
EXPLORING THE CONFLICT AND COEXISTENCE OF SMELL TRADEMARKS WITH TRADITIONAL KNOWLEDGE AND GI PROTECTION IN INDIA

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ABSTRACT

The recognition of **smell trademarks** represents one of the most innovative yet complex developments in contemporary intellectual property law. Unlike conventional trademarks, which are visual, textual, or symbolic, smell trademarks rely on the perception of scent to identify and distinguish the goods or services of one business from those of another. This intangible nature makes their registration and enforcement particularly challenging, as it requires the ability to define, reproduce, and represent a scent in legal and commercial contexts. Jurisdictions such as the **United States** and the **European Union** have established frameworks for registering smell trademarks, which require strict criteria including distinctiveness, non-functionality, and demonstrable consumer recognition. These systems have been tested through various cases, guiding how non-traditional marks can be incorporated into established intellectual property regimes.

In contrast, **India has not yet formally recognised olfactory trademarks**, despite its growing market for perfumes, cosmetics, and aromatic products. At the same time, India is home to a vast repository of **TK** and a comprehensive **GI framework**, where many local products are closely tied to specific smells and cultural heritage. This overlap creates a potential conflict, as an aromatic feature could be claimed as both a trademark and part of community-owned TK. The legal, ethical, and procedural complexities arising from this intersection highlight the need for a nuanced approach to smell trademark regulation in India.

This paper aims to examine the **conflict and coexistence** of smell trademarks with TK and GI protection in India. It analyses international practices, particularly the **United States Patent and Trademark Office's examination procedures** and landmark cases. It proposes methodologies for implementing olfactory trademarks in India, including sensory testing, consumer surveys, and descriptive representation of scents. The study also explores the role of **trade secrets** in the perfume industry, with examples such as **DIOR**, and considers the potential of the **public olfactory domain**, smells that are culturally common or regionally significant as a source of

branding innovation.

The dilemma remains unresolved: **Can India safeguard proprietary scents without undermining its vast repository of TK and shared cultural heritage?** Or will efforts to **trademark fragrances** merely intensify the debate over the boundaries between **private ownership and the public domain**, deepening the conflict over what truly constitutes the collective heritage of humankind?

I. INTRODUCTION

Trademarks have been serving as a primary tool for distinguishing goods and services in the marketplace. Traditionally, trademarks are understood as visual or textual symbols, such as logos, brand names, or slogans, that identify the source of a product or service and distinguish it from those of its competitors. However, the evolution of marketing and branding has introduced non-traditional trademarks, including colours, sounds, shapes, and scents. Among these, smell trademarks represent one of the most innovative yet challenging categories, as they rely on olfactory perception rather than visual or textual recognition. Unlike conventional marks, a smell cannot be easily described, reproduced, or depicted graphically, which creates significant hurdles in both registration and enforcement.

Internationally, countries like the United States of America and the European Union Nations have been recognised smell trademarks under strict criteria. In the USA, the Lanham Act allows registration of non-traditional marks if they meet requirements of distinctiveness, non-functionality, and public association with a particular brand¹. European jurisprudence, particularly in cases such as *Sieckmann v. German Patent Office* (2002), emphasises the necessity for a scent to be represented clearly, precisely, and objectively to qualify for trademark protection². These frameworks provide valuable guidance for countries like India, where the legal recognition of smell trademarks remains largely unexplored.

India's intellectual property regime, governed primarily by the Trade Marks Act, 1999, has yet to recognise olfactory marks explicitly. At the same time, India possesses a rich culture and a diverse history of TK, encompassing centuries-old knowledge of aromatic plants, spices, and regional perfumes. In addition, the GI of Goods (Registration and Protection) Act, 1999,

¹ Lanham Act, 15 U.S.C. S 1051–1141n (2018).

² *Sieckmann v. Deutsches Patent- und Markenamt* (German Patent Office), Case C-273/00, ECLI:EU:C:2002:748, [2002] E.C.R. I-11737 (ECJ).

safeguards products that are linked to specific regions and whose characteristics, including smell, reflect local heritage.³ The potential overlap between smell trademarks, TK (For brevity, “TK”), and GI (For brevity “GI”) protection raises unique legal and ethical questions. For instance, registering a vanilla or sandalwood scent as a trademark may conflict with existing TK claims or GI rights, leading to disputes over ownership, commercial exploitation, and benefit-sharing.

The concept of smell trademarks in India, therefore, presents both opportunities and challenges. On the one hand, it allows businesses to distinguish their products in a crowded market, foster brand loyalty, and encourage innovation in aromatic industries such as perfumery, cosmetics, and food products. On the other hand, India’s huge population and cultural diversity make it difficult to establish global standards for olfactory distinctiveness, consumer perception, and reproducibility⁴. Furthermore, issues of enforcement, public awareness, and protection of community knowledge must be addressed to prevent misuse or misappropriation.

The main aim of this paper is to explore the conflict and coexistence of smell trademarks with TK and GI protections in India. It aims to analyse how international practices, particularly the United States Patent and Trademark Office (For brevity “USPTO”) examination system and European law, can inform the development of an Indian framework for smell trademarks. The study proposes methodologies for olfactory testing, including sensory panels, descriptive representation of scents, and consumer surveys, to ensure that smell trademarks meet legal standards of distinctiveness and non-functionality.

The study considers the concept of the public olfactory domain, smells that are recognised within a culture or region and how such smells could be used responsibly in branding while respecting community rights. By identifying potential challenges, including overlap with TK/GI, proving distinctiveness, and establishing enforcement mechanisms, the paper offers a roadmap for India to adopt olfactory trademarks in a manner that balances commercial innovation with cultural preservation.

II. Examination System of Smell Trademarks

The registration and examination of smell trademarks present unique challenges due to the

³ Geographical Indications of Goods (Registration and Protection) Act, 1999, No. 48 of 1999, INDIA CODE (1999).

⁴ U.S. Patent & Trademark Office, *Trademark Manual of Examining Procedure* (TMEP) S 1202.13 (2024).

intangible and subjective nature of olfactory perception among the Indian people. Unlike conventional trademarks, which can be represented visually or textually, a smell is inherently ephemeral and difficult to standardise. Despite these challenges, jurisdictions such as the United States and the European Union have developed legal frameworks to accommodate smell marks, providing a valuable reference for India as it considers future recognition of olfactory trademarks.⁵

In the United States, smell trademarks are governed under the Lanham Act, which requires any traditional or non-traditional serve as an identifier of source.⁶ For a smell to qualify, it must satisfy three primary criteria: distinctiveness, non-functionality, and consumer association. Distinctiveness requires that the smell clearly identifies the source of a product and is not generic or common in the industry. For example, the scent of bubble gum used for candy products has been successfully recognised as a trademark because consumers associated it specifically with a particular brand⁷. Non-functionality ensures that the scent does not perform a utilitarian role; a smell that is inherent to the product's use, such as the fragrance of soap, cannot be monopolised as a trademark. Consumer association or secondary meaning requires evidence that the public perceives the smell as a unique identifier of the brand. This can be demonstrated through surveys, marketing data, or sales records.⁸

Several notable cases illustrate how smell trademarks are evaluated in practice. In the *In re: Eden Sarl vs European Union Intellectual Property Office*, the European Union examined the registration of a strawberry scent for products such as soaps, cosmetics, and perfumes, emphasising the challenge of representing a smell graphically in a manner that is clear, precise, and objective.⁹ The EUIPO and the court held that this application couldn't be registered. The description of the smell of ripe strawberries was neither clear nor objective in nature; there was no acceptable GI that could differentiate the scent to the consumers. Smells are subjective to the nature, and they are not accepted universally if they are not clearly represented in a chemical

⁵ *Sieckmann v. Deutsches Patent- und Markenamt* (German Patent Office), Case C-273/00, ECLI:EU:C:2002:748, [2002] E.C.R. I-11737 (ECJ).

⁶ Lanham Act, 15 U.S.C. §§ 1051–1141n (2018).

⁷ *In re Clarke*, 17 U.S.P.Q.2d (BNA) 1238 (T.T.A.B. 1990).

⁸ *Qualitex Co. v. Jacobson Prods. Co.*, 514 U.S. 159 (1995).

⁹ *In re: Eden Sarl v. European Union Intellectual Property Office (EUIPO)*, Case T-305/04, [2005] E.C.R. II-47 (Gen. Ct.).

formula; they fail to meet Sieckmann's criteria¹⁰

In the *Ralf Sieckmann v. Deutsches Patent- und Markenamt*, the court laid down some essentials. The olfactory trademark should be clear, precise, self-contained, easily accessible, intelligible, durable, and objective. The *Eden Sarl (Bonbon perfume)* failed to these tests¹¹

A proposed methodology for India could involve several stages. First, applicants must submit a detailed description of the scent, including its chemical composition, origin, and method of production. Second, an olfactory testing process could be established, using trained sensory panels to assess distinctiveness and reproducibility¹². Consumer surveys would complement these panels, providing evidence of secondary meaning by demonstrating public association with a specific brand.

The Trade Marks Registry could develop examination guidelines for registration of Smell trademarks. These guidelines would evaluate whether the scent is non-functional, distinctive, and not already associated with a TK or GI product. Publication in the Trade Marks Journal would allow for opposition by community stakeholders, competitors, or TK holders, ensuring transparency and preventing misappropriation of traditional scents. Upon successful examination and opposition resolution, registration could be granted, and enforcement would rely on existing provisions for trademark infringement under the Trade Marks Act, 1999.¹³

Implementing this framework in India presents unique challenges. Smell is inherently subjective, varying across individuals and regions, making it difficult to standardise. Additionally, the overlap with TK and GI rights requires careful consideration; for instance, scents derived from Mysore sandalwood may be culturally and commercially significant and cannot be monopolised without community consent. developing expertise within the Trade Marks Registry and raising awareness among businesses and consumers will be crucial for the successful adoption of smell trademarks.

Despite these challenges, the benefits of recognising smell trademarks in India are substantial. They would allow businesses to differentiate their products within the market, promote

¹⁰ *Sieckmann v. Deutsches Patent- und Markenamt* (German Patent Office), Case C-273/00, ECLI:EU:C:2002:748, [2002] E.C.R. I-11737 (ECJ).

¹¹ *Id*

¹² World Intellectual Property Organization (WIPO), *Guidelines for the Examination of Non-Traditional Trademarks* (2020).

¹³ Trade Marks Act, 1999, No. 47 of 1999

innovation in the aromatic sector, and attract international investment¹⁴. When combined with robust mechanisms to protect TK and respect GI rights, smell trademarks could contribute to a balanced intellectual property ecosystem that encourages both commercialisation and cultural preservation.

The US and EU examination systems provide practical and legal guidance for India. By adopting a structured approach including olfactory testing, descriptive representation, consumer surveys, and opposition mechanisms, India can create a framework that recognises smell trademarks while safeguarding traditional and regional knowledge. Such a framework would not only align India with global intellectual property trends but also enhance the country's capacity to protect and commercialise its rich aromatic heritage.

III. Legal Framework and Challenges

India's Trade Marks Act, 1999, governs the registration and protection of trademarks in the country. Under the Act, a trademark must be capable of graphical representation and should distinguish the goods or services of one business from another¹⁵. While the law recognizes conventional marks such as logos, brand names, and slogans, non-traditional trademarks like smells or scents are yet to be recognised¹⁶. The requirement for graphical representation, as outlined in Rule 2(k) of the Trade Marks Rules, 2017, poses a significant obstacle for olfactory marks, as scents are inherently intangible and cannot be depicted visually in a standardised manner. This limitation has prompted debates among legal scholars and policymakers regarding the need for legislative reforms to accommodate emerging branding methods.

India's rich repository of TK and GI further complicates the process of recognition of smell trademarks. Many regional products, such as Mysore sandalwood, Attar from Kannauj, or jasmine from Tamil Nadu, are closely associated with specific aromas and are protected under the GI Act, 1999. Consequently, registering these scents as private trademarks could conflict with community rights, raising ethical and legal questions regarding misappropriation, ownership, and benefit-sharing.¹⁷

¹⁴ Ranjana Kaul, Non-Traditional Trademarks: Protecting the Invisible Marks, 58 J. Indian L. Inst. 245 (2016).

¹⁵ Trade Marks Act, 1999, No. 47 of 1999

¹⁶ Ranjana Kaul, Non-Traditional Trademarks: Protecting the Invisible Marks, 58 J. Indian L. Inst. 245 (2016).

¹⁷ Dev S. Gangjee, Geographical Indications and Cultural Heritage, 6 WIPO J. 17 (2014).

IV. Proposed Implementation Strategies

To facilitate the recognition and registration of olfactory trademarks in India, a comprehensive strategy involving legal reform, administrative mechanisms, and public engagement is essential. The following steps are recommended:

- **Legal and Policy Reform:**

Amend the Trade Marks Act to include olfactory marks, defining criteria such as distinctiveness, reproducibility, and non-functionality. Permit flexible representation through chemical data, olfactometer readings, or detailed descriptions.

- **Evaluation and Infrastructure:**

Establish trained sensory panels, standard testing protocols, and a specialised Olfactory Marks Division within the Trade Marks Office. Incorporate international best practices and digital tools like AI-based scent verification.

- **Integration with TK and GI Systems:**

Create databases linking olfactory marks with traditional knowledge and geographical indications. Ensure fair benefit-sharing with communities and prevent conflicts with protected traditional scents.

- **Awareness and Collaboration:**

Conduct awareness programs, workshops, and stakeholder consultations. Collaborate with industry bodies, research institutions, and international IP organisations such as WIPO and EUIPO.

- **Enforcement and Market Validation:**

Develop clear rules for infringement and passing-off cases. Require proof of consumer recognition through surveys or sales data before granting registration, ensuring balance between innovation and public interest.

V. Trade Secrets and Olfactory Marks in India

Companies rely heavily on trade secrets to safeguard proprietary scents, formulas, and blending techniques. Trade secrets are essential in preserving competitive advantage, particularly for the perfume and fragrance industry, where the combination of aromatic compounds defines brand identity. Internationally, brands like DIOR rely on trade secrets to protect iconic fragrances like *J'adore*, whose formulation remains confidential and is a cornerstone of their market value.¹⁸

Legislation and Legal Definition

India does not have a dedicated statute for trade secrets. Instead, protection arises from contract law, principles of equity, and common law actions for breach of confidence¹⁹. In *John Richard Brady & Ors v Chemical Process Equipment Pvt Ltd & Anr*, the Delhi High Court held that courts could enforce trade secrets either through equity principles or common law breaches of confidence.²⁰

India is also a signatory to the TRIPs Agreement, which under Article 39(2) encourages member states to protect undisclosed information that is:

1. Secret and not generally known to the public and in the relevant industry;
2. Economically valuable due to its secrecy and
3. Subject to reasonable steps to maintain its confidentiality.

VI. Indian courts have further defined trade secrets in landmark judgments:

- In *Tata Motors Ltd. & Anr v State of Bengal*, the High Court of ²¹Kolkata the honourable justice Pinaki Chandra Ghose relied on Black's Law Dictionary, "The term trade secrets has been defined in Black's Law Dictionary as " A formula, process, device, or other business information that is kept confidential to maintain an advantage over competitors; information including a formula, pattern,, compilation, program, device, method,

¹⁸ *Dior v. Parfums Christian Dior S.A.*, Case No. T-647/21, Judgment of the Gen. Ct. (EU) (2023).

¹⁹ Raju, K.D., *Protection of Trade Secrets in India: A Legal Perspective*

²⁰ *ohn Richard Brady & Ors v. Chemical Process Equipment Pvt. Ltd. & Anr.*, AIR 1987 Del. 372

²¹ *Tata Motors Ltd. & Anr v. State of Bengal*, 1996 (1) Cal. L.J. 33 (Kolkata H.C.).

technique, or process-that (1) derives independent economic value, actual or potential, from not being generally known or readily ascertainable by others who can obtain economic value from its disclosure or use, and (2) is the subject of reasonable efforts, under the circumstances, to maintain its secrecy"

- In *Bombay Dyeing & Manufacturing Co Ltd v Mehar Karan Singh* (2010)²², the Bombay High Court listed criteria in para 10 of the judgement of justice Roshan Dalvi to determine trade secret status, trade secrets, formulate and process of manufacturing of various products by the Company and/or list of companies' customers and suppliers (and likewise in relation to the Company's associated companies), all of which information is or may be confidential except any information generally made available to the public or make or take copies of the manuals, tracings, blueprints, drawing books, papers containing such confidential information without authority taken prior to making or taking copies, such copies may contain the whole information substantially similar information from the original manual, tracings, drawings, blueprints, papers, books etc.
- In *John Richard Brady & Others v. Chemical Process Equipments P. Ltd. & Another*²³, the plaintiffs, led by John Richard Brady, were the inventor and copyright owners of the original technical drawings for an improved "Fodder Production Unit" (FPU). To manufacture the FPU in India, the plaintiffs approached the defendants to supply specialised thermal panels . The Delhi High Court granted an injunction stopping the defendants from making a machine (FPU) based on the plaintiff's (Brady's) technical drawings. The key ruling in the case are a 3D object (machine) can infringe the copyright of a 2D technical drawing, clarifying that the test for infringement is visual similarity to a non-expert, not functional differences. Separately, it ruled that an obligation of confidence exists in equity, even without a finalised contract The defendants' access to the drawings, combined with the "striking similarity" of the machines, established a strong prima facie case. Based on this, the Court granted an injunction to prevent irreparable harm to the plaintiff.

VII. Ownership and Legal Protection

Ownership of a trade secret is established by demonstrating the nature of the information, how

²² *Bombay Dyeing & Manufacturing Co. Ltd v. Mehar Karan Singh*, (2010) 100 DLT 545

²³ *ohn Richard Brady & Others v. Chemical Process Equipments P. Ltd. & Another*, AIR 1987 Del 372

it was created or acquired, and that it is not publicly available.

1. Ownership can involve:

- Proprietary creation, such as perfume formulations or client lists, is also protected under copyright.
- Proper acquisition of information, ensuring that independent creation by others does not infringe the trade secret.

2. Secrecy

The state of secrecy is critical for protection. Courts consider:

- Extent of information known outside the business;
- Knowledge within the organisation;
- Measures taken to safeguard the information.

Information accessed by employees or vendors carries an implied duty of confidentiality, which is enforceable even without explicit contracts, provided the information is not publicly available.

3. Commercial Value

The economic value of a trade secret derives from its secrecy and competitive advantage. The Bombay Dyeing case emphasised:

- Value gained over competitors.
- Effort and resources invested in developing the information;
- Time and expense for third parties to independently replicate it.

For olfactory marks, the commercial value is substantial, particularly for iconic fragrances, as it directly impacts brand recognition and consumer loyalty.

4. Protective Measures

Courts assess whether reasonable measures were taken to protect trade secrets. These include:

- Confidentiality agreements with employees, vendors, and partners;
- Physical and technological security measures;
- Cybersecurity protocols;

VIII. Public Olfactory Domain and Integration with TK in India

India's rich cultural and botanical heritage makes it a unique repository for aromatic scents and substances. Many scents, such as Mysore sandalwood oil, Kannauj attars, jasmine from Tamil Nadu, and rose attar from Rajasthan, are deeply tied to traditional roots and practices and local craftsmanship²⁴. These scents are considered part of the public olfactory domain, meaning that they are widely known and culturally associated with certain regions or communities. certain scents are protected under the GI Act, 1999, which grants legal recognition and protection to products with qualities or reputations attributable to their geographic origin. For example, Mysore sandalwood oil and Kannauj attars are registered as GI products, recognising their unique regional identity and production methods.

The integration of TK and GI into the management of olfactory marks are important to avoid misappropriation. Companies seeking to develop commercial fragrances inspired by traditional scents should be able to differentiate their proprietary formulations from those that are culturally or geographically protected²⁵. Failure to do so may lead to legal disputes, accusations of cultural theft, reputational damage and many more. Moreover, the TRIPS Agreement under Article 39(2) allows countries flexibility in protecting undisclosed information while respecting existing TK and GI rights, providing a framework for India to balance innovation with heritage protection.²⁶

²⁴ World Intellectual Property Organization (WIPO), Intellectual Property and Traditional Knowledge: A Guide for Policymakers (2018)

²⁵ Office of the Controller General of Patents, Designs and Trade Marks (India), *Geographical Indications Registry*, available at <https://ipindia.gov.in/writereaddata/Portal/Images/pdf/GI-Search.pdf>

²⁶ Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, art. 39.2, 1869 U.N.T.S. 299.

IX. Challenges in Leveraging the Public Olfactory Domain:

1. **Identifying Public vs. Proprietary Scents:** Many traditional scents have been monetised for centuries, making it difficult to draw a clear line of difference between public olfactory resources and proprietary innovations. For instance, the use of jasmine in Indian perfumery is widespread, but unique combinations or processing methods may constitute protectable trade secrets.
2. **Cultural Sensitivity:** Certain scents hold religious or historical significance. Commercialising such scents without consent from the local community can result in ethical and social challenges.
3. **Documentation and Traceability:** Traditional production methods are frequently traditional or handcrafted. Companies must engage with local communities to document processes and ingredients to ensure compliance with TK and GI protections.
4. **Regulatory Overlap:** While trade secrets protect proprietary formulas, they do not provide any monopoly over scents existing in the public domain. Companies must navigate overlapping rights under contract law, GI law, and trade-secret protections to avoid infringement.
5. **Benefit-Sharing Agreements:** To respectfully employ traditional scents, companies should implement agreements that compensate communities, credit the origin and encourage environmentally responsible practices. This approach aligns with India's obligations under TRIPS and international best practices for protecting indigenous knowledge.

X. Application to Olfactory Marks in India

In India, olfactory trademarks lack formal legal recognition, which means that trade secrets remain the only primary legal tool for protecting scent compositions in India. Trade secrets allow companies to maintain exclusivity over formulations for their products, ensuring that unique blends of aromatic compounds cannot be replicated without authorisation. Indian firms can leverage trade secrets strategically to:

1. Securing Exclusive Formulas:

Perfume companies often guard their fragrance combinations as trade secrets to protect

their formulation. By keeping the exact mix of ingredients confidential, especially in scents inspired by natural elements like Mysore sandalwood, they prevent imitation and preserve originality.

2. Strengthening Brand Image:

A distinct scent can become a strong part of a company's identity. When the formula is kept secret, customers associate that fragrance only with one brand, the consumers to recognise the brand, helping it gain recognition even without formal trademark registration.

3. Temporary Shield before Legal Recognition:

Until India formally allows the registration of smell trademarks, maintaining trade secrets serves as an effective and the only option for safeguard. Companies following strict protection measures can later register their scents once the law provides for it.

4. Respectful Innovation from Traditional Sources:

Firms can take inspiration from traditional or public fragrances such as the Kannauj rose, but must modify and enhance them creatively. This ensures ethical use while remaining compliant with GI and Traditional Knowledge standards in India.

XI. Conclusion

The recognition of olfactory trademarks represents a frontier in intellectual property law, one that challenges conventional notions of what constitutes a "mark" capable of distinguishing goods and services. While jurisdictions such as the United States and the European Union have made significant progress in this domain, India remains at a critical juncture. Its dual identity as a rapidly modernising economy and a custodian of vast TK and GI products makes the task of integrating smell trademarks uniquely complex.

This research has demonstrated that India's current legal framework under the Trade Marks Act, 1999, is insufficient to accommodate olfactory marks due to its insistence on graphical representation. However, international experiences, particularly under the USPTO and EUIPO systems, offer valuable models for reform emphasising clear representation, distinctiveness, and consumer recognition. For India, a hybrid framework combining statutory amendment,

administrative innovation, and technological adaptation can make olfactory mark protection both feasible and equitable.

At the same time, India must guard against the commercial monopolisation of scents rooted in community heritage. A robust integration of TK and GI databases, benefit-sharing arrangements, and community consultation mechanisms can ensure that traditional scents such as Mysore sandalwood or Kannauj attar are protected as collective heritage rather than privatised assets.

The convergence of trade secrets, technological tools, and potential statutory reform provides a balanced path forward. In the interim, trade-secret protection should be strengthened through contractual safeguards and digital traceability until legislative provisions for olfactory marks are enacted.

Ultimately, the recognition of smell trademarks in India must not only serve corporate innovation but also respect the cultural and ethical dimensions of scent. The challenge lies in harmonising commercial exclusivity with collective cultural ownership—a task that demands both legal foresight and cultural sensitivity. As India continues to evolve as a global IP hub, embracing olfactory marks with responsibility and inclusivity will not only enrich its intellectual property landscape but also reaffirm its role as a nation that values both innovation and tradition in equal measure.

XII. Future Scope

The field of olfactory trademarks in India presents vast potential for interdisciplinary research, legal innovation, and industry collaboration. As India moves towards recognising non-traditional marks, future studies should focus on developing empirical models to assess consumer perception of scents and their effectiveness as source identifiers. Collaborations between legal scholars, neuroscientists, and sensory marketing experts can deepen the understanding of how olfactory stimuli influence consumer behaviour, brand recall, and market differentiation.

Legislatively, India could initiate pilot programs within the perfume, cosmetics, and food industries to test the feasibility of olfactory registration using chemical representation, sensory panels, and consumer surveys. The outcomes of these programs could inform amendments to

the Trade Marks Act, 1999, and Rules, 2017, ensuring that the statutory framework aligns with both technological advancements and cultural considerations. Additionally, the Trade Marks Registry may establish partnerships with the Council of Scientific and Industrial Research (CSIR), the Fragrance and Flavour Development Centre (FFDC), and the World Intellectual Property Organisation (WIPO) to formulate testing protocols and data standards.

Future work should also explore the creation of a National Olfactory Database that documents traditional scents associated with TK and GI. This database would function both as a defensive mechanism to prevent misappropriation and as a resource for innovation, enabling industries to develop new proprietary blends while respecting community rights. Finally, researchers should examine the ethical and environmental dimensions of scent commercialisation, ensuring that olfactory IP protection contributes to sustainable practices, fair trade, and inclusive growth.

The path ahead requires India to balance progress with preservation, ensuring that legal recognition of scents reflects not just commercial ambition but also cultural responsibility. By doing so, India can emerge as a global pioneer in the protection of olfactory creativity, anchored in law, informed by science, and guided by ethics.