



Perfumery Market Trends

Trends and Operational
Snapshot of Primary Packaging
for the Fragrance Market

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The Evolving Landscape of Fragrance Packaging

Perfumery packaging is undergoing a **profound transformation**, driven by changing consumer expectations, sustainability imperatives, and innovative dispensing technologies. **Four key trends** are currently set to redefine how fragrance products are packaged, delivered, and experienced by customers:

- 1. Refill Solutions:** What started as a **sustainability initiative** – offering refillable perfume bottles or in-store refill stations – is now a mainstream strategy for many beauty brands. Looping packaging materials back into use is seen as crucial to **circular economy** goals and waste reduction. *Refillable packaging is rapidly gaining traction, with major markets seeing up to 279% growth in beauty refill product launches from 2017 to 2023¹*. Consumers increasingly demand eco-conscious options, while **European regulation** is setting progressively stricter requirements for packaging recyclability, reuse and refill models, with all packaging placed on the EU market expected to be **recyclable by 2030²**. However, implementing refill systems presents both **opportunities** – such as reduced packaging waste and enhanced brand loyalty – and **challenges** around design, aesthetics, and consumer adoption.
- 2. All-Over Sprays & Bag-on-Valve (BOV) Technology:** Perfume is expanding beyond the traditional pump-spray or roll-on application into **continuous all-over sprays** that can be misted liberally over the body, hair or clothing for a new “*mist-on*” fragrance gesture. **Bag-on-Valve** aerosol technology (long used in other categories like sun care and medical sprays) is now being explored for fragrance to enable ultra-fine, **360° continuous sprays** with **pressurized, propellant-driven** systems. In BOV systems, the fragrance is contained in a sealed inner bag, while the propellant remains outside the bag and acts only by applying pressure. This separation helps preserve the **integrity of the formula**, while the system enables **continuous, all-angle dispensing** and **high product evacuation**. BOV also uses **compressed air or nitrogen** instead of flammable hydrocarbons as propellants, supporting **lower-VOC aerosol configurations**. This technology can create new sensorial experiences and **lifestyle positioning** – think of a perfume you can spray head-to-toe post-shower – but also requires **specialized packaging (metal cans, accessories)** and **filling processes** unlike standard perfume production.

1 Jamie Matusow, “[Beauty Refillables That Overcome Challenges](#)”, Beauty Packaging, 12 July 2024.

2 European Commission, “[Packaging & Packaging Waste Regulation](#)”, European Commission, 2025.

3. **Alcohol-Free Fragrances:** Rising consumer interest in **gentler, “clean” fragrance formulations** is driving a renewed focus on **alcohol-free perfumes**. Historically, ethanol has been the primary carrier for fine fragrances due to its volatility and quick evaporation, which lifts scent into the air³. But **“free-from” trends, sensitive skin considerations, family-friendly products, and cultural or religious (halal) markets** are expanding demand for **non-alcoholic perfumes**. Alcohol-free fragrances may use water, oils, or other solvents; these can offer a **different skin feel** and **may reduce the drying** sensation associated with alcohol-based formulas, depending on the formulation and user profile. However, **technical challenges** abound. Without alcohol's quick evaporation, spray performance and initial scent diffusion may change; formulas may require emulsifiers, stabilizers and preservatives to remain clear and microbially safe. Brands must carefully develop these formulations to ensure longevity, stability, and consumer-pleasing scent delivery, which often involves innovative approaches like **microencapsulation** of fragrance oils for slow release. Matching the refined sensorial impact of traditional perfumes in an alcohol-free format requires specialised dispensing solutions, such as **dedicated pump-insert combinations**, able to manage different fluid properties and deliver a satisfying, controlled and elegant spray.

4. **Fragrance Mists: Lightweight fragrance mists** – often called body mists or perfumed sprays – have emerged as a **fast-growing category** that complements traditional perfumes. With lower fragrance concentrations (typically 1–5% vs ~15–20% in an *eau de parfum*) and a refreshing, easy-to-wear character, mists provide consumers with a **casual, versatile way to enjoy scent** throughout the day. They are typically packaged in larger volumes (100+ mL) with **fine mist pump sprays**, have more water content and moisturising additives, and are priced more accessibly than prestige perfumes. Younger consumers in particular are embracing mists for **layering with lotions or perfumes**, for a quick sensory refresh on hair and skin, and as a **fun, shareable luxury**. As a result, even luxury and niche brands have introduced body/hair mists or “*all-over sprays*” in simplified packaging (e.g. aluminum cans or plastic bottles) to tap this trend. *The global market for scented body mists has roughly tripled from 2020 to 2023, reaching an estimated USD 7 billion in 2024*⁴. Brands see this segment as a way to extend their reach (to more usage occasions and younger audiences) without cannibalizing core perfume lines.

These four trends may seem distinct, but they share a common theme: fragrance packaging and dispensing technology is evolving from a static, single-use format toward **more adaptable, sustainable and experiential systems**. Today, a bottle of per-

3 A. E. Rodrigues, I. Nogueira and R. P. V. Faria, “[Perfume and Flavor Engineering: A Chemical Engineering Perspective](#)”, *Molecules*, 26(11), 3095, 2021.

4 Nicolas Olczyk, “[Fragrance mists, all-over body sprays... how and why luxury brands are getting on board](#)”, *Formes de Luxe*, 1 July 2025.

fume is not only a beautifully packaged liquid, it's part of a **broader product ecosystem** that can incorporate refills, new spraying mechanisms, alternative solvents, and novel formats. For fragrance brands, adapting to these trends involves cross-functional collaboration between packaging engineers, R&D chemists, marketers, and manufacturing partners. By embracing innovations like **refillable packaging, BOV aerosols, and advanced pumps** – and by aligning them with the right formulations – brands can create products that meet modern consumers' demands for **convenience, sustainability, and sensory delight**.

The following chapters explore these trends in depth, combining industry data and technical analysis to examine their implications for the fragrance industry.

1. Refill Solutions: From Sustainability Initiative to Strategic Packaging Model

1.1 Market Drivers: Sustainability, Value & Convenience

Refillable packaging has become one of the most significant developments across the beauty and fragrance sector in recent years. Initially championed by a few eco-conscious brands as a way to **reduce waste**, it is now evolving into a mainstream expectation in prestige beauty. **Both consumers and companies are embracing refillables** as a route to more sustainable consumption and brand loyalty. Research indicates that consumers increasingly feel a responsibility to purchase products that reduce environmental harm, for instance, **47% of U.S. consumers say they try to behave in an eco-friendly way in their daily lives**⁵. Refills can resonate strongly with these values, allowing shoppers to re-use a high-quality perfume bottle rather than discard it, and often providing cost savings on subsequent purchases. At the same time, brands are using refillable designs to **differentiate themselves** and communicate a commitment to sustainability.

Regulatory and corporate sustainability goals are also driving the adoption of refill models. In Europe especially, the **Packaging and Packaging Waste Regulation** is strengthening requirements around packaging recyclability, reuse and refill models as part of the transition towards a more circular packaging system⁶.

PPWR Strategic Timeline

Impact on Spray & Dispensing Packaging

- **August 12, 2026 – PPWR Entry into Force & NPD Compliance**
 - Regulation becomes applicable.
 - New Product Development (NPD) for dispensing systems, valving, and filling machinery must align with circularity and material efficiency mandates.
- **By 2028 (Estimated) – EPR Eco-Modulation Fees Implementation**
 - Extended Producer Responsibility (EPR) contributions modulated based on packaging performance.
 - Complex spray pumps and aerosol actuators utilising non-separable metal springs or mixed plastics will face financial penalties.

5 Jamie Matusow, "[Beauty Refillables That Overcome Challenges](#)", *Beauty Packaging*, 12 July 2024.

6 European Commission, "[Packaging & Packaging Waste Regulation](#)", European Commission, 2025.

- **January 1, 2030 – Design for Recycling (DfR) & PCR Mandates**
 - All formats must comply with Recyclability Classes A, B, or C.
 - Plastic valve components must not contaminate primary recycling streams.
 - Minimum PCR targets become effective.
 - Pharma MDIs granted temporary exemptions.
- **January 1, 2030 – Reuse & Refill Target Enforcement**
 - Refill architectures scale up.
 - Homecare triggers transition into “durable goods”.
 - Personal Care in-store refill expands.
 - Traditional LPG aerosols face in-store barriers, driving demand for compressed atmospheric gas technologies.
- **January 1, 2035 – Recyclability “At Scale” Verification**
 - Packaging must demonstrate it is collected, sorted, and recycled “at scale”.
 - Industrial sorting facilities must safely process propellant residues.
 - Sorting facilities must cleanly isolate complex plastic mechanisms from aluminium/tinplate bodies.
- **January 1, 2040 – Maximum PCR Caps & Final Target Alignment**
 - Mandatory PCR plastic inclusion targets for pumps, triggers, and actuators rise to maximum binding thresholds.
 - Previously exempted Pharma/Medical categories undergo review for integration.

Beyond compliance, many major beauty companies have set **2030 environmental targets** that include packaging waste reduction, recycled content, and refill or reuse programs, making refill innovation a strategic necessity.

The combined result of these drivers is rapid growth in refill offerings across multiple beauty categories. **Between 2017 and 2023, refill product launches in key markets (e.g. UK, US, Germany, France) surged by up to 279%⁷**, an indicator that refills are shifting from niche to norm. This expansion is evident in perfumes as well: numerous luxury fragrance houses now offer iconic scents in **refillable flacons or with refill purchase options**. The prestige market has already seen successes with high-end perfumes packaged in **desirable, durable bottles** designed for multiple refills. Meanwhile, the concept has expanded beyond luxury: **mass-market brands have introduced refillable deodorants – most commonly based on reusable outer cases combined with replaceable stick refills or cartridges –, makeup palettes, skincare jars, and more**, reflecting how widely the refill model is being applied. In fragrance specifi-

7 Jamie Matusow, [“Beauty Refillables That Overcome Challenges”](#), *Beauty Packaging*, 12 July 2024.

cally, refills are positioned as a way to give consumers more flexibility (e.g. a “refill at home” kit to top up a travel spray) and to **extend the life of a premium bottle**, making the initial purchase feel more valuable.

1.2 Sustainability Rationale: Circularity & Environmental Impact

The sustainability rationale for refills is compelling, but complex. At its heart, a refill model means reusing a container multiple times, thereby **reducing the total number of packaging units** produced and thrown away. If a heavy glass bottle can be used ten times with refill vials instead of buying ten entirely new bottles, the **potential savings in energy, materials, and waste** are significant. A recent industry analysis by the SPICE initiative (a cosmetics sustainability consortium) found that **reusable packaging generally has a lower environmental impact than single-use packaging, provided it is reused enough times**. Life Cycle Assessment (LCA) calculations show that over multiple uses, the impacts of producing the durable container are spread out, usually outweighing the impacts of repeated single-use packaging production⁸.

However, reuse models also involve **trade-offs**. Refillable packaging can reduce environmental impact, but this depends on several factors, including **material choice, packaging weight, transport, washing or refill logistics**, and the actual **number of reuse cycles** achieved. For this reason, refillable systems should be designed as part of a broader packaging model, not only as a single component change. Current LCA-based guidance for cosmetics packaging highlights the importance of keeping refillable primary packaging durable but as **light** as possible, while also ensuring that the **system is used enough times** to offset its higher initial material and production impacts.

In practice, this means that **the environmental value of refill depends on both design and adoption**. Dematerialisation and recycled content remain important levers, and refill systems should be assessed case by case through life-cycle thinking rather than assumed to be automatically preferable.⁹

⁸ SPICE, “[Optimizing Reusable Cosmetics Packaging Models](#)”, Sustainable Packaging Initiative for Cosmetics (SPICE), 2025.

⁹ N. Vassallo and P. Refalo, “[Reducing the Environmental Impacts of Plastic Cosmetic Packaging: A Multi-Attribute Life Cycle Assessment](#)”, Cosmetics, 11(2), 34, 2024.

1.3 Designing Refillable Fragrance Systems: In-Store & At-Home Models

Refill solutions in perfumery today span several models, each with distinct **design and logistical considerations**:

- I. **In-store Refill Stations:** Used by selected fragrance and beauty brands, these allow customers to bring empty fragrance or body product bottles to a **retail counter** or **refill station** to have them refilled from bulk dispensers. In-store refilling works best when there is a **physical retail presence** and when the brand fosters an eco-conscious customer community. Packaging for in-store refills needs to be robust to endure transport and handling (e.g. thicker glass or sturdy plastic) and have **secure, re-sealable closures** that can be opened and re-closed by staff without compromising the product's hygiene or quality.
- II. **At-home Refill Packs:** Several luxury fragrance houses offer refill formats for selected iconic scents, either through **refill bottles** designed to top up the original flacon or through **replaceable units** inserted into a permanent outer case or travel format¹⁰. In many at-home systems, the consumer **unscrews the pump** from the original bottle, connects or inserts a **dedicated refill** fitted with an anti-spill applicator, fills the bottle, and then screws the pump back into place. Other formats rely on **cartridges** or **refill units** that are replaced inside a reusable outer pack. In all cases, the refill system must be intuitive, minimise spillage and unnecessary exposure to air, and preserve the integrity of the fragrance across repeated refill cycles.

A key technical enabler for at-home perfume refills is the removable **screw pump**, which differs from the traditional crimped pump permanently fixed onto the bottle. In refillable systems, the pump must be designed to be **safely unscrewed** before filling and then **securely screwed back** onto the bottle once the refill has been completed. This architecture supports refill formats where the consumer tops up the original flacon using a dedicated refill bottle or anti-spill applicator, as seen in several fragrance refill systems.

From a packaging perspective, the **challenge** is not only **functional** but also **aesthetic**. Refillable pumps must allow **repeated opening and closing** while preserving **spray performance, leak-tightness** and the **premium appearance** expected in fine fragrance. Recent developments therefore focus on screw-on or twist-lock mechanisms that remain visually close to traditional crimped systems, with **hidden plastic thread** (replacing the full metal closure used in the original screw-on pumps), **tight-fitting collars** or **no-gap finishes** that help maintain a refined look on the bottle.

¹⁰ Mugler, "[Refill at home your fragrance bottle](#)", Mugler. See also Guerlain, "[L'Art & La Matière – The Flacon Sac – The Refills](#)", Guerlain.

1.4 Manufacturing & Operational Considerations

Adopting refill systems also impacts **production and supply chain processes**. **Filling lines** for fragrances are traditionally optimized for crimp-fitted pumps: bottles are filled, pumps placed and crimped in automated sequences. Switching to screw-fitted pumps might require modifications to assembly equipment (e.g. torque-controlled capping heads instead of crimping heads) and additional quality checks to ensure a leak-proof fit without over-tightening. The process is not necessarily more complex, but it requires different equipment settings, controls and validation steps.

Refill packaging often means handling **multiple components per product** (the primary bottle plus separate refill units). Brands must plan for managing these components: for instance, handling separate SKU logistics – shipping a fragrance plus its refill pack – or coordinating an in-store refill operation with bulk supply shipments. There are advantages too: **repeated refills can build brand loyalty and repeat purchase cycles**, but only if customers can easily access and use the refills. Ensuring the distribution system is in place (e.g. widely available refill packs and clear instructions) is operationally critical.

One often-cited advantage is that **refillable reduce the material intensity of subsequent purchases** in the long term. Once a consumer owns the core bottle, the cost (and environmental impact) of subsequent purchases is mostly in the refill container, which usually uses **less material** and may be simpler to produce (e.g. a lightweight pouch or a simple glass bottle, rather than a decorated glass bottle).

Refill models can yield significant benefits beyond sustainability. They can become a core part of a brand's story, emphasizing **convenience and conscious luxury**. Consumers may be drawn to the idea of owning a **"forever bottle"** – a beautifully crafted object that they can keep indefinitely – which can reinforce brand prestige and a sense of **investment value**. From a development perspective, **designing for refillability from the outset** is preferable. Retrofitting an existing product to be refillable can be more challenging, whereas integrating the concept at the outset ensures the fragrance, the bottle, and the consumer experience are all aligned with a refill model. This often means early collaboration with packaging engineers to incorporate screw closures or refill ports without compromising aesthetics.

2. All-Over Sprays & Bag-on-Valve Technology: A New Gesture for Fragrance

2.1 What Is a Bag-on-Valve System? – Technical Overview

Traditional aerosol sprays mix product liquid with a propellant (e.g. hydrocarbons or compressed gases) in a single container. In contrast, **Bag-on-Valve (BOV)** is an **advanced aerosol packaging system** that **completely separates the product from the propellant** inside the can. It consists of a **multi-layered flexible bag** (containing the product formula) **attached to a specialized valve**, which is crimped onto a metal can that is then pressurized with liquid or compressed gas propellants in the space between the bag and the can walls.

To fill a BOV, the process is almost reversed compared to normal aerosols: the bag-and-valve assembly is sealed and **gas is added first**, pressurizing the can, and **then the liquid product is filled through the valve** into the bag. When the consumer presses the actuator, the propellant squeezed between the can and inner bag forces the liquid out in a steady spray, without the propellant ever mixing with the product itself.

Key Features and Advantages: The BOV design yields several benefits especially relevant to **all-over body sprays**:

- I. **Total Formulation Purity:** Because the fragrance never contacts the propellant gas, **the formulation stays pure and stable** inside the bag. This means no chemical interaction or dilution with propellant, preserving the scent integrity.
- II. **Continuous, 360° Spray:** Unlike a manual pump that delivers a short burst, a BOV produces a **continuous mist** as long as the actuator is pressed, as a classic aerosol. Because of the pressurized system and flexible bag, it **works at any angle (even upside-down)**, enabling consumers to spray hard-to-reach areas of the body.
- III. **Compressed Gas Propellants:** BOV systems can be powered by compressed gases such as air or nitrogen. From a sustainability perspective, this can reduce reliance on hydrocarbon propellants and support lower-VOC aerosol configurations.
- IV. **Near-Complete Evacuation:** BOV cans can deliver **over 95–99% of the product** inside, significantly reducing leftover waste. By contrast, conventional aerosols and pumps often leave some liquid unreachable at the bottom.
- V. **Fine, Controlled Mist:** The BOV system **produces a very uniform, fine spray** with-

out large droplets or sputtering. This uniformity gives a pleasant, even coverage ideal for an all-over body “cloud” of fragrance.

- VI. Longer Shelf Life:** With the product sealed away from air and any propellant, **oxidation is minimized**, potentially extending the formula’s shelf life and reducing need for preservatives.

2.2 The All-Over Spray Experience vs. Classic Perfume Sprays

All-over sprays represent a distinct **usage “gesture”** for fragrance. The idea is to **liberally mist the entire body** (and even hair or clothes) with a light, continuous spray, rather than applying a few concentrated spritzes to pulse points as with traditional perfumes. This **full-body approach** offers a different sensorial experience: it can create a subtle, enveloping aura of scent that’s part of a daily routine.

With BOV packaging, the **spray experience** is notably different from a classic pump:

- I. Continuous mist:** The user can spray for several seconds continuously, this creates a feeling of *immersing oneself* in the fragrance, similar to a **fine cloud or veil of scent**. It tends to be a **lighter application** per area (since each second delivers a fine mist) but can cover a larger body area quickly.
- II. Aerosol spray:** Unlike a traditional perfumery pump, which delivers a defined spray dose through mechanical actuation, a BOV system delivers the fragrance through a **pressurised aerosol** mechanism. This creates a spray that is **wider** and **more evenly dispersed** than a traditional perfume pump spray, making it more suitable for all-over application. Droplet size and spray pattern still depend on the valve, insert and formulation, but the defining feature is the aerosol-type dispersion enabled by the system.
- III. 360° application: BOV sprays work at any angle**, users can comfortably spray around the body (even upside-down for back or legs), adding a **convenience and fun factor** that a rigid bottle cannot provide.

For consumers, these differences translate into new ways to use fragrance. All-over sprays are well-suited to **post-exercise freshening, summertime cooling, or layering over lotions** for extended scent. They encourage **more generous use** (which can drive higher product consumption, an attractive proposition for brands). In interviews, market experts note that **younger consumers enjoy the playful, on-the-go aspect of mists and sprays**, and the ability to personalize their scent “wardrobe” by layering multiple products¹¹. All-over sprays also remove the formality sometimes associated with perfume: it’s a more casual, everyday use of fragrance.

¹¹ Nicolas Olczyk, [“Fragrance mists, all-over body sprays... how and why luxury brands are getting on board”](#), *Formes de Luxe*, 1 July 2025.

2.3 Current & Emerging Applications: Fragrance Opportunities with BOV

In the fragrance world, BOV is newer but garnering interest. **All-over body sprays** in fine fragrance are seen as a way to create additional usage occasions beyond the traditional “morning spritz” of perfume. Some industry experts note that **Middle Eastern consumers use fragrance in particularly diverse ways**, applying scent to skin, hair and clothing and combining different formats to create personalised signature scents¹². This strong fragrance culture may make the region especially relevant for **innovative formats** such as all-over sprays, where the product gesture moves beyond the traditional perfume spritz. BOV opens the door to **creative new fragrance products**: for example, a luxury brand might offer a scented body mist in a BOV can for a **gym bag**, or a **cooling all-over fragrance** spray for hot climates.

There’s also potential for **premiumisation** within all-over sprays through packaging and accessories. Metal aerosol cans offer broad customisation possibilities, allowing the use of **decorative finishes, metal collars** and **refined overcaps** to enhance the overall look and feel of the pack. Although these are early days, such approaches could allow for **personalised designs and collectors’ editions** of all-over spray products, aligning them with luxury positioning.

From a **placement** perspective, all-over sprays could occupy new retail and usage niches. They sit at the intersection of **fine fragrance and personal care** – not quite a traditional perfume, but more special than a deodorant. This versatility means they could be marketed in contexts like *travel (on-the-go refreshment)*, *fitness and wellness*, or in *lifestyle and home fragrance spaces*. In some cases, an all-over spray can double as a **room or linen mist**, adding to its appeal as a multi-use product.

Luxury brands have taken note of this trend. For example, Chanel has created “All-Over” sprays for its iconic male fragrances in simplified aluminum aerosol packaging¹³, and Tom Ford launched body sprays for its Private Blend line at premium price points¹⁴, confirming that **even high-end consumers are interested in these convenient formats**.

¹² Rawya Catto, quoted in “[How the Middle Eastern Fragrance Market is Influencing Global Consumer Habits](#)”, *Perfumer & Flavorist*, 26 September 2024.

¹³ Chanel, “[Bleu de Chanel All-Over Spray](#)”, Chanel

¹⁴ Tom Ford Beauty, “[Body Sprays](#)”, Tom Ford Beauty

2.4 Manufacturing & Material Considerations

Implementing BOV for fragrance requires adjustments in **manufacturing processes and materials**:

- I. **Filling Equipment:** BOV filling follows a dedicated process compared with standard fragrance filling. The bag-on-valve assembly must be secured to the can, the can is pressurised with compressed gas and subsequently crimped onto the can, and the product is then filled into the inner bag through the valve. Within this process, the crimping and gassing steps are central because they secure the bag-on-valve assembly to the can and create the pressure needed for dispensing, while maintaining the separation between product and compressed gas.
- II. **Product-Contact Materials & Dosing System:** Particular attention must be paid to the **product-contact materials** used in the filling and dosing system, as fragrance formulations, particularly those containing alcohol and fragrance oils, can affect seals, tubing, valves and other components. Materials must therefore ensure adequate **chemical compatibility, cleanliness and resistance**, while minimising product retention and facilitating cleaning and product changeover.
- III. **Certification and Testing:** Aerosol products are subject to **specific safety and regulatory requirements** related to **pressure, flammability** and **product integrity**. In Europe, the **Aerosol Dispenser Directive** provides the product-safety framework for aerosol dispensers¹⁵, while equipment used in potentially explosive atmospheres may also need to comply with the **ATEX framework**¹⁶, depending on the production environment and materials handled. Brands introducing BOV-based fragrance formats therefore need to work closely with packaging engineers, filling specialists and test laboratories to validate the full pack and the related filling process.

Despite these requirements, **BOV is more likely to grow as a complementary fragrance format** than as a replacement for traditional perfume bottles. It offers **new possibilities** for customer engagement and differentiation, while serving **different usage moments** and consumer needs.

¹⁵ European Commission, "[Aerosol Dispenser Directive](#)", European Commission,

¹⁶ European Commission, "[Equipment for potentially explosive atmospheres \(ATEX\)](#)", European Commission.

3. Alcohol-Free Fragrances: Formulation, Consumer Expectations & Dispensing Challenges

3.1 Drivers of the Alcohol-Free Trend & Target Consumers

Alcohol-free fragrance formats are not new, oil-based perfumes, attars and solid perfumes have long existed alongside alcohol-based fine fragrances¹⁷. What is changing today is the renewed industrial interest in alcohol-free or low-alcohol formulas, driven by a combination of skin-comfort expectations, ingredient scrutiny, lifestyle positioning and cultural or certification requirements:

- I. Sensitive Skin and Skin-Comfort Considerations:** Ethanol is widely used in cosmetic formulations as a **solvent, preservative and sensorial modifier**, but its effect on skin can vary depending on concentration, formulation type and skin condition. Scientific literature indicates that **ethanol** may be associated with **irritation or contact dermatitis** in certain contexts, while more recent studies also show that its effects depend on **concentration and formulation context**.¹⁸ For this reason, **alcohol-free fragrances** are often explored as part of a broader search for alternative sensorial profiles and improved skin comfort, rather than as inherently non-irritating products.
- II. Family and Lifestyle Positioning:** Products intended for infants and young children require specific safety assessment, as children may be more vulnerable to certain cosmetic ingredients and exposure scenarios.¹⁹ In this context, **alcohol-free** or **water-based fragrance formats** may be considered for products positioned around **delicate skin**, wellness routines or softer daily use, provided that their safety, preservation and allergen profile are properly assessed.

¹⁷ E. Sikora, M. Miastkowska, K. Wolińska-Kennard and E. Lasoń, "[Nanoemulsions as a Form of Perfumery Products](#)", *Cosmetics*, 5(4), 63, 2018.

¹⁸ D. W. Lachenmeier, "[Safety evaluation of topical applications of ethanol on the skin and inside the oral cavity](#)", *Journal of Occupational Medicine and Toxicology*, 2008. See also M. Celikoglu et al., "[A pilot study on the cutaneous effects of ethanol in a moisturizing cream on non-lesional skin of patients with atopic dermatitis](#)", *Scientific Reports*, 2025.

¹⁹ EDQM / Council of Europe, "[Safe cosmetics for young children – Second edition provides state-of-the-art guidance on cosmetic products for infants and young children](#)", 2023. See also European Commission, Scientific Committee on Consumer Safety, "[SCCS Notes of Guidance for the Testing of Cosmetic Ingredients and their Safety Evaluation – 12th revision](#)", 2023.

III. **“Free-From” and Ingredient Transparency:** The wider clean beauty discussion has increased consumer attention on ingredient lists, safety perceptions and “free-from” claims. Mintel notes that definitions of **“clean beauty”** vary significantly by region, with some markets associating it more closely with **safety and “free-from” assurances**.²⁰ Alcohol-free fragrances can therefore fit into this broader positioning, but claims should remain precise and substantiated. **Natural or oil-based alternatives** should not be presented as automatically safer, since fragrance allergens can be present in both **synthetic and natural fragrance materials**, and EU regulation requires the labelling of specific fragrance allergens to support sensitised consumers.²¹

IV. **Cultural and Certification Requirements: Alcohol-free fragrance formats** can also be relevant for **halal-oriented** product development and markets where the origin and use of ethanol require specific certification scrutiny. Halal certification requirements for cosmetics generally include controls on **ingredient origin, alcohol use, cross-contamination and traceability**.²² Market data also indicates continued growth in **halal cosmetics**, including **personal care and fragrance-related categories**, with demand linked to religious compliance as well as broader interest in ethical and transparent beauty products.²³

3.2 Consumer Experience: How do Alcohol-Free Fragrances differ?

Removing or reducing alcohol can affect how a fragrance behaves on skin and how the scent is perceived over time. These differences are not inherently positive or negative, but they require formulation and dispensing systems to be adapted to the chosen carrier.

I. **Evaporation and Lift:** Ethanol is commonly used in **fine fragrance** because it helps dissolve fragrance materials and supports **rapid evaporation** after application. This evaporation contributes to the initial diffusion of volatile fragrance molecules and to the perception of top notes.²⁴ When ethanol is reduced or replaced with water, oils, glycols or emulsified systems, the evaporation profile can change, often resulting in a softer or less immediate opening.²⁵

II. **Longevity and Dry-Down:** Alcohol-free systems, particularly **oil-based or structured**

20 Mintel, [“Conscious Cosmetics: The Rise of Clean Beauty”](#), 2026.

21 European Commission, [“Commission Regulation \(EU\) 2023/1545 of 26 July 2023 amending Regulation \(EC\) No 1223/2009 as regards labelling of fragrance allergens in cosmetic products”](#), 2023

22 American Halal Foundation, [“Halal Certification Requirements & Process for Cosmetics”](#), 2024.

23 Fortune Business Insights, [“Halal Cosmetics Market Size, Share & Industry Impact Analysis”](#), 2026.

24 A. E. Rodrigues, I. Nogueira and R. P. V. Faria, [“Perfume and Flavor Engineering: A Chemical Engineering Perspective”](#), *Molecules*, 26(11), 3095, 2021.

25 E. Sikora, M. Miastkowska, K. Wolińska-Kennard and E. Lasoń, [“Nanoemulsions as a Form of Perfumery Products”](#), *Cosmetics*, 5(4), 63, 2018.

emulsified formats, may remain on the skin differently from ethanol-based sprays. This can influence the balance between initial projection and persistence, with some formulations giving a closer-to-skin effect rather than the immediate diffusion associated with alcoholic fine fragrance. Formulation choices therefore affect not only longevity, but also the perceived evolution of top, heart and base notes.

III. Skin Feel and Sensorial Profile: Alcohol-free formats can also change the **tactile experience** of the product. **Oil-based perfumes, water-based mists and emulsified systems** each bring different sensations on application, from a more emollient feel to a **wetter or softer spray impression**. From a technical perspective, these sensorial differences are closely linked to **solvent choice, viscosity, surface tension** and the ability of the dispensing system to atomise the formula effectively.

IV. Fragrance Character: Because **fragrance performance** depends on evaporation, diffusion and the interaction between the perfume mixture, solvent and skin, changing the carrier system can alter the way the fragrance develops over time. Some **volatile notes** may require **reformulation** to maintain impact, while **less volatile materials** may become more **prominent** earlier in the dry-down. This makes alcohol-free development a formulation challenge rather than a simple substitution of ethanol.

Consumer perception of performance remains an important factor. If an alcohol-free fragrance is perceived as **weaker, heavier or less refined** than the intended product experience, acceptance may be limited. To address this, **current technical approaches** include:

- **Microencapsulation of fragrance materials:** tiny encapsulated fragrance systems can help protect **volatile fragrance materials** and support controlled or sustained release in cosmetic and topical applications.²⁶
- **Emulsified or nanoemulsion systems:** Alcohol-free or low-alcohol perfumes may use **oil-in-water systems, solubilisers** or other structuring approaches to improve **clarity, sprayability, olfactory fidelity and persistence**.²⁷
- **Adjusted fragrance architecture:** Formulators may need to adapt the **fragrance concentrate, carrier system and dispensing technology** together, rather than treating alcohol-free development as a direct replacement of ethanol with another solvent.²⁸

26 S. Russell and N. Bruns, "[Encapsulation of Fragrances in Micro- and Nano-Capsules, Polymeric Micelles, and Polymersomes](#)", Macromolecular Rapid Communications, 2023.

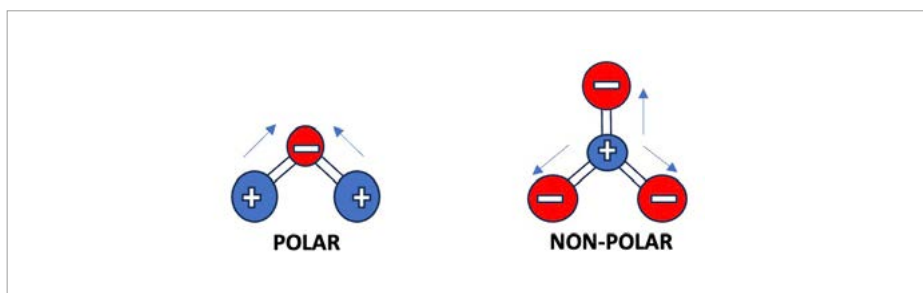
27 Sikora et al., "[Nanoemulsions as a Form of Perfumery Products](#)", 2018.

28 Rodrigues, Nogueira and Faria, "[Perfume and Flavor Engineering: A Chemical Engineering Perspective](#)", 2021. See also Sikora et al., "[Nanoemulsions as a Form of Perfumery Products](#)", 2018.

3.3 Formulation Challenges: Stability, Solubility & Performance

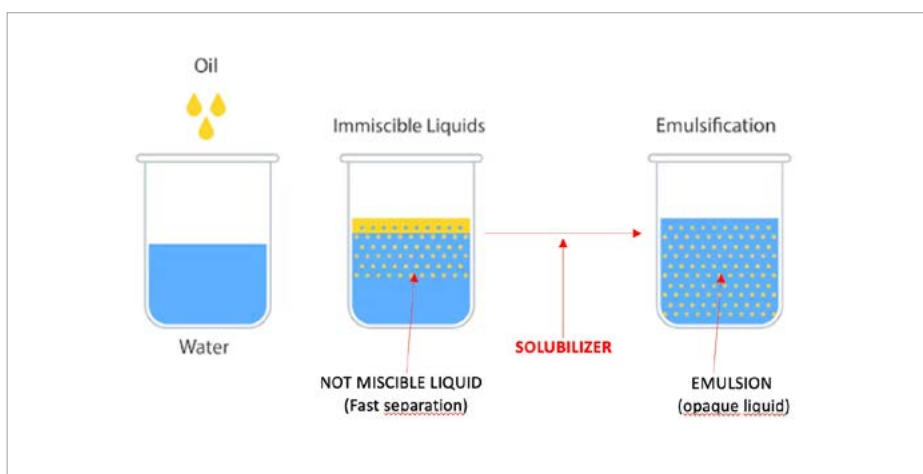
While the motivations are clear, **formulating alcohol-free fragrances** is more complex than replacing ethanol with another carrier. The main challenges concern **solubility, clarity, microbiological protection, spray performance and claim substantiation**.

- I. **Solubilisation and clarity:** Fragrance compositions are typically made of **lipophilic materials**, while water-based systems require a stable way to disperse or solubilise those materials. **Water and fragrance oils** are inherently immiscible because of their **different polarity**: water is a **polar substance**, whereas most fragrance compounds are **non-polar**.



In **alcohol-based** perfumes, **ethanol** prevents the formation of two phases, helping to maintain clarity and stability. In **water-based** or very low-alcohol systems, formulators may need **solubilisers, surfactants, co-surfactants or nanoemulsion** approaches to achieve a clear, stable and **sprayable product**.²⁹

Without adequate solubilisation, phase separation, haze or instability may occur, compromising both product appearance and performance.



²⁹ Rodrigues, Nogueira and Faria, "[Perfume and Flavor Engineering: A Chemical Engineering Perspective](#)", 2021. See also Sikora et al., "[Nanoemulsions as a Form of Perfumery Products](#)", 2018.

COMPONENT	FUNCTION	SUBSTANCES EXAMPLES
Water	Main solvent, fragrance carrier	
Fragrance	Perfume	
Solubilizing agent	Interaction between polar and non-polar phase	PEG-40 Hydrogenated castor oil
Wetting agent	Moisturizing effect	1,2-Hexanediol
Glycols	Moustirizing effect /Preservatives /Fragrance fixators	Pentylene glycol
Fragrance fixator	Fix the fragrance to the skin, increasing its persistence	Triethyl citrate
Preservatives	Formula micro-biological stabilization	Sodium benzoate, Potassium sorbate
Anti-oxydants	Formula chemical stabilization	Hydroxyacetophenone

II. Stability and preservation: Water-containing fragrance systems require **careful microbiological assessment**. Alcohol can contribute to preservation, but when it is reduced or removed, the formulation must still demonstrate adequate **anti-microbial protection** through an appropriate **preservative system, formulation strategy or risk assessment**. **ISO 11930** provides a reference method for evaluating the antimicrobial protection of cosmetic products, particularly **water-soluble** or **water-miscible formulations**.³⁰

III. Viscosity and spray performance: Alcohol-free systems may differ from traditional ethanol-based perfumes in **viscosity, surface tension and droplet behaviour**. These parameters influence **atomisation, spray fineness** and **overall application** feel. For this reason, the formula and dispensing system need to be assessed together, especially for **water-based nanoemulsions, oil-rich systems** or formats intended to deliver a fine mist.³¹

IV. Fragrance balance and sensory profile: Changing the carrier system can alter **evaporation and diffusion dynamics**, which in turn affects how top, heart and base notes are perceived over time. The **solvent matrix, skin interaction and volatility of fragrance materials** all contribute to **perfume performance**, so alcohol-free development often requires **reformulation** rather than a direct substitution of ethanol.³²

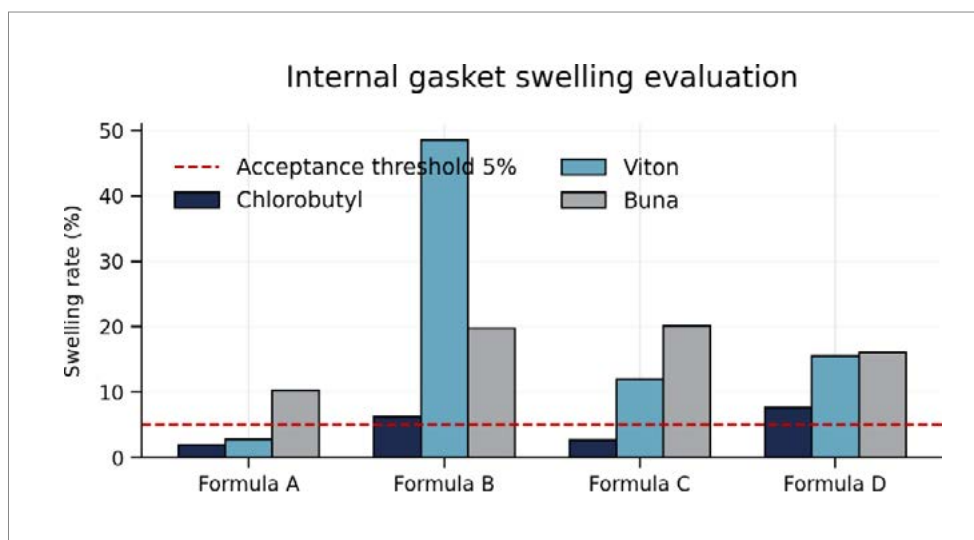
³⁰ ISO, "ISO 11930:2019 – Cosmetics – Microbiology – Evaluation of the antimicrobial protection of a cosmetic product", ISO, 2019.

³¹ Sikora et al., "[Nanoemulsions as a Form of Perfumery Products](#)", 2018.

3.4 Dispensing & Packaging Adjustments for Alcohol-Free Scents

The shift to **alcohol-free** or **low-alcohol formulations** can have direct implications for **packaging** and **dispensing systems**. A pump, bottle or closure designed for a traditional ethanol-based perfume may not perform in the same way with **water-based**, **oil-based** or **emulsified fragrance systems**. For this reason, alcohol-free development should include **compatibility, stability and spray-performance testing** from the early formulation stage.

- I. **Pump and Material Compatibility:** Alcohol-free systems may interact differently with packaging components, particularly when the formulation contains a **higher proportion of water, oils, surfactants** or other alternative carriers. **Primary packaging materials, closures, seals and dispensing components** should therefore be assessed for compatibility with the finished formulation, including possible **migration, absorption, corrosion, leakage or changes** in product quality over time.³³ Internal testing conducted by **Coster** on representative water-based fragrance formulations has shown that **inner gasket swelling** can vary significantly depending on both the **formulation** and the **elastomer** selected. **Laboratory tests** performed after **three days of immersion** at room temperature highlighted **different swelling rates** across **Chlorobutyl, Viton and Buna** materials, with a **5% acceptance threshold**. These findings confirm that gasket material selection should be validated case by case rather than treated as a standard choice for alcohol-free fragrances.



³² Rodrigues, Nogueira and Faria, "[Perfume and Flavor Engineering: A Chemical Engineering Perspective](#)", 2021. See also Sikora et al., "[Nanoemulsions as a Form of Perfumery Products](#)", 2018.

³³ Cosmetics Europe, "[Advisory Document: Information Exchange on Cosmetic Packaging Materials Along the Value Chain in the Context of the EU Cosmetics Regulation EC 1223/2009](#)", Cosmetics Europe, 2019.

Furthermore, the **high water content** commonly found in some **alcohol-free formulations** may increase the **risk of corrosion** of metallic pump components. For this reason, **swelling tests** are strongly recommended to identify the most suitable inner gasket material, while dedicated **compatibility and corrosion studies** should be conducted to evaluate the **long-term interaction** between the formulation and pump components and to detect **potential risks** at an early stage of development.

- II. Spray Quality:** Achieving a fine and consistent spray can be more demanding with alcohol-free fluids, because viscosity, surface tension and droplet behaviour may differ from those of ethanol-based perfumes. **Water-based nano-perfume studies** show that parameters such as **droplet size, viscosity, surface tension, pH** and **physical stability** are relevant to the development of **sprayable alcohol-free fragrance systems**.³⁴ This means that the **pump, actuator, insert** and **formula** should be evaluated together to ensure the desired **mist quality, spray angle and application feel**. The water content of an alcohol-free fragrance has a significant impact on the final spray performance. As the proportion of water increases, a **higher actuation force** is typically required, while **atomization** may become less efficient, resulting in **coarser nebulization and narrower spray cones** compared to conventional hydroalcoholic perfumes.

Although **alcohol-free perfumes** are often perceived as being more viscous than alcohol-based fragrances, **viscosity** alone does not fully explain these performance differences. In fact, at 20°C, the viscosity of water (1.00 mPa·s) is slightly lower than that of ethanol (1.14 mPa·s). A more relevant factor is **surface tension**, which is substantially higher for water than for ethanol. At 20°C, water exhibits a surface tension of approximately 72.7 mN/m, compared with 22.3 mN/m for ethanol (measured against air). This higher surface tension makes the liquid **more resistant to breakup** during spraying, reducing its ability to form fine droplets and directly affecting **atomization quality**.

As a general rule, the ease with which a liquid can be dispersed into **small droplets** is inversely related to its surface tension. Consequently, **water-rich alcohol-free formulations** require particular attention to both **formulation design** and **dispensing system selection** to achieve a **spray quality** comparable to that of traditional alcohol-based perfumes.

- III. Particle-size and spray pattern evaluations:** To better understand the influence of formulation properties on atomization performance, **Coster** conducted **internal laboratory evaluations** on four representative **alcohol-free fragrance formulations** available on the market. The study compared the original dispensing systems with different Coster pump and insert configurations. The tables below present a representative extract of the results, showing average Dv50 values (median droplet size) calculated from **three spray measurements** for each configuration.

³⁴ M. Miastkowska, E. Lasoń, E. Sikora and K. Wolińska-Kennard, "[Preparation and Characterization of Water-Based Nano-Perfumes](#)", *Nanomaterials*, 8(12), 981, 2018.

Formulation A

Pump configuration	Dv50 avg. [µm]
On the Market	43.31
PUMP 1 + INSERT 1	39.51
PUMP 1 + INSERT 2	40.12
PUMP 1 + INSERT 3	45.66
PUMP 1 + INSERT 4	48.47
PUMP 2 + INSERT 2	40.18

Formulation B

Pump configuration	Dv50 avg. [µm]
On the Market	46.14
PUMP 1 + INSERT 1	52.49
PUMP 1 + INSERT 2	47.88
PUMP 1 + INSERT 3	52.95
PUMP 1 + INSERT 4	75.55
PUMP 2 + INSERT 2	43.99

Formulation C

Pump configuration	Dv50 avg. [µm]
On the Market	46.24
PUMP 3 + INSERT 1	41.39
PUMP 3 + INSERT 2	38.97
PUMP 3 + INSERT 3	44.12
PUMP 3 + INSERT 4	46.54
PUMP 2 + INSERT 2	38.99

Formulation D

Pump configuration	Dv50 avg. [µm]
On the Market	43.10
PUMP 4 + INSERT 1	37.98
PUMP 4 + INSERT 2	41.18
PUMP 4 + INSERT 3	46.59
PUMP 4 + INSERT 4	45.52
PUMP 2 + INSERT 2	38.25

Across the four formulations tested, the results confirmed that **spray performance can be effectively tailored for alcohol-free fragrances** through the appropriate selection of pump and insert configurations. Different pump and insert combinations delivered distinct spray characteristics, from finer atomization to more concentrated application profiles. This confirms that **successful alcohol-free fragrance development** is not about identifying a single optimal dispensing system, but rather **selecting the most suitable configuration** based on the **formulation** and the **desired consumer experience**.

In conclusion, the same dispensing architecture may generate either a well-developed spray cone with fine atomization or a concentrated jet-like pattern depending on the formulation being dispensed. For this reason, **dedicated functionality testing remains essential** when developing alcohol-free fragrances, ensuring that pump, actuator insert and formula are properly matched to deliver the desired sensorial and olfactory experience. Internal evaluations also suggest that **higher dosage levels**, typically $\geq 90 \mu\text{l}$, **may be advantageous for water-based formulations**, helping compensate for slower evaporation rates while supporting fragrance perception on the skin.

- IV. Bottle and Closure Design:** Packaging choices should reflect the nature of the formula. **Oil-based fragrances** may require **delivery systems** and **closures** designed to **limit leakage** and protect the formula during use, while **water-based mists** or **emulsified fragrances** may require particular attention to **material compatibility and long-term stability**. In all cases, the final pack should be validated as a complete system: formula, bottle, closure and dispensing mechanism.
- V. Operational and Regulatory Considerations:** Reducing or removing ethanol can reduce the presence of **flammable solvent** in the formulation, but this should not be translated into a general claim that logistics automatically become simpler. **Alcohol-based perfumery products with flammable solvents** are identified under transport frameworks as **flammable liquid products**, and transport classification depends on the complete formulation, flash point, packaging, quantity and applicable mode of transport.³⁵ **Water-based or non-flammable** alternatives may have a **different regulatory profile**, but this must be **confirmed case by case** through the product's safety data and dangerous goods assessment.

35 NOAA CAMEO Chemicals, "[Perfumery Products, with Flammable Solvents](#)", NOAA

3.5 Performance Validation and Industry Considerations

Alcohol-free fragrances should not be assessed only through the absence of ethanol, but through the overall performance of the finished system. **Formula, packaging and dispensing technology need to be evaluated together**, as changes in solvent base can affect spray quality, scent diffusion, skin feel, stability and preservation³⁶.

From an industry perspective, the main objective is to ensure that alcohol-free formats deliver a **coherent fragrance experience** within their own technical profile. They may not behave exactly like ethanol-based perfumes, particularly in terms of initial lift, evaporation and projection. For this reason, development should focus on defining the intended application gesture, sensory effect and performance expectations from the outset³⁷.

Claims also require careful management. Terms such as “gentle”, “for sensitive skin”, “clean”, “family-friendly” or “halal” should be used only when supported by appropriate formulation data, safety assessment, certification or testing. **Alcohol-free does not automatically mean non-irritating, hypoallergenic or safer for all users**, especially because fragrance allergens may still be present in both natural and synthetic fragrance materials.³⁸

Ultimately, alcohol-free fragrance development is an integrated technical exercise. **Stability, microbiological protection, olfactory performance, dispensing quality and regulatory compliance must be validated as part of the same product system**. When these elements are aligned, alcohol-free formats can expand the range of fragrance applications and support **new usage occasions**, without being positioned as a direct replacement for traditional alcohol-based fragrances.

36 M. Miastkowska, E. Lasoń, E. Sikora and K. Wolińska-Kennard, “[Preparation and Characterization of Water-Based Nano-Perfumes](#)”, *Nanomaterials*, 8(12), 981, 2018.

37 A. E. Rodrigues, I. Nogueira and R. P. V. Faria, “[Perfume and Flavor Engineering: A Chemical Engineering Perspective](#)”, *Molecules*, 26(11), 3095, 2021.

38 European Commission, “[Commission Regulation \(EU\) 2023/1545 as regards labelling of fragrance allergens in cosmetic products](#)”, *EUR-Lex*, 2023.

4. Fragrance Mists: Versatility, Accessibility & Multi-Application Scent

4.1 Defining Fragrance Mists vs. Traditional Perfumes

Fragrance mists (also known as **body mists, body sprays, or perfumed mists**) are lighter, **less concentrated fragrance products** designed for more liberal, all-over use. They differ from traditional perfumes in several key ways:

- I. **Concentration & Composition:** A typical **eau de parfum** generally contains around **15–20% fragrance concentration** in an alcohol-based formula, whereas body mists are positioned at much lower concentration levels, commonly around **1–5%** depending on the format and brand.³⁹ This makes them significantly less intense per spray.
- II. **Intensity & Longevity:** Because of the lower concentration (and often higher water content), fragrance mists have a **subtler scent** and **shorter duration** – often a few hours of effect vs all-day wear for strong perfumes. They are meant to be re-applied more often.
- III. **Packaging & Volume:** Mists often come in **larger volume bottles (e.g. 100–250 mL)**, recognizing that consumers tend to spray them generously. The packaging may be plastic or lightweight glass and typically uses a **standard spray pump** (though aerosol body sprays exist too). The emphasis is on convenience and portability – some are **smaller (e.g. 50 mL) for handbags** – rather than heavy luxury glass.
- IV. **Price & Positioning:** Body mists are generally *more affordable per mL* than high-end perfumes, making them an accessible entry point for younger consumers. They often have a **playful, casual image**, as opposed to the formality or sophistication associated with an extrait or parfum.

39 PAIRFUM London, "[What Are The Different Levels Of Perfume Concentration?](#)", PAIRFUM London, 2025.

4.2 Market Growth & Consumer Appeal of Mists

Fragrance mists have become one of the fastest-growing segments in fragrance.

Long a staple in mass-market brands, scented mists are now being embraced by prestige and niche brands. Industry data highlights the momentum: **between 2020 and 2023, the global market for body mists roughly tripled in size, reaching an estimated USD 7 billion in 2024, with projections exceeding \$12 billion by 2033⁴⁰.** Another report forecasts the category to grow at ~5–6% annually, surpassing \$9 billion by 2032⁴¹. This surge outpaces many traditional fragrance segments, signaling a strong, sustained trend.

Several factors underpin this popularity:

- I. Versatility & Frequency:** Consumers appreciate that mists can be used **more freely and frequently** than strong perfumes – they can spray a mist after a shower, post-workout, before bed, or during a hot day, without fear of overdoing it. The lighter scent and often refreshing feeling (sometimes mists are formulated with a bit of menthol or just the water content) make them ideal for a *quick pick-me-up*.
- II. Playfulness & Experimentation:** Market experts note that **Gen Z and younger consumers enjoy the “playful” aspect of scented mists**. Body sprays often come in a wide variety of fun scents (e.g. fruity, gourmand, spa-inspired) and can serve as an **affordable way to experiment with fragrance**. This resonates with a generation interested in personalisation, using different mists to layer scents or to match a mood.
- III. New Usage Occasions:** Mists have expanded fragrance into contexts where a strong perfume might not be suitable. For example, some are marketed as **hair mists** – giving shine or conditioning benefits along with scent (with *lighter alcohol to avoid drying hair*). Others blur categories, doubling as room sprays or linen mists (for a gentle ambient scent). There are even **face and body mists** that combine skincare benefits (vitamins, hydration) with fragrance for a novel on-the-go refresh.
- IV. Seasonal & Climate Factors:** In warmer climates or summer months, heavy perfumes can be overpowering or increase skin photosensitivity. **Lighter mists are popular in the summer** as a way to stay fresh without wearing a strong perfume that might be too intense in heat. They can also be marketed around **tropical or beach themes**, with ingredients like aloe vera or coconut water that emphasize cooling and hydration alongside fragrance.

⁴⁰ Nicolas Olczyk, “[Fragrance mists, all-over body sprays... how and why luxury brands are getting on board](#)”, *Formes de Luxe*, 1 July 2025.

⁴¹ Grand View Research, “[Body Mist Market Size, Share & Trends Analysis Report](#)”, 2026.

4.3 Packaging & Dispensing for Mists: Pumps & Fine Sprays

Since body mists are used generously, **the dispensing system must be comfortable and efficient**. The typical solution is a **spray pump** (non-aerosol) that produces a **broad, fine mist**. Pumps for body mists often have a **larger output per spray (up to 200-300 µL)** than perfume pumps, since a higher output per actuation is desired. They also often use **wider spray angles** to cover more surface area.

Material compatibility and viscosity concerns are generally less demanding than in pure oil perfumes or highly viscous formats, as many body mists are built around **water/alcohol-based formulations**.

For **aerosol-type body sprays** (common in some men's body sprays or certain luxury hair mists), BOV technology can be used (as in **Chapter 2**). If VOC content and sustainability are concerns, a **BOV continuous spray** with compressed air can serve as a more environmentally-friendly alternative to a standard aerosol.

4.4 Integrating Multi-Application Products & Category Crossover

One reason fragrance mists are gaining relevance is their ability to **bridge adjacent beauty and personal-care categories**, creating additional usage occasions beyond traditional perfume application:

- I. **Body & Hair:** Many contemporary mists are positioned for **dual use** on skin and hair, turning fragrance into a more flexible daily accessory. This requires the **formula** to be **suitable for both application areas**, with attention to alcohol level, skin and hair feel, residue, and compatibility with the selected dispensing system. Some products also incorporate ingredients associated with hair or skin care, such as **biotin, niacinamide or botanical extracts**, reinforcing the crossover between fragrance and personal care.⁴²
- II. **Wellness & Skin Care Crossover:** Fragrance mists are increasingly being developed as hybrid products that combine scent with body-care or skin-care cues. Market analysis points to formulations that **bridge body care and fragrance**, incorporating **skincare-inspired ingredients** such as hyaluronic acid, niacinamide and **botanical oils** alongside fragrance profiles.⁴³ This supports a more functional interpretation of the mist format, where refreshment, **hydration, comfort or sensorial wellbeing** can become part of the product experience.

⁴² Rare Beauty, "[Find Comfort Body & Hair Fragrance Mist](#)", Rare Beauty, n.d. See also Philosophy, "[Vanilla Hug Body & Hair Fragrance Mist](#)", Philosophy

⁴³ Grand View Research, "[Body Mist Market Size And Share | Industry Report, 2033](#)", Grand View Research, 2026.

5. The Technical Bridge: How Dispensing Systems Translate Trends to Products

Implementing the trends described in this whitepaper depends on the ability of **dispensing systems** to translate new concepts into reliable, market-ready products. **Pumps, valves, actuators and filling technologies** must be selected according to the formulation, the intended application gesture and the expected consumer experience.

For **refillable fragrance formats**, the dispensing system must support repeated use without compromising functionality or aesthetics. Coster's **Alba Twist fragrance pump** is designed for refillable perfumes, combining a screw-on closure with a premium appearance, extra-fine nebulisation, superior pre-compression and smooth actuation. Its removable architecture supports refillable product formats while maintaining the refined visual aesthetics expected in prestige fragrance packaging.

In the realm of **all-over sprays**, the integration of **Bag-on-Valve technology** is the result of close collaboration between fragrance houses, aerosol component specialists and filling equipment experts. Coster has developed proprietary **BOV systems**, ranging from **standard** solutions to the more advanced **mBOV**, the first Bag-on-Valve with an integrated metering system on the market. This innovation introduces new possibilities for controlled and precise fragrance application.

For **alcohol-free or low-alcohol fragrances**, the dispensing system can be decisive. Water-rich or alternative-carrier formulations may require dedicated spray-path configurations to support fine atomisation and an elegant application feel. Coster's **Breeze special insert** is designed to enhance spray performance by supporting smaller particles, a softer spray and a drier skin feel. Combined with the **Alba fragrance pump**, Breeze provides a technically relevant solution for water-based or low-alcohol fragrance formats where standard perfume spray performance may be harder to achieve.

For **fragrance mists**, the technical priority shifts towards balancing output, fineness, comfort and consistency. These products are generally applied more generously than fine fragrance, so the dispensing system must provide broader coverage while preserving a light and pleasant mist. Coster's spray pump portfolio, including solutions such as **GMSP, 20MSP, 32MSP**, can support body mist applications by offering higher output than typical perfume pumps while maintaining fine spray performance. The final choice of pump, actuator and insert should always be validated with the specific formula to ensure the desired spray angle, particle size, dosage consistency and overall sensorial profile.

Ultimately, dispensing systems are not secondary components in these new fragrance formats. They are **technical enablers** that determine whether a market trend

can become a reliable product experience. **Refillable pumps support reuse, BOV systems enable continuous all-over application, dedicated inserts help adapt spray performance to alcohol-free formulas, and fine mist pumps broaden the use of fragrance into more frequent and multi-application routines.** In this sense, the future of fragrance packaging depends not only on the formula or the bottle, but on the full system that brings the product to the consumer.

Conclusion

The four trends explored – **refillable packaging, all-over BOV sprays, alcohol-free formulations, and fragrance mists** – collectively signal a **new era for perfumery**. They are driving perfume from the realm of static, occasional luxury toward more **dynamic, everyday usage** that emphasizes convenience, personalization, and eco-responsibility. In each case, **packaging and dispensing technology are pivotal enablers**: whether it's a refill pump that adds circularity, a BOV system that creates a new spray experience, a specialized fragrance pump for water-based scents, or a fine-mist spray pump that broadens how and where consumers use fragrance.

Ultimately, these innovations all converge on a **common consumer expectation**: that **fragrance products should combine high performance, delightful experience, and sustainability**.

Perfumery is no longer just about the juice inside the bottle; it's about **reimagining the entire product ecosystem** from the formula to the final spray. By embracing this holistic view, fragrance companies can ensure that their creations remain relevant and desirable in a rapidly evolving market.



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