## A Big Stink in the World of Perfume

Fragrance creators are sniffing at increased regulations — and scrambling to find new ways to create old smells



Illustration by Kate Dehler By Noy Thrupkaew April 21, 2021

You can smell the Institute for Art and Olfaction in Los Angeles before you can see it — a riot of flowers, musks and resins billowing from a storefront in Chinatown. Founded in 2012 by Saskia Wilson-Brown, a former film and TV consultant, the institute offers programs that support independent fragrance makers. I first visited some years ago, for a perfume-making class. I returned for a few days before the pandemic to find out if I could smell the effects of new regulations that have caused an uproar among fragrance aficionados.

In 2017, after years of ominous committee research and proposal drafting, the European Commission banned the use of three molecules in perfumery — two found in oakmoss, and a synthetic reminiscent of lily of the valley — based on concerns they could cause skin rashes in 1 to 3 percent of the E.U. population. As of August 2019, no new products that contain these molecules could be introduced to the E.U. market. By August 2021, all perfumes — including preexisting formulations — containing these molecules should be withdrawn from the European Union, which constitutes the vast majority of the world's fine-fragrance market.

Then in 2020, the International Fragrance Association (IFRA), the industry's self-regulatory body, imposed a larger-than-usual number of bans, restrictions and specifications (such as purity criteria) on ingredients, with implementation required by early this May for new creations, and by May 10 next year for existing perfumes. (An estimated 80 to 90 percent of the perfume industry are members of IFRA and follow its standards.)

Reformulating fragrances is nothing new. In the past, perfume makers have had to contend with variable harvests and shortages caused by droughts and other acts of nature. Chanel No. 19, as dry and elegant as a gin and tonic, drew on a very high grade of galbanum, an umbrella-like grass that grows in Iran and a few neighboring countries. After Iran's 1979 revolution, however, access to its galbanum supplies dwindled, forcing Chanel to re-source its stock and reformulate. And sometimes formulas change for cost reasons. "Some MBA comes in and looks over your shoulder," says biophysicist and perfume critic Luca Turin, and then demands price cuts to keep profits high.

But this latest onslaught of requirements and restrictions has inspired an especially ferocious backlash. The industry has decried the time, expense and sheer blasphemy of reformulating grand classics — some a century old — with lesser amounts of some key ingredients or without others entirely. And consumers have lit up the perfume blogosphere and pelted the E.U. Commission with correspondence, including a petition with more than 2,500 signatures complaining about the new regulations.

So why are perfumistas so upset? I got an inkling inside the Institute for Art and Olfaction, when Wilson-Brown ushered me to a table where she had lined up an array of paper scent strips, glass bottles and a few luxe boxes of perfume.

Our sniffathon began. Wilson-Brown dipped each blotter in a banned or restricted scent ingredient. Jasmine sambac (lush but with an alluring tinge of banana-rot and mothball strangeness), eugenol (cloves, toasty warm, Christmas in a desert), birch tar (leather daddy). And then there was coumarin, a mouthwatering scent derived from tonka beans, with a plush smell somehow of hay and vanilla and almond toffee all at the same time. As I worked my way through the scents, 30 total — some gorgeous, others indescribably filthy, none of them boring — I began to understand why perfumers and perfume lovers were reluctant to let any of them go.

Next, Wilson-Brown handed me a blotter dipped in the now-banned lily of the valley synthetic, also called Lyral (or HICC or hydroxyisohexyl 3-cyclohexene carboxaldehyde if you're nasty). It was a soaring scent, unmistakably and eerily lily of the valley, with a dewy, green freshness.

The institute didn't have any of the verboten variety of oakmoss, but L.A. perfume maker Manuel Cross did. He met me a few weeks later with a curated treasure box of vintage perfumes and aromachemicals to share. Cross handed me a blotter dipped in oakmoss absolute, extracted from a ghostly frisée-looking frond that is actually a lichen that grows on oak trees. Sniffed on its own, it had an inky, savory smell of forest undergrowth, a contralto purr.

We then sniffed our way through assorted oakmoss substitutes developed by fragrance manufacturers. One was thinner than the traditional, more diffuse. Another was lovely, with an unexpected sweet greenness reminiscent of pandan leaf, commonly used in Southeast Asian desserts. The closest thing to the original ingredient was an IFRA-compliant (though not-acceptable-to-the-E.U.) oakmoss. But even compared to this version, the traditional oakmoss had a paradoxical, vivid dimension in its darkness — like sunlight through bottle-green glass — that the new version lacked.



Mitsouko perfume from 1946 at the Musée Baccarat in Paris. (DE AGOSTINI PICTURE LIBRARY/De Agostini via Getty Images)

Aside from imparting its brooding, indelible smell, traditional oakmoss also acts as a fixative, binding and stabilizing the other ingredients and extending the life of the perfume. It's this dark gravity that oakmoss has brought to a historical perfume genre called the chypre, based on a chiaroscuro-esque structure of bright citrus-floral bergamot, the sweet smell of labdanum or rockrose resin (which some scholars have argued is the balm of Gilead in the Bible), and the black-velvet texture of oakmoss. Perfume historians trace chypre's antecedents to classical antiquity, or even earlier. Its best-known early iteration appeared in 1917, when perfumer François Coty released Chypre, a total face-stomper of a perfume that spawned a family of

scents including the legendary Mitsouko, out of the French skin care, cosmetics and perfume house Guerlain. Mitsouko softened Chypre's rawboned extremes, imparting a creamy peach glow to the whole. Perhaps more than most, it was these classic chypre perfumes that fragrance lovers were desperate not to lose.

Mitsouko is in fact a rare happy reformulation story. In 2007, knowing the oakmoss restrictions were coming, Guerlain made adjustments. Fans complained the result was thin and disappointing. But after becoming Guerlain's in-house perfumer in 2008, Thierry Wasser took another pass at it. To replace the oakmoss, he added a bit of lentiscus, or mastic, for the smell, and heavy but odorless solvents to lend longevity. His reformulation introduced a few years later was praised for its renewed richness.

I had never sniffed anything earlier than post-2007 Mitsouko until I visited independent perfumer and collector Maggie Mahboubian. Out of her "cabinet of curiosities," as she called it with a laugh, she pulled Mitsouko in various iterations and vintages, including a 1950s-era parfum, the highest-concentration version of a perfume. We sat at her dining room table in West Hollywood in silence for a long moment, transported by the bitter sweetness of oakmoss and labdanum, the warmth of spices.

At home, as I smelled the lingering last stage of the Mitsouko on my arms, a memory came unbidden: the blue carpet in my mother's bathroom, the right-hand drawer in her vanity where she kept her perfumes, a bottle of Mitsouko with an upside-down heart-shaped top, spraying it on my arms and feeling puzzled by the citrusy cloud afloat an undertow of darkness. What would it be like to grow up and become someone who could wear such a scent?

Later I asked my mother if she'd ever worn Mitsouko. I knew her other perfumes — the steroidal '80s fragrances, powdery musks, the occasional enormous white floral — but I never had a memory of her wearing Mitsouko until I sniffed the vintage. Yes, she told me, she had worn it for a brief period starting when I was about 4 years old. Why was I asking?

Perhaps some of the reaction perfume lovers have had to reformulation can be explained by biology. Our senses of smell are deeply tied to memory. As New York University neuroscientist Donald Wilson explains, the olfactory system is unique. Unlike our other senses, smell doesn't first pass through the relay center of our brain's thalamus to be routed through to the language-rich cortex. Rather, olfactory data heads straight to the limbic system, the oldest part of our brain and the one responsible for memory and emotional processes. Smell memories, it seems, are often deeply emotional ones.

As for the smell data we collect and store in our memories, Wilson told me, it helps us differentiate between scents, a skill that humans are quite good at, even if we're not as good at identifying what each of them are. A blindfolded subject sniffing a strawberry and an apple will know that they are different smells, even if the subject can't always correctly name what they're smelling.

There's no better evidence of this skill at differentiation than the online perfume lovers' world, where message boards are on alert for any formula changes, long blog posts are dedicated to identifying pre-reformulation batch numbers on boxes and bottles, and self-described "frag heads" bid on vintage bottles of their favorite scents. Fragrance hounds seeking a more-economical alternative than buying a whole vintage bottle can turn to "decanters," who do a brisk online business dividing rare scents into smaller samples. On one

decanter's website, the vintage Mitsouko parfum I sniffed at Mahboubian's goes for \$62.63 for 2 milliliters.

It can feel like an endless and unsatisfying search ("A la recherche du parfum perdu," as Le Monde put it) to find a scent as it exists in one's memory — partly because we rarely smell the same perfume twice. Even the same beloved bottle will be touched by time and oxidation. Bright citrus notes fade away as a perfume ages, and woods, spices and ambers deepen and can become more tenacious. The sniffing environment also matters. Ambient smells can cloud one's perception; greater humidity amplifies scent. Our own senses of smell can change with pregnancy and allergies; as we age, our ability to recognize smells decreases.

And yet, the search continues. "There's no such thing as getting a password nearly right," says Luca Turin. "If there's one letter wrong, the thing doesn't click. Your grandma's perfume is your grandma's perfume. If you smell that exact thing, it will remind you of your grandma, right? There's no plan B, there's no approximation."

Mahboubian and Cross eventually tired of chasing down vintage bottles and started making their own fragrances, partially in hopes of creating the kind of scents they felt were being regulated away. When Cross launched his perfume line in 2017, his motto was "Non IFRA-Compliant Fragrance Art" until he started to think the phrase signaled an indifference to consumer safety. His new motto kept that anti-establishment edge without naming names: "Bureaucracy Destroys Art!"

Despite his defiant sloganeering, Cross is among the perfume makers who also spoke of the creativity born of constraint. When we met, he brought an oakmoss substitute that he'd made out of curiosity, a beautiful construction of myrrh and kelp.

Still, many fragrance creators view the IFRA and E.U. restrictions as a step too far, and one not necessarily in consumers' best interest. Some wished both bodies had limited their rules to labeling requirements. That way consumers could make informed decisions on their own.



Scent vials and pipettes are lined up on a table during a perfume-making class at the Institute for Art and Olfaction in Los Angeles. (Ricardo DeAratanha/Los Angeles Times via Getty Imag)

With that informed-consumer ideal in mind, Switzerland-based perfumer Andreas Wilhelm started a brand of fragrance called Perfume. Sucks in December 2016 and wrote out the whole of his formula on the bottle. He felt consumers needed transparency. And he was tired of the marketing mystique that obscured the reality of the industry — the thankless work of reformulations done by technical perfumers who usually receive no recognition, the folderol about heritage and roses and Marilyn Monroe wearing only five drops of Chanel No. 5 when she slept, a story preserved in amber, even though the perfume has been reformulated and is no longer the same. "Give the people the strength to really choose what they want," Wilhelm says. "If you tell them a story, they won't trust you anymore."

The European Commission has actually proposed an increase in the number of ingredients manufacturers must label as possible allergens on their packaging from 26 to more than 80. The industry countered with an e-labeling proposal, perhaps as a gambit to keep packages from being cluttered with the long and hairy names of chemical compounds. It's difficult to know precisely what fragrance manufacturers were thinking; of the nine companies and brands that I reached out to, only one replied. LVMH, Guerlain's parent company, sent a statement: "The health and safety of our customers is our top priority. Reflecting this, our Noses [perfumers] are focused on using the best ingredients to maintain olfactory quality while also complying with all current and evolving regulatory requirements." The European Commission is currently discussing a draft regulation on labeling additional fragrance allergens with stakeholders; if the draft regulation wends its way through the next months of votes, notification processes and committee work without a hitch, it would be officially adopted by the end of this year.

The secrecy around formulas and reformulation also seems scarcely worth the effort these days when current technology can analyze a perfume and spit out its individual chemical components. "I'm thinking that it isn't so much the formula they're protecting as the story," Mandy Aftel, a Berkeley, Calif.-based independent perfumer, says of the giant perfume houses. That "romantic, bucolic" story of flowers plucked from the fields at dawn, the glamour of the celebrity who sells it. But if "Big Frag" thinks marketing can supplant recollections of a scent, then they are forgetting how tightly we all cling to what we know.

"What is memory?" asks Saskia Wilson-Brown. "It's a construction, it's a fantasy in a way" — a simulacrum of our lived experience, one that reflects perfume's ability to evoke a moment long gone, or a whole field of roses without a trace of a single flower in the bottle. A few times every week, she told me pre-pandemic, a new student would come into the Institute for Art and Olfaction hoping to put a whole memory in a bottle. "But you just can't do it. Tempus fugit. Time goes on, and we all die and that's how it is. That's actually the reason I found perfume very interesting in the first place ... because it is so intangible. There's nothing there. The whole industry is smoke and mirrors. It's all air. Literally air." There is nothing to do except breathe in and breathe out until all of it — that long, low hum of oakmoss, that memory of Mitsouko — fades away.

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