are good and bad synthetics,” says Johnson & Johnson Consumer Health’s Homer. *“It doesn’t fit the reality of our world,”* says Homer. Rather than seeing all naturals as all good and all lab-created synthetics as all bad, *“each one has its pros and cons”*, Homer explains.

Ada Polla, CEO of Alchimie Forever often gives consumers the analogy of poison ivy to communicate why synthetics are not inherently bad or naturals inherently good in a bid to overcome misconceptions around lab-created ingredients.

“Poison ivy is a natural ingredient—but that does not make it safe for use in skin care,” details Ada. *“It is important to reframe this dialogue, where it is not black and white; a la all naturals are safe and all synthetics are unsafe.”* Instead, the skin care CEO would like to see *“a more educated conversation on the specific botanicals and synthetics being discussed”*.

Myth 2: Natural ingredients are better for the environment and synthetics are worse

“There are some great synthetics out there with good environmental data,” Homer indicates.

We’ve seen the narrative play out that natural and lab-created ingredients are mutually exclusive and therefore incompatible. However, this is not the case. Lab-created ingredients can also contain natural ingredients or raw materials in a beauty formulation. Lab-created ingredients can be created at scale without harming the natural habitats.

“Chemists and chemical understanding are doing a really good job of saving the planet, by finding advances to reduce our carbon footprint and reducing pollution, for instance,” says WIMJ’s Maria.

Myth 3: Synthetics are not biodegradable and are not earth-friendly

“Some synthetics biodegrade faster than natural materials,” adds Homer. *“We can design them that way.”* Biodegradability does not always mean natural ingredients. While natural ingredients often biodegrade faster than synthetics, there are synthetics that are safe and biodegrade that get a bad reputation. Sodium lauryl sulfate (SLS), for example, is biodegradable.

Myth 4: Synthetics have a lot of harmful impurities

The notions that synthetics are not safe, are harmful, or contain harmful impurities are *“not correct for the materials that comply with regulations”*, emphasises IPCS’s Belinda.

“We do need to be wary of naturally occurring impurities such as lead, arsenic, etc and contamination in both synthetic and natural ingredients,” adds Homer.

Myth 5: Synthetics contribute negatively to climate change

“I don’t see this type of ingredient stereotyping as science based or helpful. We must look at each ingredient individually without bias,” relays Homer.

A

New
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for

Lab-created
Ingredients

The Rise of Lab-created Ingredients



Misinformation has given rise to confusion and scaremongering around natural and lab-created ingredients, turning them into fierce opponents in the BPC ring. When in fact, natural and lab-created ingredients are complementary and can be used in harmony to create safe, efficacious and sustainable products.

Discussing the main drivers that have led to the need to defend synthetics from the negative reputation they have garnered, IPCS's Belinda comments: "*It is a lot to do with misinformation from the internet and a lot of the 'free from' claims that got out of control.*"

However, the narrative on lab-created ingredients is starting to shift. Commenting on the attitudes around synthetics, WIMJ's Maria says: "*I definitely think they are changing.*"

So why is this? "*Part of it is the power of the internet, as while the internet allows a lot of misinformation to flourish, over time, it also provides more ways for misinformation to be challenged too,*" adds Maria. "*Savvy skin care shoppers want to understand what is in their products and want to look a bit deeper than just the top marketing claim,*" Maria says. "*The reality is that the number of these consumers is growing,*" she reveals.

Looking ahead, brands, regardless of whether they are using natural or lab-created ingredients in their product, will need to be prepared to respond to consumers who will ask:

- How is it sustainable?
- Where is the resourcing coming from?
- How much agricultural land was used during the process?
- How is it mindful of its water footprint?

Removing the misperceptions, taking away the fear and correcting the narrative on lab-created ingredients is coming. As science, education and transparency continue, the myths and barriers around lab-created ingredients should diminish and hopefully disappear. And the demands of consumers are leading this.

BPC consumers want to know that the brands and products they invest in are:

1

Sustainable. A sustainable ingredient will win favour with consumers.

2

Safe. The confirmation that an ingredient is safe by a government authority or accreditation is critical. Access to this information is key.

3

Affordable. Bioengineered alternatives are thought of as expensive. The more acceptable lab-created ingredients become, the lower their price will be, as natural resources will become scarcer.



“If a consumer chooses naturally then that is up to them, and if a brand chooses to align with that consumer group to give them that choice of product, that is also up to them, but it should never be a ‘choice’ because of fear about harm or safety,” asserts Belinda.

Natural and Synthetics, Together in BPC

Covid-19 has brought forward the future of the BPC industry. As a result of the pandemic, consumers are now far more conscious of what they consume, how they consume it and the impact it has on other people, communities and the environment. Covid-19 has sped up our global attitudes and rapidly accelerated what we expect from BPC products and brands.

BPC developments that pre-Covid-19 were set to take shape by 2030 are now tipped for 2025-2030, market intelligence provider, Mintel, reveals.





Here are some of the key changes we can expect to see—with support for lab-created ingredients *and* natural ingredients leading the way.

1

Transparent Manufacturing is Vital

Safety is at the forefront of consumers' minds. With consumers' appetite for information growing, BPC shoppers will actively seek out accreditation and scores from respected independent organisations on the safety of ingredients.

Brands will need to be wholly transparent about their production methods, ingredient selection and finished formulations. And increasingly, consumers will expect to be able to track ingredients.

2

Science will Drive Lab-created Support

We will see more reliance on the expertise, experience and efforts of scientists. The BPC industry will hone in on the sustainability credentials of products.

Mintel previously highlighted In its 2030 trend: The Panorama of Humanity, that trust in science will increase. BPC consumers are putting their trust in the scientific community more than ever.

By 2025, more trust will be given to BPC laboratories. As consumers become increasingly comfortable with lab-created ingredients, the industry will show consumers that sustainability includes natural and lab-created ingredients.

“*That’s the real way forward for sustainability,*” says Alex Fisher, Associate Director of Beauty and Personal Care at Mintel, speaking at Croda’s Digital Sustainability Conference in September 2020.

Sustainability messages increasingly appeal to young adults and parents who say they would be willing to buy BPC products made with lab-created ingredients. The Generation Z demographic is highly dominating the call for sustainability in its fullest and purest sense.

Transparency To Convey Ingredient Facts

Consumers are hungry for information. Our appetite for total transparency creates growing interest in brands and products that provide it.

Consumer confidence and trust in the BPC industry revolve around:

- **Transparency:** Consumers want brands that are honest about their ingredients, and will search for certification to prove their credentials.
- **Safety:** A prerequisite for BPC ingredients. Yet, consumers still question and doubt the safety of lab-created ingredients. Dismantling the misinformation, leading to fear and confusion around lab-created ingredients, is key.
- **Responsibility:** The presence of practices and programmes that ensure no deforestation, no loss of biodiversity and the equitable sharing of benefits in supply chains are important to consumers.

Transparency reigns supreme in brand-to-consumer conversations. It helps drive engagement, build an authentic relationship and create a strong brand community.

"If your goal is to create a truly sustainable brand, be transparent with your consumers and provide them with the best performance formulas—then you can absolutely use synthetics," says WIMJ's Maria. "You can use the power of information to your advantage, by being confident that you did your homework and that you know that your product is safe," she adds.

Within the BPC industry today, transparency is also critical to busting myths around natural and lab-created ingredients to reflect the science. Calls to confirm and clarify the similarities and differences in performance and efficacy of naturals versus lab-created ingredients are already here. So it's vital that indie BPC brands are wholly transparent with their consumer base.

As calls for transparency on the safety of lab-created synthetics emerge and gather pace, Belinda suggests perhaps the industry *"has had enough of the misinformation"*, and is ready for clear, correct and transparent information on natural and lab-created ingredients.



So what do consumers want to know?

Consumers demand complete transparency that extends beyond labels and claims. Brands, therefore, need to provide comprehensive information on their entire supply chain and product lifecycle, from raw material sourcing, ingredient provenance, ingredient circularity, manufacturing processes, and testing.

Beauty buyers want to know:



How can you be sure your claims are accurate?



What are your manufacturing processes?



What sustainability criteria do you follow?



Do your suppliers meet this sustainability criteria?



Are your ingredients manufactured without harming people or the environment?



What is your criteria for confirming your ingredients are safe and non-toxic, i.e. that they will not irritate skin or eyes?



Do you understand the entire supply chain and know the full product lifecycle?

Case in point: Apps as a Knowledge Hub

As shoppers are actively looking for information on the safety, responsible practices and transparency of the ingredients and products they purchase, formula decryption apps such as Yuka, EWG and Think Dirty have entered the BPC space.

However, if beauty apps do not follow the same rating systems, which contain hazard ratings, scientific studies and data availability, information may vary by app and by ingredient. Thus, potentially creating more consumer confusion.

Transparency relating to how products are sourced and made is not yet required or regulated. Here lies a big opportunity, as science-based target accreditations can overcome ambiguities on the credentials of a particular ingredient or finished product.

The advice for consumers is to ask brands and retailers they buy from for this information. As an indie beauty brand launching or expanding your product range, the best thing to do is to ask these questions and gather as much information as possible from your contract manufacturer, ingredient supplier and other touchpoints throughout your supply chain.

The BPC industry as a whole needs to give attention to total transparency and education in this way. Although gaps of information will exist, we still need to ask these questions and demand clarity.

To direct efforts to meet ongoing and comprehensive sustainability goals, ingredient suppliers can adopt the 3 Ts as top priorities to meet the needs of individuals consumers, communities and the planet:

- **Traceability.** Obtaining and communicating information on the entire raw material supply chain is vital.
- **Transparency.** Throughout the industry, organisations and larger companies will need to share sustainability data to help all brands, companies, platforms, manufacturers and ingredient suppliers access and understand the facts. These can then be accurately and swiftly reflected in new product development (NPD) and communicated to consumers.
- **Transformation.** Innovation also relates to emerging sustainable solutions, enabling consumers and brands to achieve their BPC goals. Relaying ingredient integrity relies on the open communication and knowledge sharing of ingredient suppliers. As ingredient suppliers are upstream in the supply chain process, it's important they are proactive in describing the properties and benefits of ingredients to formulators and brands.

Brand spotlight: Removing natural versus synthetic from the ingredient debate

In a move that reflects the BPC industry's recaptured love of science, brands are striving to remove the fear and misperceptions around lab-created ingredients. Rather than trying to hide them or banish them from platforms or product ranges, they are showing no distinction between ingredient types.

Instead, they are focusing on the ingredient's scientific credentials and performance.

The very core of artificial intelligence-led skin care brand WIMJ's algorithm is that it does not differentiate between lab-created and natural ingredients. When WIMJ vets the brands it platforms on its website, it does not, therefore, adopt a different process based on ingredient origin.

In terms of whether it's lab-created or natural, WIMJ only looks into the actual study. So for example, if a brand's claim relates to efficacy, WIMJ evaluates them to see if there is research to support the claim that this ingredient can help with hyperpigmentation, or decrease or improve collagen production, for example. The priority is ascertaining whether the claim for efficacy is correct. It doesn't matter whether it comes from a lab-created or natural ingredient.

“Everything is chemical,” Maria highlights. **“The line between synthetic and natural is so thin,”** she says.



Promoting the Science behind Lab-created Ingredients

As we look to the future of natural and lab-created ingredients in BPC, the next questions become:



How can we access information on ingredients?



Where can we go to find this information?



How can we determine the safety of ingredients?



What regulations are there relating to natural and lab-created ingredients?



What industry standards are in place?



What role do third-party certifications play?



How big of a role do training and education play?



What considerations should we make when conceptualising and conveying claims to consumers?



How should we talk about ingredients in our marketing?

Let's take a look at how each of these is progressing the adoption of lab-created ingredients.

1 Determining Safety

Safety is inherent in the BPC industry. It's of paramount importance in conceptualisation, formulation and production.

“There are no unsafe approved ingredients—natural or synthetic,” clarifies IPCS's Belinda.

“In many cases, synthetic materials have to go through purifying or processing steps to ensure they comply with regulations and therefore safety,” Belinda says.

“While some products, natural oils, for example, have ‘benefits’ that mineral oils don’t have, both are emollients to the skin and in cosmetic grade, which are perfectly safe,” Belinda points out.



What does safety mean in BPC?

"It is helpful to differentiate the two types of safety," says WIMJ's Maria.

- **Risk**

The first refers to safety regarding whether an ingredient or product has the potential to cause substantial risk to consumers' health or wellbeing. An ingredient or product should not cause harm. Known as "*collective toxicity*", Maria explains that this level of safety in BPC is non-negotiable; an ingredient or product must not have the possibility of resulting in a substantial risk.

To determine this "*you need to have very serious scientific assessments on that topic and claim*", says Maria. "*EU regulators have done quite a good job on assessment and providing guidance to brands on some of the best practices,*" Maria expresses.

- **Irritation**

The second aspect of safety, which Maria relays is more specific to skin care, refers to how likely the product will be an irritant to skin. In scientific terms, this is known as irritant contact dermatitis or allergic dermatitis. "*These aspects are to some degree assessed by regulatory bodies, like the EU Scientific Committee of Consumer Safety—but they are not covered fully,*" says Maria.

As a more challenging element of determining safety in skin care, Maria explains that this second area of safety is where "*brands need to consult with dermatologists and where brands themselves need to do homework to understand irritants to ensure the product can be considered safe and certainly won't cause long-lasting harm to consumers' health*".

Let's take a look at an example of this element of safety in relation to skin care.

“If you are overloading a baby product with natural essential oils, and this product is intended for daily bath use or as a daily lotion, you are exposing that baby to the potential of developing an allergy to the essential oil,” says Maria. **“Or, you are at least exposing them to the risk of an irritant reaction,”** she adds.

These considerations are therefore areas that BPC skin care brands need to consider as part of their safety protocol for products.



Organisations that carry out safety assessments

The industry has a long history of safety and providing guidance.

There are two main organisations in the world that carry out safety assessments independently. Describing them as having the “*highest credibility*”, Maria reveals these are:

- The Scientific Committee of Consumer Safety (SCCS) in the European Union (EU) which publishes ingredient reports
- The Cosmetic Ingredient Review (CIR) in the US

Both the SCCS and CIR operate as scientific bodies. They provide information on what it means to be safe and how to determine whether an ingredient is safe.

To find organisations that are independent and credible “*is actually pretty easy because these two organisations: the EU SCCS and CIR are a great place to start*”, explains Maria. They are a good resource, “*even if the cosmetic formulators you are working with have some experience or you are partnering with contract manufacturers*”, she adds.

“*Overall, what you are looking for is someone who has scientific credentials and experience in the field they are working on, in relation to skin absorption, reproductive toxicity or endocrinology*,” says Maria. “*At least one person, but ideally, a number of people in the organisation who are making scientific claims should have qualifications, particularly in the toxicology space*,” she adds.

Accessing and understanding safety data

Firstly, it's about accessing the data that is available. Without this, it's not possible to determine safety or safe use.

"If you don't have access to the data that's available, how do you do safety assessments? How do you know that it's safe or not safe?" relays Johnson & Johnson Consumer Health's Homer.

In the BPC industry, we have a long history of sharing data, Homer details: *"Suppliers and manufacturers have the responsibility to assess the safety data. We also provide data to the CIR for additional analysis and cosmetic safety assessments."* The CIR's results are then made publicly available for all brands—small, medium and large—to access. It's the same process for all cosmetic ingredients, natural or synthetic.

"When we pull our information together and share it among the industry then the consumer wins, because you are elevating the level of safety through the entire marketplace," says Homer.

Commenting on the misconception that we need to correct in BPC, Homer explains: *"There is a mentality that says if you have any bad research data then that means the ingredient is unsafe."* We see this thinking in some organisations that assume an ingredient is safe until data is generated that says it's unsafe. *"This seems upside down for scientists and regulations,"* says Homer. *"It should be the other way around."*

A better way to define safe ingredients is that *"safe means I have a standard dataset and from this dataset, I can determine if the ingredient is okay to use"*, explains Homer. But it's important to note *"that this dataset may restrict you or direct you on how to use it or how not to use it"*. It's an approach that means you are *"making determinations based on data and not assumptions"*, Homer indicates.

This ingredient process, which sees the industry obtain data to analyse safety, is the same whether the ingredient is synthetic or natural. *"It is the same algorithm,"* Homer explains.

Rather than trying to convince a brand with safety data, focusing on the brand's market and its consumer is likely to have more impact. *"If I had research that says here's a product with this synthetic and this is how consumers responded, that is probably most compelling for me as a small brand,"* adds Homer.

It's about understanding and knowing how a consumer or customer will experience the product and ingredients. A supplier can help with providing the words, the information and the knowledge on the characteristics and features of particular ingredients.



Clearing up safety in BPC

“Brands should be focusing on the benefits of their products, and the ingredients they use should be within regulatory limits—both natural and synthetic—which means safety is inherent,” says Belinda.

Ensuring safety is paramount. WIMJ’s Maria takes us through her rules for ensuring this:



Know your suppliers very well. You need to be able to prove at any point that a safety assessment has been done so that you don’t put retailers at risk of carrying your product.



Use ingredients that are known to be safe for use in cosmetics.



Understand your supplier’s commitment to quality. Know their stance on minimising any potential impurities in your formulation.

Stewardship and sustainability in natural and lab-created ingredients

Once ingredient safety is confirmed, the question brands then need to answer is: What else do I need to address beyond safety that is important? How it's made, how people in the supply chain are treated, what the farmers are doing and what happens in the environment are also crucial. All the other elements that go into producing the product are critical to stewardship and sustainability too.

If everybody is telling me their product or ingredient is better for the planet, it's hard for consumers to know what to do exactly. *"We need a better way to talk about sustainability,"* Johnson & Johnson Consumer Health's Homer says.

“Stewardship and sustainability are becoming the new safety,” Homer highlights.

Differentiating between suppliers and ingredients on the market becomes an enormous effort and largely unknown if everybody tells consumers they are all sustainable.

It does not have to be complicated or overwhelming for indie beauty brands though. Ultimately, handling lab-created ingredients in BPC is *“nothing beyond good common sense”*, says WIMJ's Maria.



Although chemicals and cosmetics ingredients are present in brand formulations and finished products around the world, the global regulatory landscape varies from country to country. A total of 112 countries have cosmetics legislation and 38 of those have both chemical and cosmetics legislation.

Understanding and accessing the research and regulations that determine safety should be the priority in the BPC industry. *“Regulatory authorities do a lot of work with cosmetic ingredients to ensure consumer safety and we should be focusing on the research and regulations behind using ingredients, whether they are synthetic or not,”* urges IPCS’s Belinda.

When selecting ingredients, if you’re aiming to enter specific markets or retailers—both offline and online—it’s crucial to understand their requirements as these may restrict the ingredients you can choose.

Ultimately, **“we are likely going to see more regulation”**, urges Homer.

The discussion is already happening. Here, we take a look at relevant regulations and recent developments.



Key regulations

- **Toxic-Free Cosmetics Act**

On 30th September 2020, California signed the Toxic-Free Cosmetics Act, which strives to remove harmful ingredients from the BPC industry. Making it the first bill of its kind to be passed in the US, the Act sees the ban of 24 ingredients used in BPC products. Coming into force in January 2025, the bill states it “*prohibits a person or entity from manufacturing, selling, delivering, holding, or offering for sale, in commerce any cosmetic product that contains any of several specified intentionally added ingredients*”.

- **Cosmetic Fragrance and Flavor Ingredient Right to Know Act**

With a focus on consumer education, California also signed the Cosmetic Fragrance and Flavor Ingredient Right to Know Act of 2020 on 1st October. The Act, which comes into effect on 1st January 2022, stipulates that among the information manufacturers must provide, is a list of each fragrance or flavour ingredient and a list of each fragrance allergen including natural ingredients.

- **EU Cosmetics Product Regulations (CPR) 1223/2009**

In Article 20.1, which relates to product claims, the regulation sets out: “*In the labelling, making available on the market and advertising of cosmetics products, texts, names, trademarks, pictures and figurative or other signs shall not be used to imply that these products have characteristics or function that they do not have.*”

- **Regulation (EU) 655/2014 Common Criteria on Cosmetics Claims**

In Europe, there is also horizontal legislation, which applies to any sector. However, this legislation is particularly pertinent to the prevalence of claims in BPC as they relate to avoiding misleading claims:

- **Unfair Commercial Practices Directive 2005/29/EC**
- **Misleading and Comparative Advertising Directive 2006/114/EC**



Advice on Navigating Regulations

- **For indie beauty brands**

“Indie brands, if not formulating, need to entrust regulatory checks with their formulator or manufacturer,” says IPCS’s Belinda.

“The company putting the product onto the market is responsible for ensuring its safety, so if they do not have the know-how to run the regulatory checks, they need to hire someone, either through consulting or contract manufacturing, to ensure this compliance for them,” adds Belinda.

“Indie formulators need to take the responsibility for performing those checks—and if they do not know how to, they need to learn how to do these checks properly,” Belinda stresses.

- **For suppliers**

“Suppliers need to show compliance with regulations,” says Belinda. For example, they should demonstrate that 1,4-dioxane levels are below the required 10ppm limit. “This only applies to certain ingredients too—it is not relevant for many ingredients,” shares Belinda.



The International Standard Organisation (ISO) is an international non-governmental organisation (NGO). Although these standards are voluntary and unenforceable, many brands turn to these for clarification and guidance.

ISO 16128-1:2016 on natural and organic cosmetic ingredients and products. The cosmetics guideline provides technical definitions and criteria for natural and organic cosmetic ingredients. The guidance sets out a framework for the BPC industry on determining the natural, natural origin, organic and organic origin content of products based on their ingredient characterisation.

“The definition of natural is something we’ve wrestled with as an industry for a number of years but has largely been addressed with the advent of the ISO standard: 16128,” says Chris Sayner, VP of Customer Alliances at Croda.

As mentioned above, natural ingredients are defined under the standard as those that are:
“Obtained only from plants, animals, microorganisms...obtained via physical processes, fermentation or other procedures without intentional chemical modification.”

Derived natural ingredients are defined under the ISO standard as:

“Cosmetic ingredients of greater than 50% natural origin, obtained through defined chemical and/or biological processes with the intention of chemical modification.”

However, ISO 16128 does not address product communication such as claims and labelling, human safety, environmental safety and socio-economic considerations such as fair trade.

Also, while the standard offers a definition of natural, which enables limited amounts of chemical processing and very small volumes of ingredients, these ingredients do not make up the bulk of ingredients in BPC. The majority of ingredients in the industry would typically fall within the naturally-derived ingredients categories, which are those ingredients that have greater than 50% natural ingredients.

Ingredient integrity-related standards



ISO 45001: The new international standard for occupational health and safety management, replacing OHSAS 18001
occupational health and safety



ISO14001: Environmental management



ISO 9001: Quality management



ISO 26000: Framework for social responsibility



ISO 14067: Greenhouse gases and carbon footprint of products; focusing on product lifecycle analysis



ISO16128: Natural and natural-derived definition for ingredients



GRI 301-01: The Global Reporting Initiative (GRI) 301.01 refers to the total weight or volume of materials that are used to produce and package products

Certifications

Third-party certification is increasingly important at all levels in the supply chain. Certification aims to develop accessible accreditation that meets high-quality standards.

The role of reputable and respected third-party certification is to provide more information to consumers following demands for evidence of the safety and sustainability credentials of their BPC buys. Walk into a brick-and-mortar retailer and see the vast swathes of buyers turn the product packaging over to read its label. Or digital product portfolios for the ingredients list. Both are commonplace in today's BPC industry.

Certification on BPC packaging influences shoppers' decision-making processes. Shoppers want certification without clutter or confusion. Clarity is a must to convey the value of certification on BPC products. Multifunctional certifications that tackle an important focal area in BPC, such as Union of Ethical BioTrade (UEBT), are expected to resonate with shoppers wanting this clarity and convenience with credibility.

While there are numerous certifications in the BPC industry—reported to be over 500 labels—they are not required by law or backed by regulations. So where do they stand in BPC popular opinion?

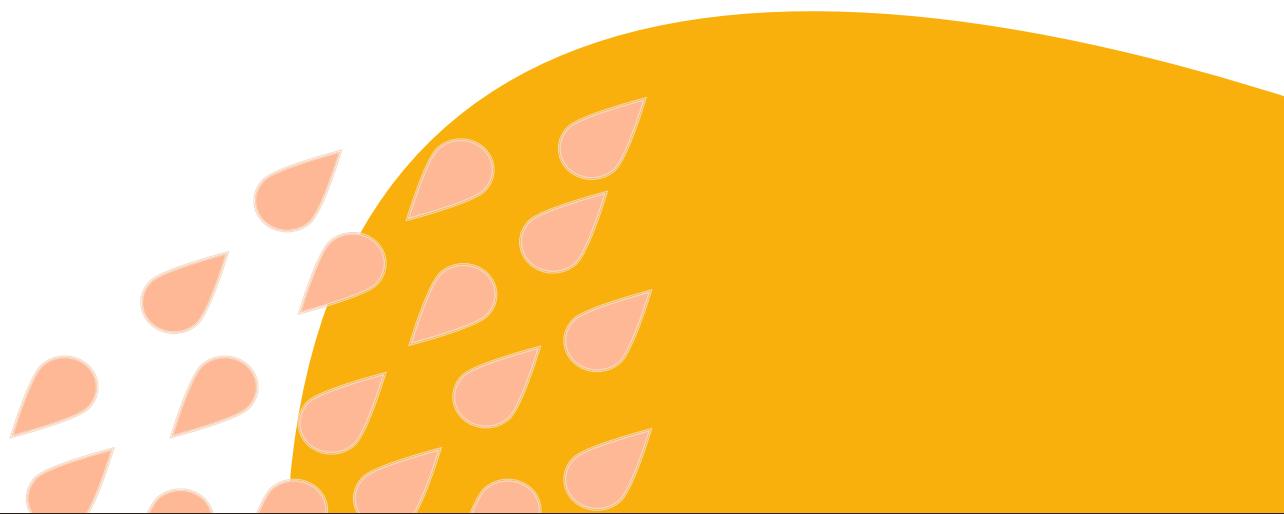
Let's take a look at certifications in a bit more detail.

- Third-party certifications are not a legal requirement or obligation.
- Applying for these schemes for cosmetic products is purely a company decision. Brands need to consider whether these schemes are in alignment with what is reflected in law.

In July 2020, the UK's Cosmetics, Toiletry and Perfumery Association (CTPA) released its [guide on environmental and green claims](#) to provide companies with an understanding of how laws apply to environmental claims.

Increasingly, consumers are studying ingredient lists and product claims, which typically relay information on:

- Natural/organic biobased content
- Chemicals and toxins
- Environmental benefits, recycling packaged content and waste reduction



Popular certifications in BPC, include:

- **The Corporate Standard of Compassion for Animals (CCIC) Leaping Bunny**
- **Natural Products Association's Certified**
- **European Federation for Cosmetics Products (EFFCI GMP)**

A certification for all manufacturing locations providing personal care products.

- **The United States Department of Agriculture (USDA)**

Certified Biobased certification strives to “*bring transparency to natural claims*”. Speaking to Croda at its Digital Sustainability Conference in September 2020, the Programme’s Senior Analyst, Kate Lewis, highlights the importance of intermediates and upstream ingredients: “*Growth in upstream ingredients as fuel to power the engine of downstream finished products really surprised us and has been really active.*” The USDA Biopreferred Programme has seen a 200% increase in the certification of upstream materials from 2015 to 2018. These are the renewable chemical components that are sold business-to-business (B2B) that pave the way for in-demand finished BPC products.

- **Union of Ethical BioTrade (UEBT)**

It supports and verifies practices relating to how companies source raw material from biodiversity. Adopting the concept of sourcing with respect, the UEBT certification was created in 2007 with the support of United Nations Conference and Trade Development (UNCTAD). It was set up to promote the sustainable use of biodiversity across the supply chain, discuss key principles and translate these into internationally-recognised standards to form good practices on raw material sourcing. UEBT focuses on specialty ingredients and sourcing rather than a specific supply chain. These specialty ingredients come from many supply chains but often in small quantities.

Training and Education

Commenting on the common barriers to using lab-created ingredients, IPCS's Belinda relays that these are "*consumer misunderstanding and miseducation*".

Training in BPC is designed to enable vast implementation of best practices across the industry. Information and education help to widen the BPC industry's knowledge and understanding on how best to implement and communicate practices, procedures and systems to convey scientific accuracy.

The Institute of Personal Care Science (IPCS), for example, is a registered training organisation with the Australian Government, recognised by the [Australian Skills Quality Authority \(ASQA\)](#). The education platform's main diploma, the Diploma of Personal Care Formulation, is also a government-registered diploma. Its courses are recommended by the International Federation for the Society of Cosmetic Chemists ([IFSCC](#)).

Sharing the typical questions from students and startup brands about lab-created products that IPCS receives, Belinda reveals: "*A lot of these questions relate to how safe or dangerous they really are—and most of them are based on misinformation.*"

Striving to clarify these misconceptions, Belinda shares that in the first three units of study with the IPCS, students "*learn how to identify what is truly natural (or not), ingredient safety and how to run compliance checks*". This focus on integrity, safety and accuracy enable students to "*start identifying what are credible sources of information and 're-learn' what they may have previously thought from the internet or other sources*", adds Belinda.

On what needs to be done to clarify the safety of synthetic ingredient use, Belinda emphasises: "*Consumers really need total re-education on this—but this will be difficult to do with so much misinformation on the internet.*"



Creating and Communicating Claims

When making a claim, indie beauty brands should also consider:

- What is the intended meaning of the claim/s?
- What does the consumer understand from the claim?
- Can the claim be robustly supported to demonstrate the message that is meant to be conveyed, i.e. is the message understood by consumers?

Aligning the gap between the perceived and actual understanding of a particular environmental, eco or sustainability-related claim is crucial. Claims should not convey a benefit that the product does not have. They should also not exaggerate a product benefit. In either scenario, this would mislead consumers and not be compliant with legal requirements.

So, how can you make sure your claim is compliant?

During the claim conceptualisation and design process, it's important to ask:

- Has it been sufficiently substantiated and verified by a third party?
- Is it factual, unbiased and up to date? Does it convey its reliability and credibility?
- Is the claim relevant for the specific product it's attributed to?
- Does the claim correctly confer the product without overstating its benefits?
- Is the claim clear and precise? Is information available on the product's full lifecycle?
- Is the claim transparent? Does it provide the intended consumer with all the elements necessary to make a decision and assess its robustness and reliability?

The amount of information you can communicate via on-pack labelling is limited. There are only so many words, scientific backing and certifications that you can place on there before it's going to turn off the consumer.

Indie beauty brands can get around this by adding information digitally to bolster claims placed on-pack. By using websites, social media and email newsletter channels to convey information, consumers can make an informed decision. Safe in the knowledge that they have full transparency on the product and ingredient lifecycles at their fingertips.

In December 2019, the European Commission launched and presented the European Commission's Green Deal to the European Parliament to highlight future environment and sustainability policies.

In a bid to reduce greenwashing and substantiate environmental claims by taking specific actions against misleading claims throughout the BPC industry, the Green Deal states: *"Companies making 'green claims' should substantiate these against a standard methodology to assess their impact on the environment. The commission will step up its regulatory and regulatory efforts to tackle false green claims. Digitalisation can also help improve the availability of information on the characteristics of products sold in the EU".*



Storytelling

Through authentic storytelling, brands can simultaneously inform and educate while building relationships with consumers. The power of community for brands is integral to connection, engagement and growth. While storytelling remains paramount, indie beauty brands need to expand beyond conscious and ingredient-led stories alone to educational, comprehensive and science-led information.

For consumers to truly love your brand and be loyal to your products, they need to have “*a positive attachment*,” says WIMJ’s Maria. Consumers need to know what value your products are delivering. More important than what the product is free from is what its benefits are and how it makes consumers feel good. Communicating how the inclusion of ingredients provides value to them and the wider environment is influential.

Indie beauty brands can use their knowledge, expertise, close partnership with manufacturers and ingredient suppliers as well as science-led stories to develop personal and emotional connections. They can create loyal brand advocates through communicating their brand philosophy and commitments.

Consumers are calling for simplification and shorter ingredient lists. Certified sustainable ingredients are supporting demands for science and sustainability that communicate safety and responsibility to individuals, consumers, communities and the wider planet.

Facts are vital in brand messaging. “*Consumers are very receptive to honest, transparent messaging,*” says Maria.

“*Don’t be afraid to go against the marketing narrative that is prevailing, because that will stand out,*” says Maria. It will help BPC brands carve a point of differentiation and emphasise their USPs.

“*It is important to not treat consumers as passive,*” reveals Maria.

In Europe, approximately three-quarters of BPC consumers would be willing to use scientist-created products that offer the same properties as natural formulations.
Source: Mintel.



Eliminate Greenwashing

It's all about purity, proof and perception. We need to eliminate greenwashing. It's damaging our perceptions of what is a 'good' product and what is a 'bad' product. And in turn, it's affecting what we buy and the industry's NPD efforts. Marketing messages around sustainability, the beauty of the environment, consumer eco mindfulness, and the positive benefits they bring, need to be communicated with complete clarity. These stories should be easy to understand to avoid leading to more confusion.

The balance the BPC industry needs to achieve is to educate consumers through smart messaging and trusted science. It's also highly valuable for non-competitive brands to unite in this mission to communicate information about ingredients accurately.

Remove Fear from the Narrative

“The first approach for brands and the most sustainable long term strategy is to communicate how your product is going to affect the person’s skin, the person’s life—rather than focusing on exploiting fear,” says Maria. *“Fear-based marketing is not very sustainable,” adds Maria.*

“It should be about making the best possible product to serve their consumer needs and wants; it should not be about adding to fear campaigns in an attempt to trick people into purchasing one product over another,” urges Belinda.

“There is, unfortunately, a category of brands that do monetise consumers’ fears of synthetics or non-natural materials,” says Maria. However, she also believes *“the feeling is that the train has passed or it will be passing soon”* as more consumers prioritise ingredient transparency instead.

Rather than focusing on whether an ingredient is natural or lab-created, the story should change to centre on whether the ingredient is safe and efficacious for skin care preparations. Brands are communicating with their consumers today in this way.

“When we discuss our ingredient strategy, we talk about how our choices are made not based on ingredient source but rather on ingredient safety and efficacy,” says Ada.

“Reframing the conversation helps consumers understand how we formulate,” adds Ada.



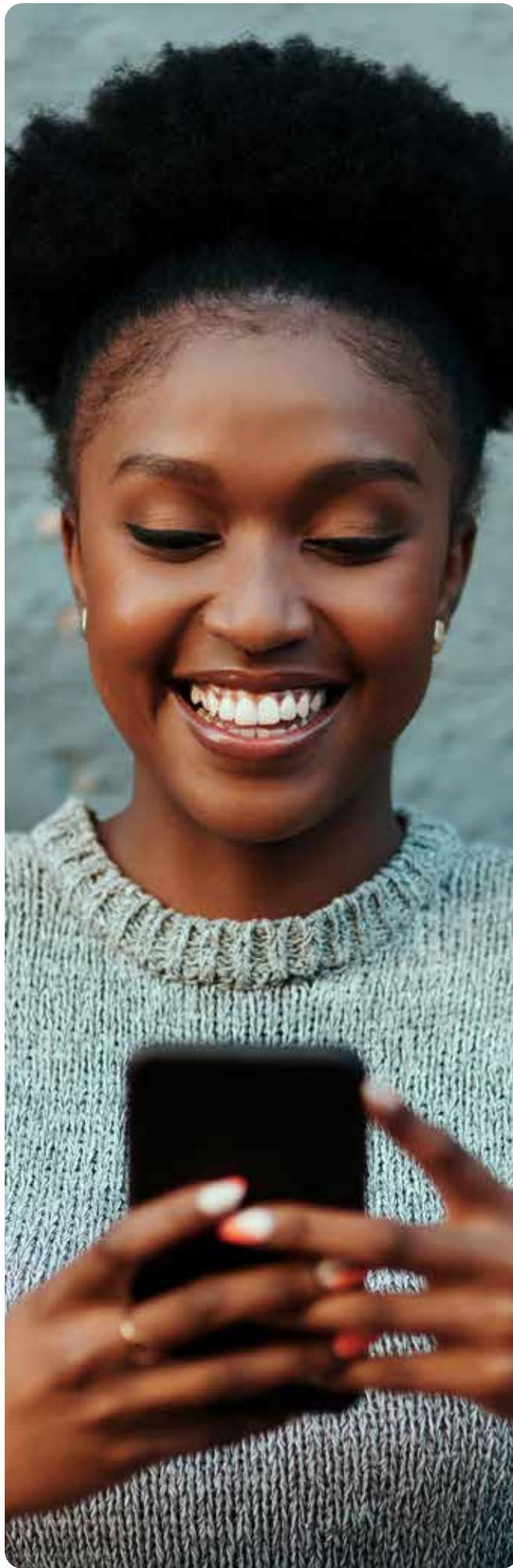
The Power of Performance

“What has come to the forefront for many consumers is that the performance of a formula becomes really important,” says Maria.

Sunscreens are a popular BPC product that is gaining traction. “Rightfully so because sunscreen is a category that is actually saving lives as much as helping skin to look better,” adds Maria.

Korean skin care trends are influencing the global skin care market. “In many cases, what Korean sunscreens do differently is that they make an amazing use of high-performance silicones and other new materials,” says Maria. Materials like silicone are interesting, as while “silicone is to some degree made of sand, most people consider it to be synthetic”, Maria adds. As WIMJ sees the number of people using more skin care products and less makeup grow, “the cosmetic elegance of formulas become really important”, she reveals.





Conveying a Memorable Experience

The overall sensorial experience is crucial.

BPC shoppers care about the texture, smell and colour of a product. Let's take sunscreens, for example. Consumers no longer want to use products that leave a white cast or are greasy and cakey, along with other unattractive properties.

It's about understanding and knowing how a consumer will experience the product and ingredients. A supplier can help with providing the words, the information and the knowledge on the characteristics and features of particular ingredients.

Communicating the whole story around ingredients and best practices remains a challenge though. For brands, suppliers and retailers, it's also about explaining why some natural ingredients do not meet their standards, along with why some synthetics do not meet their standards. At Johnson & Johnson Consumer Health, connecting with consumers on ingredients is something "*we are still working on*", says Homer. "*We haven't unlocked it perfectly yet*," he adds.

"Online by definition calls for transparency," says Maria. The emotional component is still important and is not going to go anywhere. *"But because of the nature of online information, it is visual or text-based, it calls for transparency,"* adds Maria. You are not smelling a fragrance or even touching a texture online.

“You are very much selling on words, so you cannot just throw words around,” says Maria.

“Instead of seeing it as a disadvantage, brands should embrace it,” she adds.

Benefits of Working with an Ingredient Supplier When Formulating with Lab-Created Ingredients

Building a strong partnership with your cosmetic formulators and with ingredient suppliers is key. By creating good partnerships, brands can engage in collaborations with manufacturers and suppliers who inform and advise them as well as share their expertise, industry knowledge and experience.

Looking to the future and how brands and ingredient suppliers can support consumer understanding of ingredients—education, infrastructure and reporting feature as key areas to bolster.

By making knowledge accessible and understandable to all and communicating data openly, the BPC industry can pave the way to better communicate the usage and benefits of synthetics: “*Ultimately, we should not be afraid of having the discussion,*” says Homer.

“*Most good manufacturers are happy to share their expertise, help and advise if they feel that their advice is valued and there is a partnership,*” says WIMJ’s Maria.

A good partnership is one that enables brands and suppliers to openly discuss, answer questions and convey how their production practices, sustainability approach and ingredient selection align with consumer values.

“*If you build a good partnership with cosmetic formulators, if they feel safe to voice their opinion and not be led purely by the marketing department, and you listen to what they say rather than giving orders—they are probably your best source of managing the tricky subject of safety,*” emphasises Maria.

“*You want to work with suppliers that are reputable, that follow good manufacturing practices, that are transparent about their supply chain and their production processes,*” adds Maria. “*Suppliers who are happy to show you around their premises, show how they work and even introduce you to their scientists and scientific processes.*”

Involving your ingredient supplier in all areas of your indie beauty brand development is valuable too. “*You will come up with all these arguments and all these good marketing tips and techniques and brand positionings, but you need to involve someone who understands these in your brainstorming sessions and ongoing conversations,*” says Maria.

Top Ingredient Questions to Ask

Increasingly, brands are turning to formulators and ingredient suppliers for advice on what to include in their formulations. So, what are the top questions to ask to ensure the ingredients you select are safe and appeal to consumer needs?

There are a number of questions indie BPC brands can ask the people making the claims, namely:

- Do they have a scientific background and experience in this space?
- What is the substantiation behind making the claim?
- Is there a due process for claim makers to assess the risk?

Along with their manufacturing practices, from the consumer perspective, "*I would ask about their supply chain, ingredient selection and company culture*", says WIMJ's Maria.

Following our early industry ebook on Everything You Need to Know About Contract Manufacturing, we know the benefits of asking suppliers and potential partners to help you launch and grow your indie beauty brand. It's the same when it comes to choosing your ingredients.

When partnering with ingredient suppliers, it's important to consider key questions, including:

- What are the desired properties and functions of the ingredients?
- What are the specific sustainability metrics that are important to your brand?
- How do you rate ingredients against those metrics?
- How do you compare and rank formulations?
- Are you formulating to meet a certain certification?
- Are there multifunctional ingredients you can use to produce simplified formulations?

Along with getting as much information as possible from potential ingredient suppliers by asking and studying:

- How do you source ingredients?
- How do you ensure the safety of ingredients?
- How do you search for prospective ingredients?
- How do you choose potential suppliers?
- How do you vet suppliers?
- What are your supply monitoring or quality assurance systems?
- What is your cruelty-free stance?
- What are your labour practices?
- Do you like how people treat each other?
- Is there transparency?
- Do you believe in their business ethics?
- Do you agree with how they manage their supply chain?

Ultimately, you are looking to build a thorough and clear picture of your supplier's company to enable you to enter a long-term partnership with the right manufacturer and the right ingredient supplier for you and your brand. To do this, it's vital you understand the whole value chain.

"We always ask about efficacy studies as well as safety studies and the allergy profile of ingredients," says Ada. Alchimie Forever does this with both its botanical ingredient suppliers and its synthetic ingredient suppliers. *"We also ask about harvesting, manufacturing, and environmental practices,"* adds Ada.

“Science isn’t set in stone and must continue to evolve,” says Johnson & Johnson Consumer Health’s Homer.

As a result, we want the information on the total composition of an ingredient, including impurities. The industry wants to know whether the supporting data for various regulations, stewardship and sustainability requirements is accessible. Data accuracy, availability, accessibility and ongoing research—this is what the BPC industry is concerned about today.

Looking ahead, the BPC industry is trying to make decisions based on past learnings, the current marketplace, and future predictions. The industry, therefore, wants to know:

- What is emerging?
- Is there any data or research in that area?
- What data can be shared? What information is available in those areas as well?

Questions to consider asking suppliers regarding new developments in sustainability, biodegradability and key environment endpoints, include:

- What data do you have in these areas?
- Where are the regulations heading?
- What type of investments are you making in research and development (R&D)?

When it comes to formulation and questions for the formulator, brands also want to know:

- What do you anticipate our stakeholders are going to do in five or ten years?

A Step-by-Step Process To Selecting Ingredients

When identifying and selecting appropriate ingredients for your BPC products, it's also crucial to define your checkpoints:

- 1 Pinpoint performance and efficacy needs.** Ingredient selection criteria need to be balanced with individual brand goals and what consumers specifically want from the products. For consumers, efficacy and the performance of the formulation is the number one decision making factor affecting their brand choices.
- 2 Start with research.** Advance your product development by researching, evaluating and benchmarking your ingredients in the R&D stage. Avoid pitfalls and additional resources including time and effort by considering this later in development, which may adversely affect commercialisation and marketing.
- 3 Check ingredient restrictions.** Measure these against regulatory, industry and retailer restricted substances lists (RSLs) as part of the development process. Even if it performs well, if it's on a RSL, it's prohibited.
- 4 Check ingredients for hazards.** Measure them for known, suspected or perceived hazards. Although consumers may have misperceptions over specific ingredients or groups, brands can help to educate consumers rather than avoid using the ingredient in question by gathering information to convey its safety and responsible use.
- 5 Ask questions.** Query suppliers and have direct communication to understand and gauge certification requirements to support claims.
- 6 Contact your supplier chain.** Substantiate and document the actions and components of your supply chain by collecting, managing and sharing critical information on ingredients and products through the supply chain. As brands will often source upstream and communicate downstream to your customers, these channels need to be open and transparent.
- 7 Meet compliance requirements.** Compliance is critical to accessing the market, developing a reputable reputation and sustaining your market presence. Obtain chemical lists and safety data to evaluate hazard profiles. Authorise and distribute documents such as safety data sheets too if you are a company undertaking safety tests on ingredients.
- 8 Achieve your goals.** You will have set your own brand targets. Contact credible sources and use evaluative models to score and compare ingredients and formulations to assess and compare the properties of ingredients. Check they meet the needs of your consumers.
- 9 Enter the market.** Generate product demand by continuing to leverage data and insights as well as sharing reliable and responsible material.

Conclusion

The Covid-19 pandemic has had an impact on the use of ingredients in BPC. Shortages of natural ingredients like lemon myrtle and aloe vera have occurred due to the surge in demand for hand sanitiser. The overall uncertainty and worries around the supply picture led to disruption in the BPC supply chain, with global lockdowns and fall in air travel also restricting access to natural ingredients that typically travel as cargo. With brands turning to local suppliers, supply chain networks are exploring deglobalisation and rethinking their BPC ingredient selection and sourcing considerations.

The sustainability and ingredient message is closely tied together. And this tie is only going to strengthen in the coming years, as “cleanical” ingredients represent clean and conscious consumer demands. As a result, we will be able to create and provide ingredients and formulations that are not only safe (a given!) and perform, but that are sustainable and innovative. Together, natural and lab-created ingredients will help to progress science and beauty.

“If you are an average consumer now, the volume of the anti-synthetics or natural, is so high,” says Homer. “Some call this chemophobia. But we should never blame the consumers; we didn’t tell them so how will they know?”, says Homer. We need to be able to communicate product safety clearly, without expecting consumers to unearth and decode masses of scientific research.

“If I were an indie skin care entrepreneur, I would put my cosmetic formulators more in the driving seat of the brand,” says WIMJ’s Maria. Following the accelerated growth of online sales due to Covid-19, the focus on cosmetics formulation has only become more prominent due to the calls for genuine storytelling, authentic connection and community-building.

For consumers, it’s not whether a product contains natural or lab-created ingredients that will resonate with them—it’s if brands are being fully transparent with them about the ingredients contained within their chosen products. We are seeing, and will continue to see, an enhanced focus on supply chain transparency as consumers want to have more information about ingredient sourcing and manufacturing.

We expect to see the rise in demand for lab-created ingredients go from niche to mainstream. By 2025, we will see little pushback in BPC so brands *“need to be ready with those synthetic formulations”*, says Alex Fisher, Associate Director of Beauty and Personal Care at Mintel.

The message is clear. Formulations based on science that deliver efficacy and sustainability are what BPC consumers want. And as the BPC industry turns its attention to debunking myths, communicating benefits and utilising ingredients in nature-inspired ways that promote sustainability—the “cleanical” movement is coming. The industry will promote a nature-science fusion that appeals to all BPC shoppers’ demands. And lab-created ingredient respect and uptake will help to create a BPC space where natural and lab-created ingredients exist in harmony together.



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