



The European Green Deal

**How the fragrance industry
can help make it a success**

IFRA Policy recommendations (2022-2024) on the European
Green Deal and Chemicals Strategy for Sustainability



About IFRA – The International Fragrance Association

Founded in 1973,
the International
Fragrance Association
represents the
interests of the
fragrance industry
worldwide.

We bring together multinational Regular Member companies, Supporting Members, and hundreds of small and medium-sized fragrance companies represented via 23 National Associations. As an Association, we are committed to promoting the safe use of fragrance for everyone's enjoyment.

The modern fragrance industry has its roots in Europe dating back more than 250 years ago, in the South of France. The fragrance sector is a key part of both Europe's cultural heritage and its innovative, knowledge-based future. Our sector sources ingredients from across Europe and globally, is comprised of around 800 firms and employs almost 20,000 people in Europe. The European fragrance industry market¹ is estimated at €8bn, and delivers a key attribute in consumer products that generates €357bn of global sales of consumer products.²

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Foreword

The current global sustainability challenges cannot be ignored: We need a systems change to create the economic systems of the future to be in harmony with the natural world.

The European Green Deal is the ambitious strategy of the European Union to become carbon neutral by 2050. To achieve this overarching goal in 28 years from now, all actors need to put more stakes in the ground now. The business community reads with interest the EU Green Deal and its sub-strategies, proposing paradigm shifts in policy making to achieve a circular economy that decouples future economic growth from natural resource use.

The fragrance industry, represented through the International Fragrance Association IFRA – as its global representative – backs the vision of the Green Deal and is committed to doing its part to help the EU achieve this long term transition.

One of the Green Deal sub-strategies is the Chemicals Strategy for Sustainability (CSS). It is one of the key strategies with direct impact on many industry sectors including the fragrance industry. We support the overarching goals of the CSS, “to ensure our well-being, protect our health and security and meet new challenges through innovation”.

The increased investment and innovative capacity of the fragrance industry to provide the safe and sustainable materials of the future will be an essential factor for new solutions to support the green and digital transition of our economy and society.

The fragrance industry has a long-standing cultural heritage in Europe, with its roots dating back over 250 years in the South of France. It is a knowledge-based innovative industry sector, investing 8% of its R&D to provide differentiation through technology, understanding of consumer trends and sustainable sourcing and production.

The fragrance industry, through IFRA, promotes the safe use of fragrances and science is our foundation. For nearly five decades, we have carefully examined the safe use of fragrance ingredients. Operating under a global code of practice and product stewardship program, we established the IFRA Standards based on a continuously refined risk assessment approach. The Standards ban, restrict or set purity criteria for the use of certain fragrance ingredients. They are mandatory for all IFRA members, set the boundaries for fragrance creation and are globally recognised.

This is why we are committed to realise the CSS's overarching strategy's objectives and make the transition to even more innovative, safe and sustainable chemicals. Operating in the middle of a sophisticated fragrance value chain, our scents are not only essential enablers for the use of hygiene products, but they are being ranked by consumers as the most important preference drivers. They are essential to downstream user sectors to differentiate themselves in the personal care/cosmetics, home care/cleaning, industrial/institutional and fine fragrance industries. Across a broad range of consumer products, fragrance provides uniqueness of brands and makes their difference.



Thanks to multiple programs, many IFRA members have already made strong steps to contribute to the transition described in the European Green Deal and the Chemicals Strategy for Sustainability. We invest heavily in research and development and shift towards renewable carbon, renewable feedstocks and bio-sourced ingredients.

A recent global study, conducted for IFRA, found that fragrance manufacturers invest 8% of net sales in R&D (higher than all sectors other than pharmaceuticals and technology hardware in the European Union).

Beyond financial considerations, our sector brings significant indirect value to the economy in markets where consumer preferences are driven by smell. The COVID-19 pandemic has highlighted the sense of smell as an indicator of health and well-being, as well as the importance of fragrance in personal care and cleaning products that stimulate positive emotions such as self-confidence and cleanliness.

The fragrance sector also has a fundamental connection to nature, and the vast majority of our creations are rooted in our understanding of the natural world. This proximity to the natural world gives us a keen interest in sustainable chemistry and bio-based chemicals, including natural complex substances and mixtures. This is another reason why we are committed to bring our expertise to EU and national decision-makers.

The purpose of this living document is to provide an overview of how the fragrance industry contributes positively to Europe's economy, society and culture, and how we propose to address the questions and challenges posed by the CSS.



by **Martina Bianchini**
President, IFRA



and **Hans Holger Gliewe**
Chairman, IFRA

While we support these ambitions, we must also ensure that the proposed policy measures do not cause unintended consequences which negatively impact the economic, social and environmental sustainability of Europe's citizens, communities and businesses.

This paper thus not only describes our industry but also outlines the policy areas which require more attention for the EU to make the transition. We believe that science must remain the foundation of all policy making and that science-based decision-making remains essential for 'Better Regulation'. We also believe that any proposed simplification procedures by the EU need to be carefully looked at, in order to avoid unintended adverse consequences on all actors.

The European Union has made it clear that we are at a turning point. As an industry, we are therefore prepared to step up our engagement to discuss the new concepts under consideration. We stand ready to do our share and bring in our expertise to dialogue with EU decision-makers, not only in Brussels, but also in the EU Member States, and take part in shaping Europe's innovative and knowledge-led future.

Executive summary

Fragrance is an **essential part** of our daily lives and our **well-being, health, and hygiene**. It is a key element of everyday products such as personal care products and cosmetics, hand sanitisers, surface cleaners and anti-bacterial detergents, as well as fine fragrances (perfumes).

The fragrance industry is a positive force for environmental, social and economic sustainability. The foundations of the sector's approach on fragrance safety and sustainability are the IFRA Standards and the IFRA-IOFI Sustainability Charter. For nearly 50 years, the fragrance industry has advanced the safe use of its ingredients, notably via the establishment of an **industry-wide Code of Practice and the IFRA Standards³**, which are based on a continuously refined risk assessment approach for fragrance ingredients carried out by the **Research Institute for Fragrance Materials (RIFM)**. The IFRA-IOFI Sustainability Charter takes a lifecycle approach to its products across the value chains. Furthermore, the European Union already has one of the **most comprehensive and protective regulatory systems** and we are committed to supporting the EU in **building on this solid, existing science-based framework**.

In December 2019, the European Commission presented its Communication on the European Green Deal,⁴ an umbrella communication covering several sector-specific deliverables including the Chemicals Strategy for Sustainability (CSS). **IFRA supports the aims of the Green Deal** to transform the EU's economy for a sustainable future. We also support the EU's efforts to ensure **health and environmental protection** while at the same time improving the **competitiveness of European industry, promoting recovery from the COVID-19 pandemic**, fostering the **EU's open strategic autonomy** and **making the transition to a bio-based economy**.

By leveraging our strong track record on sustainability, we look to build a more sustainable fragrance industry.

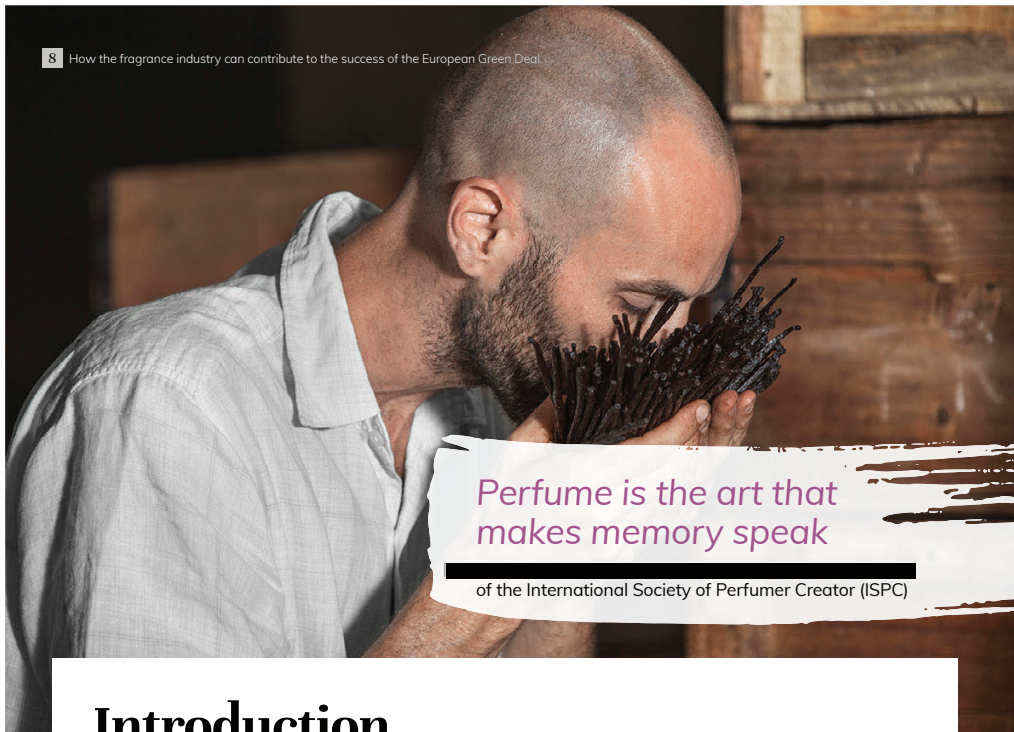
By leveraging our strong track record on sustainability, we look to build **an even more sustainable fragrance industry, examining how to apply the life-cycle approach at every stage of the fragrance value chain**, from responsible sourcing of natural ingredients to enhancing efficiencies in our manufacturing processes, and embedding green chemistry principles ever more in our daily work.

To make a success of the objectives of the Green Deal and the CSS, these are our **recommendations**:

1. The **IFRA Standards and IFRA-IOFI Sustainability Charter** are the **foundations of the fragrance industry's approach** to the EU Green Deal and the CSS
2. **Fragrances** respond to **essential consumer needs in daily products** for health, wellness and hygiene
3. The **transition pathway** should preserve the **unique qualities of fragrances**

To be successful in the green transition, the fragrance industry must rely on:

- **An ambitious and strategic research and innovation agenda** for sustainable chemistry, to enable the speedy conversion of knowledge into innovation
- **Policy consistency and regulatory predictability**, to build increased value chain resilience and tackle global megatrends
- **Alternatives to animal testing for safety assessments**, to ensure animal testing is always the last resort
- **Consistency between European and international regulations**, to promote global functioning markets



Perfume is the art that
makes memory speak

of the International Society of Perfumer Creator (ISPC)

Introduction

The International Fragrance Association (IFRA),

was founded in

1973

represents the interests
of the fragrance industry
worldwide.

It brings together

seven

multinational
companies

ten

supporting member
companies

hundreds

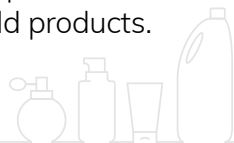
of small and medium-sized
fragrance companies via

twenty-three

national
associations.

At IFRA, our mission is to *promote the safe
use of fragrance for everyone's enjoyment*
whether in fine fragrances, personal care
and cosmetics, or household products.

These companies create the *familiar smells and
fragrances* that we encounter in our daily life.



One of IFRA's primary roles
is to oversee the safe use of
fragrances and mixtures via the
IFRA Code of Practice.⁵

This is the fragrance industry's
flagship self-regulatory
programme, enshrining best
practice in the sector. Mandatory
for all IFRA members, the Code
of Practice includes the **IFRA
Standards**,⁶ which ban, restrict
or set criteria for the use of
certain ingredients, based on
rigorous scientific evidence.

The Standards are set by IFRA on the basis of **safety
assessments prepared by the Research Institute for
Fragrance Materials (RIFM)**,⁷ with decisions made by
an **independent Expert Panel for Fragrance Safety**.⁸

**IFRA is committed to sustainability and supports
the aims of the European Green Deal to address the
climate crisis and transform the EU's economy for a
sustainable future.** The Green Deal acts as an umbrella
strategy for several sector-specific deliverables, many of
which matter for IFRA, including the Chemicals Strategy
for Sustainability (CSS)⁹ and other concrete actions
related to the revision of EU chemicals¹⁰ and other
legislations. We support the EU's efforts to strengthen
health and environmental protection, including the
transition to a bio-based economy, while at the same
time improving the competitiveness of European
industry, promoting socio-economic recovery from the
COVID-19 pandemic, and developing the EU's open
strategic autonomy.

Fragrance is an essential part of life, with important social, economic and environmental dimensions.

As an example of Europe's intangible heritage, fragrance has long played a social role, and while fragrances can take the form of a refined art, they also play a vital role in everyday well-being – from the aura of cleanliness in soap to the comfort of fresh-smelling laundry. Indeed, **a world without scent would be bleak and empty** – and if fragrances enrich our lives with pleasant scents, they also play a vital role in neutralising malodours and their negative psychological impacts.¹¹

From an economic point of view, **the fragrance industry supports a wide spectrum of markets from cosmetics and personal care products to home care and cleaning products and perfumes**. It is a sector boasting **cutting-edge innovation**, with European companies leading the world in using state-of-the-art technologies and techniques to produce the extraordinary scents that enrich our daily lives.

During the COVID-19 pandemic, the sector's resilience and capacity for innovation supported the value chain, playing a critical role in providing consumers with essential products for emotional fulfilment, well-being, hygiene and health.



Thus, fragrances are both at once at the heart of preserving Europe's rich cultural heritage and unlocking its innovative future.

The fragrance industry is committed to social, economic and environmental sustainability.

It has a strong record, achieved through years of active and collective work driven by the IFRA-IOFI¹² Sustainability Charter,¹³ based on the United Nations Sustainable Development Goals (SDGs).



We are constantly looking to build an even more resilient and sustainable fragrance sector, meeting growing demand for safe and sustainable fragrances by combining human excellence and creativity with cutting-edge technologies in the context of a deep awareness of the boundaries which the natural world imposes on us. We are constantly examining how to apply the life-cycle approach at every stage of the fragrance value chain, from responsible sourcing of natural ingredients to enhancing efficiencies in our manufacturing processes, and embedding green chemistry principles ever more in our daily work. The ultimate goal is to make the transition to a bio-based economy.



This document details the sector's role as it journeys towards the European Green Deal. IFRA values continued dialogue with decision-makers and stakeholders, and is eager to contribute and provide its expertise as part of the discussions on the CSS. As part of supporting the Green Deal's ambitions, IFRA also seeks to ensure that the possible effects on the fragrance industry are considered and addressed.

IFRA is therefore **fully supportive of a Transition Pathway for the chemical industry**, looking at a **holistic approach** and taking into account the **role and added value we bring to Europe – across the value chain** – and considering the **unique qualities of fragrances**.

Our role, and the value we bring to Europe

“

Sometimes, we are artists.

Like the musician who uses notes to create a melody for the ears. Like the painter who uses colour to depict a vision for your eyes. Like a writer who uses words to express an idea for you to think about it. We, perfumers, use ingredients to tell an olfactory story for your sense of smell. We elaborate tales about the scents. We link smells to feelings and moments.

Calice Becker – perfumer-creator and co-President of the International Society of Perfumer Creator (ISPC)

At other times, we are scientists.

We examine elements and ingredients from all over nature. We work with chemists, biologists, botanists, neuroscientists and physicists. We look into the very nature of smells. We see how different molecules combine to form new olfactory compositions. We see how it impacts the body, the brain and the environment.

”

The fragrance industry is a positive force for sustainability

Fragrances can be found in many products that we use every day, playing an essential role in our lives and livelihoods and our personal well-being. Some fragrances help us feel fresh and clean, while others stir our emotions, making us feel happy, calm, strong or confident.

Researchers say nearly 75% of the emotions we feel on a daily basis are regulated by scents.¹⁴

It is no accident that giants of literature and science alike have been fascinated by this: Marcel Proust famously described how the scent and taste of a madeleine can bring back cherished memories from a lost past in his celebrated novel, *À la recherche du temps perdu* (In Search of Lost Time).

Scientists continuously ponder the ways smells affect us – and indeed, how our own scent shapes the relationships we have with other people. New publications regularly add to an already vast body of research.¹⁵



89% of consumers believe that fragrances can improve their wellbeing, providing a positive and supportive influence in their lives.

A clear, recent reminder of the essential nature of scent and fragrance to our well-being came with the COVID-19 pandemic. The virus has accelerated research on the sense of smell, because anosmia, the loss of smell, was recognised by the World Health Organisation (WHO) as an indicator of COVID-19. Up to 80% of sufferers reported loss of scent, including a smaller proportion who did not recover the sense for long period of time.¹⁶ Recovering patients from anosmia have reported a profound and deep appreciation for their sense of smell, that only becomes noticeable when it is absent. **Studies have shown that the impacts of olfactory loss on quality of life and psychological wellbeing are severe,**¹⁷ while some researchers and medical practitioners have dedicated their life's work to helping patients affected by it, including through the use of fragrances for smell training.¹⁸ Research indicates that **89% of consumers believe that fragrances can improve their wellbeing, providing a positive and supportive influence in their lives.**¹⁹

It is this that makes sustainability so vital in our sector: the emotional and social benefits of fragrance must endure and push our world to become cleaner and healthier.

That is why we put sustainability at the heart of our agenda, including through initiatives like the IFRA-IOFI Sustainability Charter.

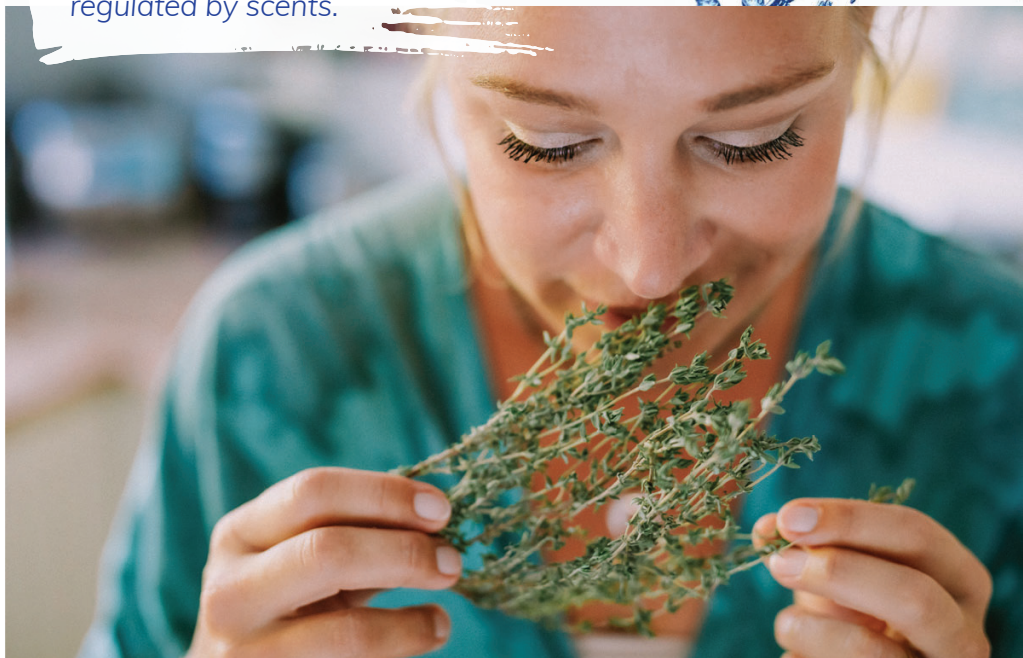
This also drives our commitment to industry self-regulation and product stewardship through the IFRA Code of Practice and the IFRA Standards.

Throughout all our activities, we value open, inclusive and constructive dialogue with all stakeholders, as exemplified by our participation in **the International Dialogue for the Evaluation of Allergens (IDEA).**²⁰

This multi-stakeholder initiative brings together the fragrance industry, downstream users, representatives of the EU institutions, academics, and scientific experts, fostering mutual trust and cooperation and improving risk assessment mechanisms. In this way, we are able to ensure everyone has access to safe fragranced products, in respect of our shared environment.

The European Green Deal is founded upon three key considerations: environmental, social and economic sustainability – and each of these is also fundamental to sustainability in the fragrance sector. It is therefore worth exploring the contributions of the fragrance industry to each of the three dimensions.

Researchers say nearly 75% of the emotions we feel on a daily basis are regulated by scents.



Environmental dimension

IFRA is committed to sustainability and sustainable development. **The IFRA-IOFI Sustainability Charter defines sustainability for our sector, its priorities and common goals, taking a lifecycle approach.** It includes a commitment to green chemistry as well as tools to help companies adopt a more sustainable approach to the development of ingredients and mixtures.

The Charter focuses on five commitments



Ensure **responsible sourcing** throughout the value chain



Reduce our industries' environmental footprint and address climate change



Enhance the well-being of employees and ensure a rewarding labor environment



Be at the **leading edge of product safety**



Be **transparent and a reliable partner** for society

The fragrance sector has a fundamental connection to nature, and the vast majority of our creations are rooted in our understanding of the natural world. **IFRA's Global Strategy for 2019-2024²¹ also prioritises sustainability as a long-term strategic goal:** action points include promoting implementation of the Sustainability Charter, advancing a common understanding of responsible sourcing and developing partnerships to maximise sustainability efforts.

Our industry is committed to **sourcing natural fragrance ingredients responsibly** by reconciling nature conservation with social commitment. We also pay more and more attention to **sustainable resource management**. **Bio-inspired synthetic raw materials** may contribute significantly to a more prudent use of natural raw materials: both are becoming sustainable by design thanks to the application of green chemistry and biomimicry principles, industrial processes and technologies inspired by nature.

Thanks to sustainability programmes, many of our members are **frontrunners in the sustainability of fragrance production** and have already made significant advances in contributing to the transition described in the CSS, **investing heavily in research and development and shifting towards renewable carbon, renewable feedstocks and bio-sourced ingredients**. They are active participants in global sustainability initiatives such as the UN Global Compact,²² Certified B Corporation,²³ One Planet Business for Biodiversity,²⁴ Disclosure, Insight, Action (CDP),²⁵ EcoVadis,²⁶ as well as the international COSMOS²⁷ and NATRUE²⁸ standards for organic and natural cosmetics ingredients. In addition, several individual companies have made commitments to **significantly reduce their greenhouse gas emissions**.²⁹

Social dimension

Before being an industry, **fragrance is first and foremost an element of European heritage and culture.**

Many countries and regions across Europe have their own signature scents, such as Provence French Lavender or Bulgaria's Rose Valley. Perfumers have existed since the Middle Ages, with the first statutes on perfumes dating back to the 12th century. These concerned the 'maîtres gantiers parfumeurs' – the perfumers who were using fragrances to take the edge off the smell of leather gloves. The first distilleries were created in the Grasse region in the south of France in the 16th century.³⁰ Grasse has been a perfumery capital since the Renaissance, drawing beautiful floral essences from its exceptional soil and climate, while building on the almost atavistic knowledge of scents of its perfumers.

In 2018, UNESCO classified the skills and know-how linked to perfume in the Grasse region as an intangible cultural heritage of humanity, covering three different aspects: the cultivation of perfume plants, the knowledge and processing of natural raw materials and the art of perfume composition.³¹

Since the 16th century, however, the fragrance industry has undergone sweeping changes, becoming a far more ubiquitous and essential presence in all our lives. It continues to underpin the world of perfumery, but just as crucial is the role fragrance plays in household and personal care products. **It is at once an industry of global proportions, and a locus of European expertise.**



As a cornerstone of European cultural heritage, fragrance is also a source of shared European prosperity, with the industry sourcing ingredients from across Europe.

The revival of the bergamot crop in Reggio Calabria in Italy has become synonymous with **regional revitalisation**, attracting people and investment to the south of Italy.³² Production of renowned "Rose Valley" in Bulgaria supports the regional economy and boosts rose heritage and sustainable tourism development in the country.³³ Pine is a popular fragrance ingredient cultivated in Nordic countries, which are also the source of tansy and horseradish.³⁴

Meanwhile, lavender is spreading across Spain – becoming a popular tourist attraction – as farmers and regions increasingly pay attention to the economic, social and environmental benefits of alternative crops.³⁵

Physiology explains, at least partly, why people respond to scents. Research shows humans can perceive over one trillion distinct smells,³⁶ and according to olfactory expert Dawn Goldworm, smell is the most developed sense in children all the way through to the age of about 10 years old. This may explain why smell is so closely associated with childhood memories.³⁷

New ways of using scents have emerged.

Some artists have shared the importance of perfumers to inspire the creation of their characters they play on screen or on stage.^{38,39}

A collaboration between the Louvre in Paris and a perfume company means you can now experience the essence of some of the museum's treasures in an entirely new way – through smell.⁴⁰ In the Netherlands, fragrance is even fighting crime: in 2019, prosecutors launched a new perfume designed to smell like illegal drugs to help members of the public spot the signs of criminal drugs laboratories in their local area.⁴¹

Fragrances and fragrance production have changed radically through history – and the fragrance sector must continue evolving with the times, adapting to change and long-term trends. Today, the industry is facing new global challenges head-on, driven by factors such as sustainability and digitalisation.

Economic dimension

The fragrance industry is the central element in a sophisticated value chain that ranges from farmers and ingredient suppliers to makers of consumer products and retailers, generating value and supporting jobs across the agricultural, chemicals, consumer goods and retail sectors.

The industry sources ingredients and materials from suppliers worldwide and relies on international, regional and local businesses to enable its customers to deliver fragrance-based products to their final consumers.

By leveraging this network, industry players can source **natural and synthetic raw materials and create fragrance mixtures that satisfy people's emotional and functional needs.**

The **European fragrance industry** market is estimated at

€8 billion⁴²

and delivers a **key attribute in consumer products** that generates

€357bn in global sales.



As a platform technology, **fragrances enable innovation and value generation downstream**, supporting

growth and job creation among consumer product manufacturers and retailers,



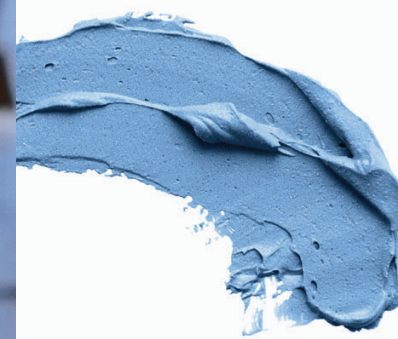
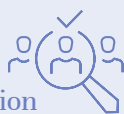
supporting

389,000 jobs.

The supply of **natural ingredients** to the fragrance industry supports

250 jobs per €1million

of spend and **34 jobs per €1million** of spend for synthetic materials.⁴³



Fragrance is a key differentiator

For consumers, and all of us in everyday life, **fragrance fulfils essential emotional and functional needs** – as a result, **people frequently choose to purchase products based on how they smell.** Thereby, despite accounting for only a small fraction of the overall product cost, it is the fragrance that unlocks value for home care and cleaning products as well as personal care products including cosmetics.

Research looking at hundreds of products that use fragrance, such as personal and home care products, shows that **the value added that can be attributed to fragrance is estimated at between €48bn and €72bn, based on a total market size of**

€357bn.⁴⁴



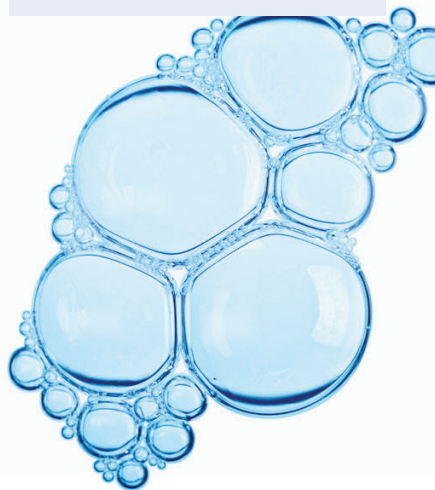
Fragrance is a leading area of European innovation

The fragrance sector is a hub of research and innovation. Fragrance creators include chemists, biologists, botanists, neuroscientists and physicists who study how different molecules combine to form new olfactive compositions, examining elements and ingredients from all over nature. They explore how fragrances impact the body, the brain and the environment.

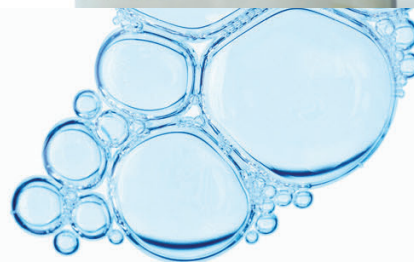
Concretely, the fragrance industry invests around

8% of its net sales

in research and development (R&D): this is **double the EU average** for large global companies and higher than all other sectors besides pharmaceuticals and technology hardware.⁴⁵



If the fragrance industry invests so much in R&D, it is because companies in the sector need innovation to succeed. **Cutting edge technologies provide new ways of differentiating products:** for example, leading perfumers are using **artificial intelligence** to identify the ideal combination of ingredients to bring their creations to life. Fragrance manufacturers are leveraging **big data** to understand the latest **consumer trends**. And industry-wide, **technology solutions and digitalisation are advancing sustainable production**. The global market for digital scent technology was valued at \$905 million in 2020, and is expected to reach a value of \$1.8 billion by 2028 – and Europe is home to some of the leading market players.⁴⁶ In Geneva, Switzerland, some have begun to describe a 'Silicon Valley of smell'.⁴⁷



Fragrance delivers economic and social value and nurtures skills

The fragrance industry supports value generation and job creation through activities such as manufacturing, blending, and R&D.



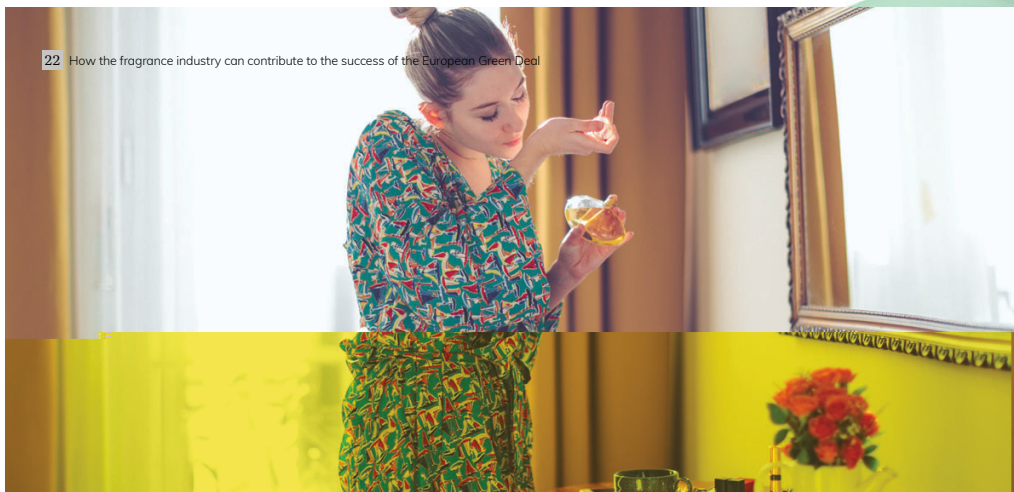
€1bn
of added value

€135,000
of value added
per employee



In Europe, the activities of **the fragrance industry create thousands of jobs** and more than €1bn of added value. Moreover, when one considers that **fragrance can unlock up to 88% of the value of certain final products**,⁴⁸ it is clear that the sector punches above its weight in terms of its final real-world impacts. The industry's activities benefit suppliers and the communities in which they operate, supporting value generation, employment and wider community benefits along a diverse and global upstream supply chain.

To produce the high-end fragrances for which the industry is renowned, skilled employees engage in sourcing, R&D, creation, evaluation, sales and manufacturing, thereby generating high value added. Globally, the fragrance industry generates €135,000 of value added per employee. This is even more pronounced in the German, Swiss and UK industries, rising to €148,000 per employee, and this is significantly more than, say, the automotive sector, at €115,000.⁴⁹



Our policy recommendations for a sustainable fragrance industry

“The safe and sustainable chemicals of tomorrow are bio-inspired from nature today.”

John C. Warner, Pioneer of green chemistry

Fragrances are unique and complex combinations of natural and synthetic ingredients that are added to consumer products – from perfumes to personal care and household products – **to give them a distinctive scent or to mask unpleasant odours.** Both natural and synthetic ingredients are regulated by EU chemicals legislation⁵⁰. Via the CSS, the European Commission is proposing regulatory and non-regulatory measures including several modifications to the current regulatory structure, of which some are more profound. In making these changes, **legislation needs to take account of the unique qualities of fragrances.**

IFRA is committed to supporting the EU in reaching the goals of CSS. As the Strategy rightly recognises, “the EU already has one of the most comprehensive and protective regulatory frameworks for chemicals, supported by the most advanced knowledge base globally.” We support decision-makers in building on this solid, science-based existing framework to make it more efficient, consistent, and streamlined.

To make the Chemicals Strategy for Sustainability a success, these are our recommendations for a sustainable fragrance sector that delivers for Europeans.



1. The IFRA Standards and IFRA-IOFI Sustainability Charter are the foundations of the fragrance industry’s approach to the EU Green Deal and the CSS

IFRA supports a risk-based and targeted revision of the REACH legislation

In the CSS, the Commission has announced it will:

- **Extend the generic approach to risk management to consumer products** – including cosmetics and detergents.
- **Revise the REACH authorisation and restriction processes.**

For nearly 50 years, the fragrance industry has carefully examined the safe use of fragrance ingredients and established the IFRA Code of Practice and the IFRA Standards⁵¹ based on a continuously refined risk assessment approach for fragrance ingredients. The IFRA Standards, which ban, restrict or set criteria for the use of certain fragrance ingredients, are mandatory for all IFRA members and **set the boundaries for fragrance creation.** The IFRA Standards-setting process principally involves IFRA, the Research Institute for Fragrance Materials (RIFM) and the independent Expert Panel on Fragrance Safety.⁵²

IFRA welcomes the EU’s efforts to even further step up protection of human health and the environment and to make regulation more efficient and predictable. Nevertheless, this should not happen at the cost of dropping the high level and well-established risk assessment structures the EU already has in place. **The fragrance industry heritage of product safety over the last 50 years** needs to be recognised in the CSS framework.

A reasonable balance between scientific integrity and workable regulatory approaches should be maintained. Extending the **generic approach to risk management (GRA) to groups of substances should be based on risk, not hazard**, and requires scientific, transparent and robust criteria for the grouping of substances.

IFRA supports a targeted revision of the REACH Regulation. The revision of authorisation and restriction processes should establish transparent processes to ensure that the most efficient risk management option is selected, and that stakeholders are consulted.

IFRA opposes further moves towards hazard-based regulatory instruments where risk management measures would automatically be triggered by identified hazards and respective classification. **Science and data need to remain at the heart of decision-making**, and chemical risk management should continue to be based on a good understanding of their uses and of potential exposure.

*“Everything is a poison,
nothing is a poison.
It is the dose that
makes the poison.”*

Paracelsus, physician and pioneer
of toxicology, 16th century

This is particularly important for fragrances, which represent a relatively small element in the finished product but can be a major factor for consumers' acceptance and satisfaction. Not looking at the exposure would neglect the essence and inherent nature of fragrances in our daily's lives.

This quote from the 'father of toxicology' speaks to the fact **there is no such thing as an inherently safe material, as literally any substance, including water, can cause harm if exposed at a too high level. It is therefore vital to control risk, not hazard.** Proceeding with a hazard-based approach would be overprotective, but also arbitrary and disproportionate.

Setting the IFRA Standards



Step 1

IFRA sends information to RIFM

IFRA sends information about exposure situation to RIFM. Usage concentration, variety of use, volume of use, chemical composition, olfactory profile, olfactory potential.



Step 2

RIFM prepares a dossier

RIFM prepares a comprehensive dossier on the material, including all available safety data. If necessary, RIFM initiates and organises safety studies to fill gaps in knowledge about the material.



Step 3

Expert Panel evaluates

The independent Expert Panel evaluates the data. It checks whether the data supports current use levels in such a way that there is no risk to consumers. If the safety assessment does not support current use, the Panel instructs IFRA to issue a Standard.



Step 4

IFRA prepares a Standard

IFRA prepares a Standard in line with its Standard-setting process.



Step 5

Consultation phase

The draft Standard is sent to IFRA's members and stakeholders for consultation. The consultation period allows members and stakeholders to provide IFRA with additional data or scientific studies that may need to be considered in setting the final Standard.



Step 6

Publication and implementation

If no additional information is received during the consultation phase, the final Standard is published as part of an 'Amendment to the IFRA Code of Practice'. Following publication, members have specified period to change internal systems and apply the Standard.

*Banning substances could
lead to the decimation of
an entire family of scents.*

Many fragrance ingredients, both synthetic and natural, which originally may be constituents of plants such as rose, lavender and jasmine and which are widely used in perfumery, cosmetics, or personal care products, could be banned or severely restricted with the implementation of a hazard-based approach.

Some of these plants contain constituents that could be considered "most harmful substances".⁵³ The terminologies of "most harmful substances" and "generic approach to risk management (GRA)" – which have not yet been clearly defined and appear equal to hazardous properties – are particularly concerning.

One concrete example of the possible impact of the GRA can be given for salicylic esters in cosmetics.

Salicylic esters are used in fragrance creation, and are notably naturally occurring in certain species of plants. A pertinent example is the presence of methyl salicylate in wintergreen oils (up to 99% in the oil). These essential oils provide aromatic, floral and balsamic notes. In the context of ongoing EU developments, a restriction of salicylic

esters comprising 27 individual substances is being considered. This restriction is being extrapolated for risk management measures from 2 to 27 substances. The grouping approach was suggested given the structural similarity of the substances and the potential for substitution.

IFRA is highly concerned by the simplified grouping and subsequent **application of the GRA, which would ban substances without any risk and safe use considerations.** The **potential for substitution for salicylic esters is today non-existent**, as very few other substances have a similar olfactive profile. Such a regulatory measure could therefore lead to the **decimation of an entire family of scents (floral, balsamic)**, with no precedent on the perfumer's palette; while based on previous safety assessments (as for methyl salicylate), safe uses have been confirmed by the Scientific Committee on Consumer Safety (SCCS), when used in cosmetic products up to certain maximum concentrations.

NO SUBSTANCE IS INHERENTLY SAFE

A generic approach to groups of fragrance ingredients and proposed generic restrictions should be based on safe use and take into account the exposure.

Moreover, the positive track record over the last 50 years should be considered as additional measures ensuring adequate control.

2. Fragrances respond to essential consumer needs in daily products for health, wellness and hygiene

Safe use should remain the first and foremost criteria to allow the use of fragrance ingredients and mixtures.

In the CSS, the Commission has announced it will:

- **Define criteria for essential uses** that will guide the application of essential uses in all relevant EU legislation for both generic and specific risk assessments.

The IFRA Standards and IFRA-IOFI Sustainability Charter are the foundations of the fragrance industry's approach for the **safe and sustainable use of fragrances**. **Safe use** should remain the **first and foremost criteria** to allow the use of fragrance ingredients and mixtures.

The **essential use criteria could be integrated as part of a stepwise approach** – considering safety first – and **be applied in a targeted manner**, i.e. where uses of a hazardous substance present an **unacceptable risk that cannot be addressed by other risk management options** (e.g. minimization of risks, adequate control of exposure).

Defining the essential use criteria demands a **wide debate**, taking into account **social and societal considerations**. The EU Chemicals Strategy for Sustainability refers to the Montreal Protocol to define criteria for essential uses, **“while acknowledging that the scope of chemicals regulatory framework is much broader than the specific scope of chemicals covered by the Montreal Protocol”**.

IFRA therefore believes that **criteria and considerations beyond the Montreal Protocol** should be looked at to define appropriately the criteria for an Essential use concept to be included in the EU chemicals legislation.



The World Health Organisation (WHO) defines “health” as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”. The assessment of the **necessity for health and/or safety** needs to integrate the **impact of fragranced products on consumers’ satisfaction and acceptance**. Across a broad range of consumer products, fragrances are not only **essential to respond to consumer needs in hygiene and well-being products**, but they are ranked by consumers as one of the most **important factors for purchase decisions**. They are essential to downstream user sectors, such as personal care and cosmetics, hand sanitisers, surface cleaners and laundry products to provide a distinct smell and mask unpleasant odours and to **meet consumers’ expectation and promote habits of hygiene**.

Fragrances also play an essential role in our emotional, social and cultural well-being. They are intimately connected to our emotions, and there is extensive evidence that scents overtly or subliminally modulate mood.⁵⁴

The health benefits of smell are not just a matter of perception but are based on measured neurological responses. In recent publications, the positive effects of the scents of lemon, lavender and peppermint have been shown on mood, stress, anxiety and depression. These studies were based on actual brain pattern measurements.^{55,56,57}

The assessment of the **“criticality for the functioning of society”** needs to encompass **cultural and heritage aspects**, as notably explicitly referred to in the Montreal Protocol. **Fragrances are at the heart of Europe’s rich cultural heritage**.

In 2018, UNESCO classified the skills and know-how linked to perfume in the Grasse region as an **intangible cultural heritage of humanity**. The assessment may therefore conclude that the **preservation of the cultural and heritage aspects, in conjunction with the demonstrated safe use and/ or adequate control of exposure, outweigh the concerns related to the presence of certain fragrance ingredient(s) (including natural raw materials) which may be classified as “most harmful substances” in consumer products**.





Fragrances also play **an important economic role**. They support jobs in agriculture, consumer products and retail, sourcing ingredients from across the European Union.

The fragrance industry uses fragrance ingredients derived from a large number of citrus plants such as lemon, orange, grapefruit, mandarin, tangerine and bergamot.

Citrus essential oils provide a pleasant and familiar scent to the consumer. This is why they are widely used in a broad range of consumer products, from cosmetics and perfumes to household cleaning products. Citrus oils are extracted from various citrus fruits themselves. For hygiene or cleaning purposes, citrus oils are very much appreciated as an ingredient due to their refreshing scent and sense of purity they bring along with other properties.

Citrus oils may however contain small amounts of natural constituents which are hazardous. Banning the use of citrus oils in consumer good products due to their hazardous constituents would be inappropriate, unnecessary and against consumers' demand for functional and safe product applications. The consideration of a potentially inappropriate definition of the essential use concept, without looking at the exposure and proportionate risk management options, would be a disproportionate measure to the functioning of the fragrance value chain and could potentially undermine its commercial viability and lead to the loss of essential applications in societal use today.

Therefore, IFRA believes that the concept of essential use should be based on **scientific assessments and only implemented where an unacceptable risk is identified or where adequate control cannot be guaranteed**.

It should be backed up with a socio-economic impact analysis by the authorities, applying a life-cycle approach to evaluating essential use, taking social and economic aspects together with health and environmental considerations into account.⁵⁸

SAFE USE SHOULD REMAIN THE FIRST AND FOREMOST CRITERIA TO ALLOW THE USE OF FRAGRANCE INGREDIENTS AND MIXTURES.

Defining the essential use criteria demands a wide debate, including social and societal considerations.

The role that fragrances play in consumer products for health, wellness and hygiene also needs to be recognised.

The development of Safe and Sustainable by Design criteria should leverage the IFRA Standards and the industry's proven sustainability guidelines

In the CSS, the Commission has announced it will:

- Develop **safe and sustainable-by-design criteria** for chemicals.
- Establish, in close cooperation with stakeholders, **Key Performance Indicators** to measure the industrial transition towards the production of safe and sustainable chemicals.

IFRA supports the development of **Safe and Sustainable by Design (SSbD) criteria** and believes this can be done most effectively by leveraging the framework provided by the above mentioned IFRA Code of Practice and IFRA Standards as well as the IFRA – IOFI Sustainability Charter, which support fragrance manufacturers in shaping SSbD substances.

The Charter is a collective effort to raise the bar and foster sustainability in the fragrance⁵⁹ sector, building on our proud heritage and long-standing commitment to sustainable development. Since its conception in 2016, the IFRA-IOFI Sustainability Charter has helped the sector gather experiences and expertise that can be useful in the context of EU discussions on the development of SSbD criteria.

The Charter takes a lifecycle approach to its products across the value chains, including Focus Areas on Environmental Footprint and on Product Safety, as well as a specific commitment on green chemistry. The availability of innovative, bio-inspired synthetic raw materials contributes significantly to a more careful use of natural raw materials. Both natural and synthetic raw materials are becoming sustainable by design through the application of green chemistry and biomimicry principles, industrial processes and technologies inspired by nature.



Business has an essential role to play in developing the SSbD products and technologies of tomorrow.

In June 2021, IFRA and IOFI released their first annual Sustainability Report,⁶⁰ showcasing and assessing how more than 120 signatory companies are fulfilling the commitments in the Charter. The report found that there is a **high level of awareness and maturity in the industry**, and that the overall footprint of the fragrance (and flavour – F&F) industries is relatively small. More than 75% of survey respondents, representing over 90% of the F&F market, have a **global environmental strategy for implementing eco-measures and acting to reduce consumption and waste**. On **product safety**, the F&F industries are at the leading edge, and more than 90% of respondents engage in dialogue with downstream customers on product stewardship.

The sector is also committed to responsible sourcing, with more than 70% of respondents, including companies accounting for the vast majority of the market, engaging with farmers and communities; the bulk of the market also has advanced human rights, labour and biodiversity action plans.

The fragrance industry is a committed and well-established leader in sustainability. The development of new Safe and Sustainable by Design criteria should therefore **make use of the deep experience and proven achievements of the sector**.

A framework should also be established for continued dialogue, stakeholder consultation and partnerships, in order to fully leverage sectorial expertise.

THE FRAGRANCE INDUSTRY HAS A 50-YEAR HISTORY OF PRODUCT SAFETY AND HAS MADE PROVEN ACHIEVEMENTS ON SUSTAINABILITY.

The development of Safe and Sustainable by Design criteria for fragrances should be based on the tools and practices laid down in the IFRA Code of Practice, IFRA Standards and the IFRA-IOFI Sustainability Charter.



3. The transition pathway should preserve the unique qualities of fragrances

Fragrance companies source a **large number of synthetic and natural materials, which all are regulated by the EU chemicals legislation**. The perfumer's palette is composed of thousands of **complex substances**, representing a **small contribution by volume in the final consumer product** but playing a **major role for consumers**. This must be taken into account in the context of upcoming discussions on the CSS, whether it is on the **generic risk approach** to groups of substances, the **Mixture Assessment Factor(s)**, the new **requirements for (very-) low tonnage substances** or for the application of the “**One Substance, One Assessment**” concept.

As seen in previous sections, the fragrance industry is a **positive force for sustainability**, from an **environmental, social and economic viewpoints**. IFRA is therefore fully **supportive of a Transition Pathway for the chemical industry**, looking at a **holistic approach** and taking into account the **role and added value we bring to Europe – across the value chain** – and considering the **unique qualities of fragrances**.

The three below examples on the **introduction of mixture assessment factor(s)**, of **additional requirements for (very-) low tonnage substances** and the implementation of the “**One Substance, One Assessment**” concept are shedding some light on the trade-offs that may arise from these (generic) regulatory measures on the fragrance value chain.

Any additional Mixture Assessment Factor(s) should be based on robust scientific assessment and be subject to impact assessment

In the CSS, the Commission announced it will:

- Assess how to best introduce in REACH **(a) mixture assessment factor(s)** for the chemical safety assessment of substances.
- Introduce or reinforce provisions to take account of the **combination effects in other relevant legislation**, such as legislation on water, food additives, toys, food contact materials, detergents and cosmetics.

The idea to establish one or several mixture assessment factors for the chemical safety assessment of substances was put forward with the goal to tackle the so-called “cocktail effect” of chemicals. At European level, **there is already a well-established process in place** to assess the potential risks that substances could pose to the environment and to people under the REACH regulation.

This process is based on methodologies which are **inherently conservative**⁶¹ and **cover substances on their own as well as substances used in mixtures**. Moreover, this assessment is considered for the **entire life cycle of the substances** (from its use to its waste), and **captures potential combined exposures** (i.e. the exposure to multiple substances by a single or multiple use(s)).

IFRA is therefore concerned by the **introduction of an additional risk factor** (as a generic one-size-fits-all Mixture Assessment Factor (MAF)) **for fragrance substances**. Combined exposure is a complex matter and cannot be addressed via this ‘simple’ solution.

Such a solution would in fact be a political decision, for which there would be no scientific justification.

Moreover, and as reported in a recent publication from the German Federal Institute for Risk Assessment (BfR),⁶² *the impression that people exposed to mixtures of chemicals will always experience higher toxicity than when exposed to the same chemicals alone is not reflected in the current state of science or that of previous regulatory assessments.*⁶³

Therefore, IFRA believes that the provisions ensuring the safe use of fragrance mixtures should continue to be science-based, proportionate and manageable.

A fragrance mixture is typically composed of a combination of dozens to hundreds of fragrance ingredients.

Fragrances are present at (very) low levels in consumer products, frequently at less than one per cent in the final consumer product formulation. As a result, it generally takes **very small amounts of a fragrance mixture to provide a scent to a consumer product.**

Introducing a generic fixed MAF would have significant impacts on the formulation and reformulation of fragrance mixtures, severely restricting fragrance substances, while the approach may not be scientifically substantiated. The introduction of a generic MAF requires a detailed impact assessment by the authorities to fully understand these effects.

A range of MAFs could be applicable depending on the exposure scenario.

FRAGRANCES ARE COMPLEX

Any additional risk factor aiming at capturing the exposure to multiple substances (a MAF) should be based on a robust scientific assessment and be subject to impact assessment by the authorities, including consideration of currently applied sector-specific risk management measures.

Regulatory requirements for (very-) low tonnage fragrance substances must be proportionate and clearly add value

In the CSS, the Commission has announced it will:

- Amend REACH registration requirements to enable an **effective identification of substances with critical hazard properties**, (...), the move towards grouping approaches, (...), and the **obligation of chemical safety reports for substances between 1-10 tonnes**.

The fragrance industry produces a large number of fragrance ingredients at low levels. **IFRA is very concerned with the introduction of stricter REACH registration requirements for substances at lower tonnages.** Given their intended use, fragrances are by nature characterised by ‘low tonnage’ (< 10 tonnes) and even ‘very low tonnage’ substances (kg ranges). We therefore believe that the new data requirements should be clear, justified and bring added value compared to the current status quo.

This is important so that new requirements remain manageable for the wide range of operators in the sector, from multinational companies to small and medium size enterprises (SMEs) – including microenterprises and family businesses with less than 10 employees.

More than half of the registered fragrance substances are in the registration band between 1 and 10 tonnes and 80% in the case of essential oils.



The setting of new information requirements need to take into account the impact it would have on the companies operating in the sector, in terms of administrative burden and related compliance costs. **This should particularly be considered for SMEs**, including farmers, assessing their existing economic, technical and human resources. It is also important to **develop proportionate requirements in line with the scale of the impact**, established in consideration of the actual risks substances present for consumers and the environment.

A comprehensive impact assessment is therefore required to understand the **socio-economic impacts, especially for SMEs, as well as consumers' demands**, the possible **trade-offs** in terms of **innovation**, and finally, whether **these requirements are proportionate given measurable environmental impacts**, in line with Better Regulation principles.

Special attention should be given to the impact on natural fragrance substances. Achieving compliance with the current REACH regulation for all SMEs manufacturing natural

fragrance substances was already a challenge, which succeeded thanks to a dialogue between industry and representatives of the European Commission, the European Chemicals Agency (ECHA), and local authorities. **This constructive dialogue led to the publication of two sector-specific guidelines**, enabling authorities to take better account of the specificities of the sector within REACH. **Preserving this success is important as consumers increasingly value their access to local and naturally sourced products.**

IMPACTS SHOULD BE ASSESSED.

Regulatory requirements for low-tonnage or very low-tonnage fragrance substances must be proportionate and clearly add value.

IFRA recommends maintaining the obligation of chemical safety reports for substances above 10 tonnes, so that supply of fragrance ingredients remains manageable.



One Substance, One Assessment could help implement a more consistent approach to hazard assessments

The CSS offers a unique opportunity for regulators to **improve consistency between the actions of different authorities**. The **"One Substance, One Assessment"** concept could be appropriate if it is only applied to the **hazard assessment**. Sectors could then benefit from access to a complete set of hazard data, forming a common basis for sector-specific risk assessments.

However, **the concept should not pre-empt or replace sectorial risk assessment**. It should be stressed that in relation to cosmetic products, due to the animal testing ban under the Cosmetics Regulation, the full hazard dataset may not be acceptable for use in cosmetics risk assessment.

IFRA is supportive of the maintenance of the Scientific Committee for Consumer Safety (SCCS) as a dedicated and experienced independent expert committee to underpin the cosmetic ingredients legislation. For more than 40 years, the SCCS has built up **state-of-the-art expertise in risk assessments and its opinions are recognised internationally**, becoming a reference for cosmetic ingredients legislation in different regions of the world, and thus facilitating trade and exports of cosmetic products from the EU. In addition, the SCCS has developed **ground-breaking know-how and scientific approach on alternative methods to animal testing**, given the very specific animal testing ban under the cosmetics regulation and the resulting needs for specific risk assessment approaches. One such development is the **Quantitative Risk Assessment Methodology (QRA2)**, which was jointly developed under the **International Dialogue for the Evaluation of Allergens (IDEA)**.

The **"One Substance, One Assessment" concept** offers an opportunity **for the EU to implement a more consistent approach to hazard assessments across various pieces of legislation** – whether it is for the same chemicals under REACH or CLP, in food contact materials legislation or other product legislation. **However, attention should be given to cross-framework compatibility and specific risk assessment** should be safeguarded. This becomes evident from the simple consideration of different exposure routes resulting from the application of products. Looking at a very generic example of an ingredient having the potential to cause irritation and sensitisation, the evaluation of an ingredient's use in a fragrance mixture in cosmetic products with potential exposure to skin and eye will follow different approaches and assessment outcomes compared to use in a flavour that is part of a product that will be ingested as a food.

"ONE SUBSTANCE, ONE HAZARD ASSESSMENT" COULD ENABLE SECTORS TO BENEFIT FROM ACCESS TO A COMPLETE SET OF HAZARD DATA, FORMING THE BASIS FOR SECTOR-SPECIFIC RISK ASSESSMENTS.

The Scientific Committee for Consumer Safety (SCCS) should continue to provide its state-of-the-art expertise in risk assessments as visible in the cosmetics legislation.

Enablers for the green transition

Sustainable chemistry has made possible the discovery of new molecules and new, cleaner and safer methods, using renewable resources and limiting the production of waste.

Sylvain Antoniotti, Director of research at the French National Centre for Scientific Research (CNRS).

The fragrance industry needs a broader enabling framework to become even more competitive, innovative and successful.

This includes horizontal enablers such as **predictable science-based policies, digitalisation and functioning global markets**. All of these are vital for the maintenance and development of the sector, especially in the longer run, and guarantee a stable outlook for possible investments.

IFRA considers that the following enablers are key for a successful green transition for the fragrance industry:



IFRA supports an ambitious and strategic research and innovation agenda for sustainable chemistry

Research and Development (R&D) are important drivers of Europe's competitiveness and growth, as **industrial success** relies on the **speedy conversion of knowledge into innovation**. The fragrance industry is a highly innovative sector, investing 8% of revenues in R&D. The industry sits at the heart of a sophisticated value chain where Europe is a global leader, holding a **pivotal position in R&D and the market introduction of innovative solutions**, such as the development of bio-inspired and upcycling fragrance ingredients, the use of Artificial Intelligence and further examples provided below. Therefore, IFRA believes that the **fragrance industry must continue to play a key role in future EU R&D policy and priority-setting**.

Europe's digital ambitions are a major priority for the fragrance industry, as digital solutions are crucial to ensuring Europe's competitive advantage in the global economy and delivering sustainable growth and jobs. **The sector invests heavily in digital technologies for fragrance creation**, to master lasting fragrances, to explore and understand the role of smell in our daily lives and to develop digital smell-based technologies.

Did you know? Some gaming companies are exploring how smell (and even taste) could join the sensory experience of gaming. The new technology would provide smell to a user, and even account for the different ways humans perceive smell!⁶⁴

At the same time, the **European fragrance sector's continued competitiveness and capacity to innovate also relies on a competitive Research and Innovation (R&I) framework at EU level**. Indeed, the value of EU action in this area is clear when one looks to various previous and ongoing innovation projects in the industry.

One notable success of EU R&I policy in the sector occurred as part of the Horizon 2020 funding programme (October 2018 – March 2020), advancing research into the development of **sustainable synthetic menthol** as a fragrance ingredient. Menthol is used in many daily consumer products such as toothpastes, personal care products such as shower gels, and cooling ointments. In recent decades, the natural extraction of menthol (such as peppermint oil) could no longer meet the widespread demand and synthetic alternatives were necessary. Through this project, a **ground-breaking innovation was discovered to create sustainable synthetic menthol**, without using metal catalysts.⁶⁵

Another project, which was launched under Horizon 2020 in May 2020 for a 4-year duration, aims at reducing costs, increasing scale and lifting sustainability for **microalgae crops**. If successful, microalgae hold promise for greener agriculture that could supply the fragrance as well as other sectors.⁶⁶



The fragrance sector is constantly looking to new innovative materials to maximise sustainability.

For example, bioengineering approaches are solving the problem of over-harvesting by **designing strains of yeast that can be fermented into fragrances such as peach, rose, or coconut**. Fragrance houses are increasingly exploring how they can **repurpose discarded materials, whether it be using botanical waste to create essential oils, or sourcing oakwood extract from the wood discarded from wine harvests or from alcohol barrels**.⁶⁷

These concrete examples reflect the importance of maintaining and increasing investment into targeted research to close existing knowledge gaps, support innovation and respond to societal demands for increased sustainability and access to natural fragrances.

An ambitious and strategic European research and innovation agenda for sustainable chemistry, such as under the Horizon 2020/ EU R&I programmes or the Partnership for the Assessment of Risk from Chemicals (PARC) should guide the implementation of the CSS.

These projects will take time, as will the ensuing discussions in the scientific regulatory community. However, this time is needed to ensure the CSS is guided by the best science available.

THE FRAGRANCE INDUSTRY IS HIGHLY INNOVATIVE

The CSS must be accompanied by an ambitious research and innovation agenda to promote sustainable chemistry and innovative materials including bio-based materials.



Better Regulation tools and regulatory predictability should continue to guide the 'twin' transition (green and digital)

IFRA supports adherence to the European Commission's Better Regulation principles, which call for systematic **assessment of the economic, social and environmental impacts of policy action** and ensure a consistently high quality of proposed legislation. This includes integrating strategic foresight in policymaking to ensure that **regulation addresses key challenges in a targeted manner that increases economic, health, social and environmental resilience**.

The **2021 Strategic Foresight Report** presented by the European Commission identifies "Ensuring sustainable and resilient health and food systems" as the first of ten strategic areas where the EU must strengthen its response to global challenges and enhance its global leadership.⁶⁸ **During the COVID-19 pandemic, fragrance manufacturing has played a key role as a 'critical infrastructure' in the fight against the virus.** Vital products including hydroalcoholic gels used in hospitals, pharmacies and elderly care facilities, as well as sanitary, hygiene and disinfecting products, relied on the sector's capacity to continue operating as an essential component of the supply chain. Our members have played a crucial role in ensuring continued access to vital products and in many cases diverted resources to supporting pandemic control.

Beyond the immediate response to the pandemic, our sector is also committed to **building increased resilience for the long term and tackling global megatrends**. This includes fully leveraging the opportunities of the digital and green transition by continuing to prioritise innovation and applying cutting-edge technologies to achieve sustainable growth.

IFRA also stresses the importance of **leveraging digital tools to the benefit of citizens and businesses across Europe**. By engaging and informing consumers in an innovative way, digital consumer information can help create a culture of better-informed EU citizens in support of the green and digital transition. It can also help **reduce packaging waste** by limiting the size of packaging and decreasing the need to destroy outdated labels. IFRA therefore supports a **coordinated EU approach to promote uptake of such tools across business sectors, ensuring that small enterprises are empowered and vulnerable customers are supported through the digital transition**.

DID YOU KNOW THAT ARTIFICIAL INTELLIGENCE IS BEING ACTIVELY EXPLORED AND DEVELOPED IN THE FRAGRANCE INDUSTRY?

Francis Kurkdjian, perfumer-creator and co-President of the International Society of Perfumer-Creators (ISPC) stressed that “Without the human, all you get is a blend.” That said, data-driven innovation is in development in the fragrance industry, and the interaction between human and machine drives the creative process. Perfumers are using artificial intelligence to create new fragrances: to find the most efficient dosage between two ingredients to reduce fragrance oil concentration, to pair it with something complementary that makes its effect more powerful, or to measure how intensely we would smell the scent over time. Artificial intelligence also limits environmental impact, offering a reduced number of trials or proposing alternatives to natural ingredients available only in limited amounts in nature. For example, rose may be enhanced by other notes to preserve the use of the rare and natural oil.

Consistency in policy and regulatory stability is essential for innovation. When considering changes to the current regulatory framework, the possible impact on predictability, legal certainty and long-term investment must be considered. Investment in R&D by the fragrance industry is high, at around 8% of net sales,⁶⁹ as fragrance companies develop new innovative means and technologies for product differentiation, understanding consumer trends and advancing sustainable production. Innovative solutions and sustainable chemistry are vital to achieving a climate neutral, circular, digital, safer, cleaner, and strategically autonomous Europe. **By ensuring regulatory predictability, policymakers can support the sector's stability and capacity to make investments for the future.**

SMEs are particularly susceptible to outsized burdens and costs caused by new regulations and need time to adapt when new regulations are imposed as they are, often lacking the economic resources, technical capacities and personnel of larger firms. They have also been disproportionately affected by the economic impact of the COVID-19 crisis. It is important that they be **well informed and consulted during the policymaking process**, and that any regulatory change takes into account the potential impacts on small enterprises, including through systematic application of the ‘SME test’.

Regulatory predictability is notably a key success factor for REACH. Several proposals introduced in the CSS have the potential to drastically alter the rules of REACH and other chemicals legislation, both in terms of which substances are understood to be ‘of concern’ and in terms of how risk management processes are subsequently pursued for these substances. IFRA therefore stresses the need to **assess the implications and costs of applying legislation, especially for SMEs, including with regard to any revision of REACH.** IFRA also highlights the importance of reality checks on implementation to ensure that proposals are economically and technically feasible and perform as expected.

Finally, IFRA welcomes the **Commission's adoption of a ‘one in, one out’ approach to legislation**, which ensures that any new introduction of a regulatory burden is offset by removing an equivalent burden in the same policy area. While the primary test remains whether the benefits of new legislation outweigh the costs, ‘one in, one out’ offers a powerful and complementary way to guard against accumulated regulatory burdens and ensure policymaking pays attention to process as well as objectives.

THE FRAGRANCE INDUSTRY IS A RESILIENT AND STRATEGIC SECTOR

Policymaking should encompass policy consistency and regulatory stability to build increased value chain resilience and tackle global megatrends.



We need to leverage the successful work on alternatives to animal testing for a more ethical approach to regulation

Consumers increasingly demand **high ethical standards** in the products they buy, not least with regard to the welfare of animals. Approaches to regulation that put animal testing front and centre, regardless of progress in ethical scientific testing, are therefore becoming increasingly unpalatable to European citizens, few of whom now see the use of animals as acceptable or necessary.

In recent years, our sector has actively supported progress in alternatives to animal testing. It has done so notably through the International Dialogue for the Evaluation of Allergens (IDEA), a long-term, multi-stakeholder, expert-led programme that seeks to advance consumer protection through a responsible approach to **addressing fragrance allergens and evaluating the application of alternatives to animal testing in risk assessments**. The IDEA platform brings together experts and stakeholders from the fragrance industry, downstream users and academia, as well as leading scientists in fields such as dermatology, toxicology and alternatives to animal testing, with observers from the EU institutions.

We are also a highly engaged founding member of the cross-sectoral **European Partnership for Alternative Approaches to Animal Testing (EPAA)** and member of the Board of the **Centre for Alternatives to Animal Testing (CAAT)**.

We support the European Parliament's resolution⁷⁰ of 16 September 2021 calling for a **better coordinated, cross-sectoral and EU-wide approach** across all Member States and all EU agencies, including via the EPAA. As highlighted in the resolution, we also value the **active involvement of the private sector in the European plan to accelerate the transition to innovation without the use of animals in research, regulatory testing and education**.

We believe the revision of EU chemicals legislation should encompass the tremendous progress made in alternatives to animal testing in recent years, and **must absolutely avoid increasing the demand for animal testing**. This would undermine the substantial ongoing work on alternatives and raise serious ethical concerns.

The targeted revision of the REACH Regulation offers a vital opportunity to consider recent toxicological advancements and respond to the demands and concerns of European citizens. **Advancements in Non-Animal Methods/New Approach Methodologies (NAMs) need to be reflected in the new data requirements:** such recognition is already included in the **Cosmetics Regulation**⁷¹ – which bans animal testing for cosmetic products. It is also essential to speed up the development and validation of NAMs (particularly in relation to endocrine disruptors) to ensure more regulatory acceptance of alternatives.

The impact of new data requirements on animal welfare should, therefore, be an **integral part of the European Commission's Impact Assessment**, including consideration of the number of animal studies that may be involved. We also recommend clarifying "exposure-based waiving," as the full potential of this approach has not been fully exploited until now.

ANIMAL TESTING SHOULD ALWAYS BE THE LAST RESORT

We are fully supportive of the pursuit of alternatives to animal testing for safety assessments, and are actively engaged through IDEA, EPAA and other initiatives.



It is critical to promote functioning global markets and preserve consistency between European and international regulations



The map highlights the global sourcing countries of a range of natural fragrance raw materials.

Fragrance is global. The industry sources fragrance ingredients and materials from more than 50 countries. From Brazilian acai berries to Indian sandalwood, to Haitian vetiver, Turkish orange blossom and Egyptian geranium (to name only some examples of the most iconic natural ingredients), **the fragrance industry supports socio-economic development across the world**, contributing to value chain generation in local communities.⁷²

Functioning global markets are therefore particularly important for the fragrance industry.

In the context of the CSS, we believe that EU decision-makers should, where possible, take into account consistency with international regulatory instruments. The EU should make use of international bodies, institutions and conventions, such as the UN Globally Harmonised System of Classification and Labelling of Chemicals (GHS), and work against deviations between EU legislation and international rules and standards. This is particularly important for the EU's CLP Regulation, implementing the UN GHS for Classification and Labelling into EU law.

Trade policy should also foster fair competition for the European fragrance manufacturers in order not to disadvantage the European industry due to an unproportionate high regulatory burden. EU policies should not only preserve intra-EU competition but also maintain the ability of the European industry to remain competitive on a global scale.

Finally, **we would value close collaboration between the European Union and countries outside Europe to ensure that future EU legislation is understood by policymaking and enforcement authorities.** This would avoid conflict and/or misunderstanding when new countries are considering the European legislation to build up future regulation.

FRAGRANCE IS GLOBAL

Consistency between European and international standards is key to foster fair competition and safeguard the competitiveness of the fragrance industry.



Conclusion

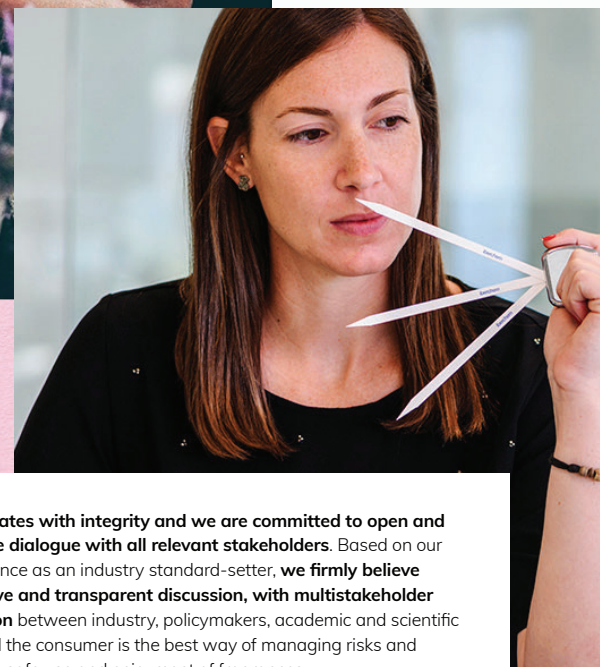
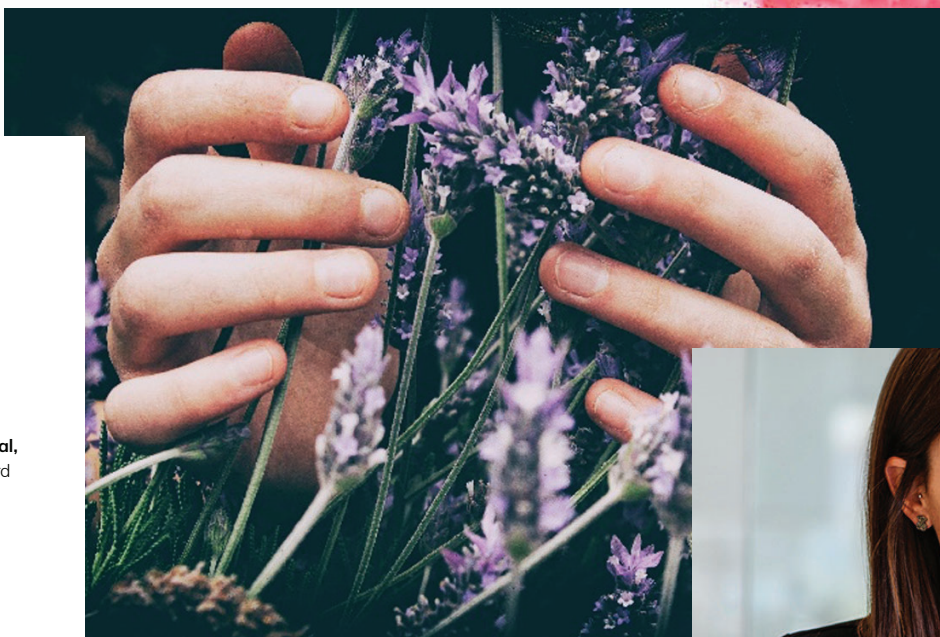
The foundations of the sector's approach on fragrance safety and sustainability are **the IFRA Standards and the IFRA-IOFI Sustainability Charter**.

The fragrance industry heritage of product safety over the last 50 years needs to be recognised in the CSS framework.

Moreover, **the fragrance industry is a positive force for environmental, social and economic sustainability**. It already has a strong track record and a high level of awareness and maturity on sustainability, achieved through years of active and collective work and, more recently, as part of the IFRA-IOFI Sustainability Charter, based on the United Nations Sustainable Development Goals (SDGs).

With the European Green Deal and the Chemicals Strategy for Sustainability (CSS), the European Commission has proposed non-regulatory and regulatory measures, of which some are more profound. **We are committed to supporting the EU in its work to achieve this transition to the CSS, but it must be based on solid and existing science-based frameworks**. Science and data need to remain at the heart of decision-making.

To ensure the CSS achieves its objectives as it pertains to the fragrance sector, we have suggested **several policy recommendations that take the specificities of the industry into account**. These include providing the IFRA Code of Practice, IFRA Standards and the IFRA-IOFI Sustainability Charter as a basis for the development of Safe and Sustainable by Design criteria in the fragrance sector; ensuring that an extension of the generic approach to regulation of substances is based on risk - considering exposure; consulting broadly on the inclusion of any "essentiality" concept in the revised legislation to ensure appropriate definition, criteria and application of the concept; basing any Mixture Assessment Factor(s) (MAF) on current scientific knowledge, taking into account the complexities of the fragrance industry; and ensuring that any regulatory requirements for (very-) low-tonnage fragrance substances are proportionate and clearly add value.



IFRA advocates with integrity and we are committed to open and constructive dialogue with all relevant stakeholders. Based on our long experience as an industry standard-setter, **we firmly believe that inclusive and transparent discussion, with multistakeholder collaboration** between industry, policymakers, academic and scientific experts, and the consumer is the best way of managing risks and ensuring the safe use and enjoyment of fragrances.

IFRA is **fully supportive of a Transition Pathway for the chemical industry**, looking at a **holistic approach** and taking into account the **role and added value we bring to Europe – across the value chain – and considering the unique qualities of fragrances**. To that end, we welcome the opportunity to engage in this process as the EU reviews and revises the relevant legislation – and **we look forward to shaping a sustainable future with you**.

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Image References

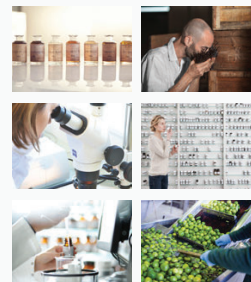
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