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BUILDING A GREEN FUTURE FOR BEAUTY INDUSTRY: INTERNATIONAL COOPERATION CONFERENCE ON COSMETICS GREEN DEVELOPMENT HELD SUCCESSFULLY IN SHANGHAI

RESEARCH AND REFLECTIONS ON GREEN PRODUCT EVALUATION TECHNICAL SYSTEM FOR COSMETICS INDUSTRY

REGULATORY IMPROVEMENT & SERVICE EFFICIENCY-BOOSTING: EIGHT OPTIMIZATION MEASURES TO FUEL INNOVATION VITALITY IN THE COSMETICS INDUSTRY

A TURNING POINT FOR SUSTAINABLE BY DESIGN: THE EU PACKAGING AND PACKAGING WASTE REGULATION

COSMETICS ADVANCEMENT COMMITTEE OF CHINA HEALTH CARE ASSOCIATION

CHINA COSMETICS

REGULATIONS AND DEVELOPMENT

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Conference Highlights

- Building a Green Future for Beauty Industry: International Cooperation Conference on Cosmetics Green Development Held Successfully in Shanghai

Building a Green Future for Beauty Industry: International Cooperation Conference on Cosmetics Green Development Held Successfully in Shanghai

On September 15, 2026, the International Cooperation Conference on Cosmetics Green Development (hereinafter referred to as the conference) was held in Shanghai. Bringing together representatives from national regulatory authorities, universities and research institutes, China domestic and international industry associations, as well as beauty enterprises, the conference centered on the green upgrading of the entire cosmetics industrial chain. It opened channels for dialogue between Chinese policy practices and global sustainability governance, built consensus among government, industry, academia and research circles, and explored new models for green development of the trillion-dollar beauty industry.

China's cosmetics market has exceeded one trillion RMB, making it the world's largest consumer market for cosmetics. Amid continuous industrial expansion, green and low carbon development is no longer an optional extra for enterprises, but a must-have for the industry's high-quality growth. New quality productive forces are inherently green productive forces. The national strategy for building a Beautiful China, the official implementation of the "Ecological Environment Code of the People's Republic of China", together with a series of regulatory reforms rolled out by the National Medical Products Administration (NMPA), form a top-level framework for the green transformation of China's beauty sector, charting the course for the industry's evolution from a large cosmetics manufacturing nation to a powerful one.



I. Multi-Stakeholder Input Refines Top-Level Design for Greener Beauty Sector

From perspectives of national macro-strategy, local industrial practices, industry-university-research collaboration and global sustainability governance, participants explored pathways for the green transition of the trillion-dollar cosmetics industry, drawing up high-level blueprints and setting clear directions for its high-quality advancement.

Advancing new quality productive forces: three priorities for cosmetics green development

Xiong Jing, Vice-Director, Solid Waste and Chemicals Management Center (SCC), Ministry of Ecology and Environment of the People's Republic of China (China MEE), delivered an opening address. She noted that promoting green and sustainable concepts and fostering new quality productive forces within the trillion-dollar beauty sector carries exemplary significance for building a Beautiful China. She put forward three major directions for progress: Consolidate green foundations through innovation, embedding pollution reduction, carbon mitigation and environmental risk control across the full industrial chain; Foster green consumption via supply-demand coordination, creating a virtuous cycle where green production drives green consumption; Engage in global green governance through open cooperation, supporting Chinese beauty brands to

go global. Green development requires legal safeguards, standards based guidance and data driven empowerment. The whole industry should work collectively toward innovative, eco-friendly high-quality growth.



Xiong Jing, Vice-Director, SCC of China MEE

Shanghai takes the lead as a benchmark for cosmetics green transformation

Zhao Yanjun, Deputy Director General of Shanghai Municipal Medical Products Administration, remarked that the conference's focus on cosmetics sector green development helps translate the "green content" of growth into its "economic value", which bears great importance for industrial high-quality development. Rooted in local industrial realities, Shanghai regards safety as the industry's lifeline and green transition as its new growth direction. She encouraged cosmetics enterprises to build solid foundations through compliance, embed green concepts throughout industrial chains, accelerate green production modes, compete on product quality and pursue long-term growth enabled by eco-friendly practices. Since 2021, Shanghai has pioneered digital transformation for cosmetics manufacturers. It has introduced high-quality industrial development measures jointly issued by six municipal departments, and rolled out China's first-ever pilot scheme for electronic labels for cosmetics. Pilot exploration for imported cosmetics electronic labels has been launched in Pudong New Area, with over 60 enterprises either having deployed or planning to adopt electronic labels. This

initiative has effectively cut packaging costs and shortened product launch cycles. Regulatory authorities in Shanghai will keep scaling up the electronic label pilot, advance the application of animal alternative testing technologies, and guide enterprises toward low carbon operations, including building green factories and adopting ESG principles. Regulators will continue optimizing public services, urging enterprises to integrate green ideas into every industrial chain link, underpinned by compliance and powered by technology, so as to lift core industrial competitiveness.



Zhao Yanjun, Deputy Director General, Shanghai Municipal Medical Products Administration

Chen Daijing, Deputy Director, Science and Technology Commission of Shanghai Jing'an District, shared that Jing'an hosts headquarters and global R&D centers of numerous multinational beauty corporations. Leveraging top-tier local clinical resources to translate medical-research outcomes, the district has built multiple laboratory platforms to participate in developing green standards. It has forged a cross-regional collaborative model: "R&D and branding in Jing'an, smart manufacturing in Fengxian". A fund for future beauty innovation has been set up to integrate AI with the cosmetics industry and nurture new-quality productive forces. Going forward, Jing'an will keep pioneering green technology research and international rule alignment to contribute to Shanghai's beauty-driven economy.



Chen Daijing, Deputy Director, Science and Technology Commission of Shanghai Jing'an District

Industry-university-research collaboration & integration of science and art build long-term competitiveness for local brands

Competition in the beauty industry extends far beyond ingredient and formula R&D; it now encompasses aesthetic value, cultural intellectual property and brand communication. Academic institutions serve as an intellectual cornerstone for industrial innovation, bridging basic research to real market application. Sun Jian, Deputy Secretary, School of Art Design and Media, East China University of Science and Technology, stated that drawing on world-class disciplines such as chemical engineering and fine chemistry, the university has long supplied talent to the beauty sector and conducted in-depth research on ingredients, formulations and safety assessment. Its School of Art Design and Media integrates Chinese trend culture, aesthetic design, brand communication and consumer research into industrial innovation to help local brands break free from homogenization. The school will keep developing a full-chain empowerment system covering “technology R&D - aesthetic design - brand building - market communication”. Focusing on home-grown IP creation, brand globalization and upgraded aesthetic consumption, it will deliver research outputs and professionals to enhance the global influence of China’s cosmetics industry.



Sun Jian, Deputy Secretary, School of Art Design and Media, East China University of Science and Technology

Global dialogue builds new consensus on sustainable cosmetics governance

Green development knows no borders. The green evolution of cosmetics industrial chains calls for cross-border collaboration and mutual learning on international rules. The conference assembled representatives from foreign consular missions in China and international industry organizations to establish a dialogue platform for global sustainable beauty development.

Pierre MARTIN, Economic Counsellor at Economic Department, Consulate General of France in Shanghai, noted that the beauty economy constitutes a key cooperation track between China and France, and sustainability is a shared challenge. French beauty enterprises have deep roots in the Chinese market: L'Oréal's global Suzhou factory and the Shanghai office of Cosmetic Valley maintain strong presence in the Yangtze River Delta. France's cosmetics exports to China reached nearly EUR 2 billion in 2025. French firms are rolling out plastic reduction and other sustainability focused innovations in China. Both sides share common goals in product safety, sustainable development and intellectual property rights protection. France looks forward to deeper regulatory policy dialogue, developing innovation friendly regulations drawing on proven international experience, and strengthening bilateral trade and technical cooperation in cosmetics.



Pierre MARTIN, Economic Counsellor at Economic Department, Consulate General of France in Shanghai

Subsequent sessions featured in-depth discussions by representatives of Cosmetics Europe, European Federation for Cosmetic Ingredients, the Cosmetic, Toiletry and Perfumery Association, ASEAN Cosmetic Association and Japan Cosmetic Industry Association on topics including global green cosmetics regulations, sustainable ingredient standards, packaging decarbonization and circular economy.

II. Three Core Outcomes & Joint Industry Initiative Unveiled: Full-Chain Cosmetics Up-Accelerated

Amid restructuring of global green trade rules and improvement of China domestic low carbon policies, China's cosmetics industry has moved past fragmented, piecemeal green trials toward systematic full-chain upgrading characterized by measurability, digitalization and internationalization. As China's first authoritative, professional and international platform for green industry exchange, the conference saw senior technical experts and association leaders release landmark deliverables.

Blueprint for systemic advancement: "Action Plan for the Green Development of the Cosmetics Industrial Chain" addresses industry bottlenecks

Wu Yidan,Deputy Director of Cosmetics Advancement Committee of China Health Care Association (CACHCA) and Deputy Director of China Cosmetics International Trade Committee (CCITC) of China Chamber of Commerce for Import and Export of Medicines and Health Products (CCCMHPIE), presented the “Action Plan for the Green Development of the Cosmetics Industrial Chain”.



Wu Yidan, Deputy Director of CACHCA and Deputy Director of CCITC of CCCMHPIE

To tackle prevailing pain points - limited industrial chain transparency, scattered green data, lack of unified standards, high corporate green transition costs and misalignment between Chinese and international rules - isolated corporate green renovation often suffers long cycles and high uncertainty. The Action Plan establishes six core support systems: green data and information, green standards and certification, green product compliance, green market cultivation, policy and law consultation, and international regulation alignment. It covers ingredient supply, manufacturing, packaging and consumption across the entire cosmetics value chain. Its green data and information system consolidates more than 60 China domestic and international authoritative databases into a publicly accessible platform, resolving fragmented, low authority compliance data that hamper corporate R&D and compliance work. Its green standards

and certification system brings together government departments, research institutes and enterprise specialists to draft the "Technical Guidelines for Green Evaluation of the Full Cosmetics Industrial Chain" and supporting tiered certification rules, enabling measurable, evaluable and implementable ESG environmental dimension indicators.

Additional measures include building a cross-border pool of Chinese-foreign experts to solve technical challenges, nurturing green consumption via national level media, participating in global green-rule-making and promoting mutual recognition of Chinese and international standards, empowering Chinese beauty brands for global expansion. Wu also expressed that CACHCA will fulfill four core functions: bridge government and industry, facilitate international exchanges, foster cross-sector innovation and lead green industry progress.

Wu invited enterprises up and down the industrial chain, research institutes and international organizations to join the Action Plan, to jointly build data infrastructure, set green standards, boost compliance capacity, expand green markets and succeed in global trade. The Action Plan sets five major goals for the coming years:

1. Provide authoritative, professional support for government authorities drafting green low carbon policies;
2. Deliver practical tools for enterprises pursuing green growth, enabling mutual gains between commercial and social value;
3. Develop international green standards and promote their mutual recognition, raising China's competitiveness, influence and discourse power in global green beauty sectors and supporting Chinese green brands' global expansion;
4. Make ESG environmental dimension ("E") indicators easier to measure and assess;
5. Raise public consensus around green development and enhance consumer recognition of green products.

Quantifiable benchmark fills gap: Technical Guidelines launch full life cycle tiered evaluation system for the first time in the sector

Standards are essential for translating green goals into practice. The conference

announced the formal group standard project initiation for the “Technical Guidelines for Green Evaluation of the Full Cosmetics Industrial Chain”, filling a China domestic void in quantifiable full-chain green assessment for cosmetics. Zhao Jing, Professor-level Senior Engineer, SCC of China MEE, introduced the background, evaluation framework and implementation pathways of the Guidelines, delivering a unified authoritative benchmark for industry green compliance, rating and benchmark driven upgrading.



Zhao Jing, Professor-level Senior Engineer, SCC of China MEE

Built upon the UN Sustainable Development Agenda, EU Ecodesign for Sustainable Products Regulation, China’s “Ecological Environment Code” and “Action Plan on New Pollutant Governance”, as well as reviews of existing China domestic and foreign green certification frameworks, the Guidelines resolve the long-standing dilemma in China’s beauty sector: “general frameworks exist, yet no detailed rules, tiered criteria or practical assessment methods”. The evaluation scope spans ingredient manufacturing, cosmetics product production and packaging production. Covering rinse-off and leave-on mainstream cosmetic categories, it adopts a “cradle-to-gate” assessment boundary including ingredient extraction, transportation, manufacturing and packaging.

A two-tier evaluation mechanism combines basic admittance requirements and core rating criteria. Four baseline corporate compliance requirements set floor standards for ingredient safety, production techniques, pollutant discharge and management system construction. Six top-level indicators - resources, energy, environment, health, low carbon performance and product quality - are further broken down into 16 quantifiable metrics such as climate change, acidification, ozone depletion and water resource consumption. Assessment synthesizes on-site corporate production data and reference datasets from authoritative sources. A pioneering five-tier green rating system gauges corporate green development maturity, with peer category benchmarking to guarantee fair evaluation.

The Guidelines will underpin corporate brand upgrading, government policy incentives and informed consumer green purchasing. Working group membership is open to stakeholders across the industrial chain to refine China's beauty sector green standard system and align Chinese rules with international ones.

New digital infrastructure: Green Industrial Chain Information Platform co-launched by Chen Ying and Dai Zhengli enables one-stop compliance and evaluation services

Real-world implementation of standards and industrial upgrading depend on digital infrastructure. The conference launched the China Cosmetics Green Industrial Chain Information Platform, developed by authoritative industry bodies to break down information silos and deliver digital infrastructure for full chain green advancement. Chen Ying, Director of New Pollutant Management Technology Center, SCC of China MEE, explained the policy rationale and underlying data architecture behind the platform's datasets.

She pointed out that the cosmetics industrial chain involves vast numbers of chemical substances; new pollutant risk management and product safety assessment rely heavily on complete, authoritative data. Yet the industry suffers from scattered datasets, limited authoritative resources and missing hazard information. To address this gap, the SCC has curated, cleaned and assessed data from 59 China domestic and

foreign authoritative databases, compiling a comprehensive cosmetics ingredient dataset covering physicochemical properties, environmental fate, ecological hazards and health toxicity. Core work includes reorganizing ingredient catalogues, removing redundant records, aggregating hazard data and filling data gaps, laying a solid data foundation for the platform, green evaluation and risk analysis.



Chen Ying, Director of New Pollutant Management Technology Center, SCC of China MEE

Building on this dataset, Dai Zhengli, Manager of Product department of China National Pharmaceutical Industry Information Center, demonstrated functional modules and real-world use-cases and unveiled Phase 1 core capabilities of the officially launched platform. Centered on high-frequency industry needs, it offers three key scenarios: ingredient lookup, regulation lookup and assessment execution, enabling streamlined one-stop work for cosmetics compliance and green evaluation.

- Ingredient lookup supports keyword, CAS number and multi-condition filtering, assembling complete safety evidence chains drawing on over 60 databases;
- Regulation lookup provides Chinese-English cross-border regulatory documents with download and trace verification functions;
- Intelligent assessment integrates a MoS auxiliary calculator to automatically compute risk boundaries and drastically cut corporate manual calculation workload.



Dai Zhengli, Manager of Product department of China National Pharmaceutical Industry Information Center

The platform also aggregates quick links to official industry tools and authoritative websites, removing burdens of cross-site searches and repeated information checks. Registration review channels are now open. Future iterations will add packaging material green databases and introduce large AI model capabilities for intelligent safety assessment report generation, empowering continued digital and green transformation of the industry.

Industry-wide consensus: Joint initiative read out by university representatives builds a responsible beauty ecosystem

Associate Professor Dong Kun, School of Light Industry Science and Engineering, Beijing Technology and Business University, read out the “Shanghai Initiative for High-quality Green Development of Cosmetics” on behalf of all signatory organizations. Signatories include industry associations, industrial chain enterprises, universities, research and testing institutions. The Initiative calls on the whole industry to: Pursue green R&D and manufacturing, advance clean production and circular packaging decarbonization; Deepen industry-university-research collaboration to overcome green technology bottlenecks; Uphold compliance bottom lines and oppose “green washing” marketing; Standardize green market order and foster rational green consumption patterns; Fulfill diverse social responsibilities.

The list of participating organizations for this initiative is as follows (in no particular order):

China Pharmaceutical Industry Information Center, Beijing Technology and Business University, School of Art Design and Media of East China University of Science and Technology, Cosmetics Advancement Committee of China Health Care Association, Shanghai Association of Food and Drug Safety, Beijing Daily Chemical Association, Zhejiang Health Products and Cosmetics Industry Association, Beauty Nova Tech Hub (Shanghai) Brand Management Co., Ltd., Oriental Beauty Valley Enterprise Group Co., Ltd., Pudong Prosperity Alliance Climate Week Research Institute, Amway (China) Daily Use Goods Co., Ltd., Proya Cosmetics Co., Ltd., Bloomage Biotechnology Corporation Limited, Shanghai CHANDO Group Co., Ltd., Guangzhou Yixian E Commerce Co., Ltd., Cosmax (China) Cosmetics Co., Ltd., Meichulai (Hangzhou) Cosmetics Co., Ltd. (ClorisLand), Nivea (Shanghai) Co., Ltd., Shanghai Baisili Industrial Co., Ltd., Shanghai Betaine Health Technology Co., Ltd., Shanghai Linqingxuan Cosmetics Group Co., Ltd., Vimeizi Industrial (Guangdong) Co., Ltd., Symrise Fragrance & Flavors (Nantong) Co., Ltd., Jiaweida (Hangzhou) Biotechnology Co., Ltd., Anhui Mingzhuang Environmental Protection Technology Co., Ltd., Shenzhen Cosmol Tech Group Co., Ltd., Guangzhou Shanggong Plastic Co., Ltd., Hangzhou Re O Tech Co., Ltd., Beijing Mega Health Technology Co., Ltd., Beijing Ouhua Yihong Consulting Co., Ltd.



Associate Professor Dong Kun, School of Light Industry Science and Engineering, Beijing Technology and Business University

III. Global Wisdom for a Greener Future: Exploring Regulatory Innovation and New International Cooperation Pathways

The conference also addressed smart regulatory reform practices. Experts worldwide shared sustainable transition experience. China Domestic industry-university-research stakeholders and media discussed endogenous growth drivers for the sector, and the RCEP China-ASEAN cooperation project was formally inaugurated.

Regulatory synergy & innovation: Electronic-label pilot drives green digital transformation of cosmetics

Cosmetics electronic-label is a key green reform special project spearheaded by the NMPA. It cuts packaging-related carbon emissions while enabling cross-ministry collaboration between medical products administration and customs authorities, creating a smart digital regulatory model that serves as an institutional innovation example for high-quality green cosmetics sector development.



Jin Xin, Deputy Director of the Cosmetics Supervision Division of Shanghai Municipal Medical Products Administration

Jin Xin, Deputy Director of the Cosmetics Supervision Division of Shanghai Municipal Medical Products Administration, detailed Shanghai's pilot implementation of national cosmetics electronic labels. Launched in February this year across six provincial-level

pilot regions, the reform replaces redundant printed label information with unified QR code-based electronic labels while retaining mandatory core disclosures, slimming down product packaging for environmental benefits.

As a core pilot region, Shanghai has conducted research, policy outreach and enterprise support. Two batches totalling more than 60 enterprises have joined the pilot, with nearly one hundred products marketed with electronic labels. Participating enterprises have seen label revision, packaging procurement and manual labelling costs drop by 60 %. A dual-page design - primary compliance disclosure page plus secondary traceability extension page - supports dynamic updating of product information and full traceability. Shanghai has also pioneered an imported cosmetics electronic label pilot together with customs authorities, breaking down inter-departmental data barriers and shifting supervision from manual spot-checks toward digital and intelligent governance, delivering dual benefits: industrial green transition and improved regulatory efficiency.



Zhou Haochi, Deputy Director of the Food Safety Division of Shanghai Customs

Zhou Haochi, Deputy Director of the Food Safety Division of Shanghai Customs, interpreted how new-regulatory innovations in foreign-trade supervision support

high-quality cosmetics industry growth. The revised "Measures for the Administration of Inspection and Quarantine Supervision of Import and Export Cosmetics", effective December 1 this year, streamlines notification procedures, optimizes inspection scenarios, accommodates new-business formats and deepens data sharing to reduce institutional transaction costs for enterprises and build a full chain risk control system.

Drawing on Shanghai's imported cosmetics electronic label pilot as a benchmark, customs authorities work with medical products administration and market supervision authorities under a tripartite closed loop supervision model enabling intelligent data comparison of product information. Customs clearance durations have been shortened by 40%, with more than 7.43 million pilot scheme products cleared successfully. Paperless declaration, remote inspection and streamlined market procurement customs clearance, among other measures, support both Chinese beauty brands going global and international products entering China. Institutional innovation and smart supervision jointly build an open, green and efficient foreign-trade gateway for the cosmetics sector.

As a pioneering systemic regulatory reform initiative for global cosmetics, the value of cosmetics electronic labels extends beyond China domestic cost and carbon reduction and smarter oversight. Building on proven China domestic pilot outcomes, China aims to translate this Chinese practice into shareable industry solutions, actively participating in and promoting international rule and standard setting for electronic labels, aligning China domestic regulatory innovation with global industry collaborative development.

Insights from international delegates: Sharing global green transition practices for beauty

Gerald Renner, Director of Technical Regulatory and International Affairs, Cosmetics Europe (CE), presented EU experience on sustainable cosmetics formula development. He explained that after over 50 years of evolution, EU cosmetics regulation, historically safety centered, now pursues safety and sustainability in parallel. He emphasized

that cosmetics green development rests on three pillars: environment, society and economy, warning against oversimplified interpretations of environmental protection.



Gerald Renner, Director of Technical Regulatory and International Affairs, CE

On the environmental front, natural ingredients are not automatically green; their ecological impacts must be scientifically assessed. Biotechnology and bio-based materials can lower carbon footprints. Water and energy consumption during manufacturing cleaning and end-of-life biodegradability of products are critical levers for environmental mitigation. Socially, the industry must uphold ethical sourcing, fair labour standards and zero child labour principles. Cosmetics contribute to public health and quality of life improvements; stakeholders should advocate rational consumption, reject “fast beauty” and green washing, and advance safety assessment methods without animal testing. Economically, sustainability constraints and industrial vitality need balance. Appropriate industrial policies should facilitate corporate innovation of green formulas while preserving industrial economic value and jobs.

Federica VALLI, Executive Assistant of the Secretariat and the President, European Federation for Cosmetic Ingredients (EFfCI), addressed opportunities and challenges for

sustainable cosmetic ingredients. Sustainability has evolved from a marketing selling point to a fundamental corporate survival strategy, and biotechnology is reshaping ingredient R&D.



Federica VALLI, Executive Assistant of the Secretariat and the President, EFfCI

She interpreted the interlocking regulatory logic of EU CLP, REACH and CPR regulations. While no standalone EU legislation governs cosmetic ingredient sustainability, compliance draws on chemical hazard management, risk restrictions, safety assessment and the EU Chemicals Strategy for Sustainability, pursuing the overarching objective of "safe and sustainable by design" and phasing out non-essential hazardous substances. Innovation has expanded beyond novel chemicals and formulas to new processes, technologies and supply chain upgrades. Market demand is rising for traceable, responsibly narrated and recyclable ingredients. She called for mutual adaptation between regulators and industry, balancing sustainability compliance requirements with corporate transition timelines and reserving room for innovation.

Nico Shaw Núñez, Director of Regulation and Sustainability, Cosmetic, Toiletry and Perfumery Association (CTPA), shared pathways for building industry resilience amid global volatility. Representing over 230 full chain member enterprises with a GBP 12.5 billion market footprint, CTPA's systematic sustainability strategy centers

on carbon and waste reduction, quality and efficiency improvement and industrial empowerment.



Nico Shaw Núñez, Director of Regulation and Sustainability, CTPA

To address transition pain points, CTPA has released an inclusive sustainability handbook for industry practitioners. Covering business trend analysis, dual carbon goals and resilience building, consumer insight, corporate transition roadmaps and cross-departmental coordination, with practical exercises and implementation plans, it guides enterprises away from a “minimum compliance only” mindset toward transformative development incorporating ingredient circularity, biodiversity protection and full life cycle management. The handbook anticipates trends such as water scarcity, circular material adoption and shifting global consumption patterns, advising enterprises to optimize product design, packaging and service systems for future consumer needs and resolve sustainability challenges through innovation.

Andrew Gan, President of Cosmetic, Toiletry and Fragrance Association Singapore (CTFAS), analyzed real world pathways and obstacles for beauty sector sustainability under UN SDG 12 (Responsible Consumption and Production), drawing on Singapore’s local context. The cosmetics industry, with its heavy chemical usage, packaging waste

output and complex supply chains, is a priority area for SDG 12 implementation requiring multi-stakeholder collaborative governance.



Andrew Gan, President of CTFAS

Singapore operates a multi-faceted governance system integrating government regulation, industry support, research input and financial incentives, focusing on SDG 12.4 chemical substance management, 12.5 waste reduction and 12.6 sustainability disclosure requirements. Risk prevention runs through ingredient selection, production and waste disposal, targeting pain points including micro-plastic pollution and aquatic toxicity. For circularity, the “less is more” philosophy guides packaging streamlining, refill and replacement schemes and material recycling to mitigate waste generated by multi-layer composite packaging and excessive sample size products. More than 99 % of Singapore listed beauty enterprises publish sustainability reports to curb green washing, traceability gaps and misleading environmental claims, while targeted support lowers compliance and transition costs for small and medium sized enterprises (SMEs).

Shuhei Matsumoto, Chair of packaging subcommittee in Sustainability committee, Japan Cosmetic Industry Association (JCIA), presented Japan’s green action experience

for cosmetics packaging. To tackle marine plastic pollution, Japan has updated its circular economy legal framework from the original 3R principles to the enhanced "3R+" regenerative development concept. The "Act on Promotion of Sorting and Collecting Plastic Resources" mandates circularity, reduction and eco-design from the product development phase.



Shuhei Matsumoto, Chair of packaging subcommittee in Sustainability committee, JCIA

The Japanese beauty industry widely promotes refill and replacement formats for rinse-off products, achieving plastic usage cuts exceeding 50 %. Tiered environmental standards have been introduced: high-bar eco-certifications paired with inclusive good practice benchmarks, plus ISO-aligned disclosure guidance and checklists. This raises the sustainability ceiling for the sector while preventing corporate inaction and countering green washing, offering replicable models for global packaging plastic reduction, circularity and standard setting.

China Domestic stakeholders foster endogenous drivers for cosmetics green growth

Zhu Zihui, Channel Transformation Center Manager, Meichuang Jingjie (Shanghai) Brand Management Co., Ltd., presented achievements in building regional beauty

innovation ecosystems. Leveraging the Jing'an-Fengxian cross district synergy, the hub has built a full chain industrial ecosystem: front-end R&D incubation and back-end large scale manufacturing, solving industry pain points such as slow scientific research translation, difficult resource matching and sluggish technological iteration.



Zhu Zihui, Channel Transformation Center Manager, Meichuang Jingjie (Shanghai) Brand Management Co., Ltd.

Four specialized laboratories have been established in partnership with Huashan Hospital and Shanghai Dermatology Hospital to deliver sensory evaluation, efficacy verification and technical problem solving services filling industry gaps. A full life cycle enterprise incubation system collaborates with leading firms such as L'Oréal on industry competitions and deep dive incubation, hosting over 130 beauty tech startups. Going forward, the hub will harness AI-driven R&D, hair testing and smart hardware technologies to push the cosmetics industry toward personalized precision solutions, technological innovation and eco-efficiency, helping China domestic beauty brands connect with global markets.

Nie Fei, Director of the Commercial Operations Department Consumption Advocates, Finance Programme Centre, China Media Group, launched the "CMG Healthy China in Action · New Chapter of Beauty Vitality" industry empowerment initiative. The

beauty sector has evolved beyond competition over traffic and products toward rivalry centered on quality, branding and trust. The industry needs to translate green technology innovation, R&D strength and industrial advantages into consumer perceivable, trustworthy brand value.



Nie Fei, Director of the Commercial Operations Department Consumption Advocates, Finance Programme Centre, China Media Group

Rooted in four core dimensions of beauty - technology, industry, culture and green development - the initiative employs a “Six-in-One” all media communication system to build a multi-party linkage platform connecting national strategies, research institutes, enterprises and consumers. Through special topic reports, annual summits, experiential events and outcome releases, it highlights outstanding industry practice, standardizes green-related communication and fights green washing, helping high-quality China domestic brands committed to quality and green innovation build public trust and foster virtuous cycles between green production and green consumption.

Professor Li Wenzhu, East China University of Science and Technology, addressed building green design standard systems. Her team, working with the World Green Design Council, has built a global cross-sector three-tier international standard framework for green design: general principles, cross-industry common standards

and special technical standards. More than 20 sub-standards have been implemented across beauty, energy, environment, cultural tourism and other sectors. Several outputs have been selected for Shanghai World Design Capital innovation projects and UN sustainable development demonstration projects, supplying unified international specifications for full life cycle green design of cosmetics and steering industrial low carbon transformation through standardization.



Professor Li Wenzhu, East China University of Science and Technology

Professor Jia Yan, Dean, School of Light Industry Science and Engineering, Beijing Technology and Business University, introduced chain oriented scientific research layout for cosmetics. The university conducts full industrial chain R&D for beauty, with four core research systems: skin science, green ingredients, formulation and packaging, and safety and efficacy evaluation. Priority research fields include biosynthetic ingredients, green surfactants, biodegradable packaging materials and full chain carbon accounting. Drawing on national level research platforms and standard setting qualifications, the university participates deeply in drafting industry standards on safety, efficacy and low carbon development. Industry-university-research collaboration supports enterprises implementing green manufacturing and low carbon transition, delivering solid scientific research backing for sustainable cosmetics sector growth.



Professor Jia Yan, Dean, School of Light Industry Science and Engineering, Beijing Technology and Business University

Upgraded international cooperation: RCEP China ASEAN cooperation project officially launched

The conference inaugurated the RCEP Cosmetics International Cooperation Platform China ASEAN Project. Cosmetics Advancement Committee of China Health Care Association and China Cosmetics International Trade Committee of China Chamber of Commerce for Import and Export of Medicines and Health Products cooperate with multiple ASEAN cosmetics industry associations. Taking advantage of the world's largest free trade zone under RCEP, a cross-border industrial cooperation platform has been established.

Five cooperation pillars have been defined: cross-border regulatory training, notification and filing information exchange, industry resource matchmaking, field visit and exchange programs and construction of an AI-powered shared database. Responding to trade growth needs of Chinese and ASEAN beauty industries, the project pursues regulatory mutual recognition, standard harmonization, trade facilitation and technology exchange. It aims to resolve SMEs' pain points in overseas

expansion including compliance hurdles, information asymmetry and fragmented resources, building a win-win international industrial ecosystem of joint global market expansion and advancing green, high-quality coordinated development for regional beauty sectors.



Andrew Gan, President of CTFAS

Bringing together regulatory insights, local practice experience, global outlooks, academic expertise and media influence, the conference systematically reviewed global experience, innovative pathways and practical deliverables for green development in the beauty industry. Through standards development, technology empowerment, policy innovation and international linkages, it has identified solutions to green transition bottlenecks, mapped pathways for building low carbon cosmetics industrial chains and deepened global cooperation. Going forward, stakeholders across the industry will keep advancing green innovation, uphold quality bottom lines and strengthen collaborative governance, steering China's cosmetics industry toward higher quality, more sustainable and more globally competitive new development stages.

Sustainable Development

- Research and Reflections on Green Product Evaluation Technical System for Cosmetics Industry

Research and Reflections on Green Product Evaluation Technical System for Cosmetics Industry

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Driven by the global trend of green and sustainable development, all industries are confronted with the transition toward low-carbon and eco-friendly operations. Green product certification has evolved into a critical instrument for facilitating corporate green transformation, regulating industrial development, and measuring the eco-friendly attributes of products. While international green product certification systems emerged earlier with broad certification scopes and progressively stringent assessment criteria, China's domestic green product evaluation framework is advancing toward systematization and standardization. This paper reviews mainstream international green certification systems and evaluation methodologies, analyzes the current status of China domestic certification standards, and puts forward preliminary proposals for establishing a green product standard system for the cosmetics industry.

I. Overview of International Green Product Certification Systems

International green product certification systems originated in the 1970s. After decades of evolution, they have formed a diversified pattern led by governments, coordinated by industrial sectors and participated by third-party certification bodies, covering cosmetics, textiles, home appliances, packaging and numerous other sectors. The majority of certification frameworks center on the full life cycle concept, targeting three core objectives: resource conservation, environmental friendliness and human health protection, and serve as vital guidance for global green consumption.

Launched in 1978, Germany's Blue Angel certification is the world's first official environmental label. Its full life cycle assessment framework laid a foundational basis for subsequent green product certification systems. Canada's EcoLogo and the United

States' Green Seal mainly target the North American market; both certification systems emphasize environmental impacts across the entire product life cycle including production, usage and disposal. The Nordic Swan Ecolabel is renowned for its rigorous standards, with key focuses on sustainable raw material procurement, ecological protection and strict chemical safety control. As a regional certification system uniformly rolled out by the European Union, the EU Ecolabel harmonizes green product standards across all member states and functions as the core official eco-label for green products in the European market.

II. International Green Certification Systems for Cosmetics

1. EU Ecolabel

Launched by the European Commission in 1992, the EU Ecolabel is an official EU green product certification scheme designed to incentivize the production and consumption of eco-friendly goods across Europe. Certified products are referred to as "flower-labeled products", with a three-year certification validity period. As of September 2025, 109,096 products and services have obtained this certification, 97% of which are issued within the European Economic Area. Small and medium-sized enterprises constitute the primary certification applicants, accounting for 57% of total certified entities.

Its certification scope for cosmetics covers two major categories: rinse-off and leave-on products. Rinse-off products include soaps, shampoos, body washes, hair conditioners, shaving creams, toothpastes, etc. Leave-on products cover creams and oils, skin lotions, hair styling products, sun care items, color cosmetics, personal deodorants and antiperspirants, basically encompassing all cosmetic categories.

Based on Regulation (EU) 2021/1870 and its 2023 amendments, the certification standards establish requirements across six dimensions:

(1) Low aquatic toxicity: strict threshold limits are set for overall ingredient toxicity to aquatic organisms;

(2) Using biodegradable ingredients: stringent limits on non-biodegradable organic substances;

(3) Restriction of hazardous substances: ban on carcinogenic, mutagenic and reprotoxic (CMR) substances, nanomaterials and microplastics; fragrances are prohibited in children's cosmetics and sensitive-skin products;

(4) Minimized and recyclable packaging: priority given to refill formats and recycled materials;

(5) Sustainable renewable ingredients: only sustainably sourced palm oil and its derivatives are permitted;

(6) Guaranteed product performance: product efficacy and consumer satisfaction verified via accredited laboratory tests and consumer trials.

2. COSMOS Standard

The COSMOS standard was jointly launched in 2010 by five leading European authorities (BDIH from Germany, Cosmebio/Ecocert from France, ICEA from Italy and the Soil Association from the United Kingdom), and COSMOS-standard AISBL, headquartered in Brussels, Belgium, was formally established in 2011. There are currently 12 certification bodies worldwide, with certification services covering numerous countries and regions across Europe, Asia, the Americas, Africa and Oceania, etc.

COSMOS labels fall into two categories: finished product labels and ingredient labels. Finished product certifications are split into COSMOS ORGANIC and COSMOS NATURAL. COSMOS ORGANIC represents the highest tier, applicable to cosmetics fully compliant across all production links with qualified organic ingredient content. COSMOS NATURAL applies to products complying with all process requirements yet failing to meet the organic ingredient threshold, focusing on products' natural attributes. Ingredient certifications include COSMOS CERTIFIED and COSMOS APPROVED. COSMOS CERTIFIED is applicable to cosmetic ingredients that meet organic content requirements and have undergone physical or chemical processing; COSMOS APPROVED applies to non-organic ingredients that have been reviewed and are suitable for use in the production of COSMOS-certified products, offering compliance guidance for corporate ingredient procurement.

Running through the full product life cycle, the certification standards and rules govern six core links: ingredient sourcing and processing, total product composition, inspection, certification and control, labeling and marketing claims, storage, production and packaging, and environmental management. Four core principles underpin the framework:

(1) Promote organic agriculture: prioritize agricultural organic ingredients for cosmetics to reduce ecological harm from synthetic ingredients;

(2) Responsible resource utilization: mandate resource conservation throughout corporate operations to lower environmental load;

(3) Green chemistry implementation: adopt manufacturing processes benign to human health and ecosystems, with strict curbs on hazardous chemicals;

(4) Clean production and health safeguards: integrate advanced green chemical technologies to drive green transformation of cosmetic manufacturing technique.

3. EcoBeautyScore (EBS) Rating System

Developed by the EcoBeautyScore Association in collaboration with over 70 global beauty enterprises and associations including L'Oréal and Beiersdorf, the EcoBeautyScore (EBS) system was officially launched in Europe and the United Kingdom in July 2025. Its core objectives are to help brands assess and mitigate product environmental footprints, boost supply chain transparency, and provide consumers with scientific criteria for green consumption choices.

Initially covering four core cosmetic categories in the European market (shampoos, hair conditioners, body washes and facial moisturizers) subdivided into 30 subcategories, the EBS system plans to incorporate more cosmetic product categories and ultimately achieve full-category coverage globally.

Built on Life Cycle Assessment (LCA) theory and the EU Product Environmental Footprint (PEF) standard, EBS sets the full product life cycle - from ingredient extraction, manufacturing, packaging, transportation and distribution to end-user application and post-consumer waste disposal - as its evaluation boundary. It calculates 16

environmental impact indicators across all stages, including climate change, water resource depletion, land use intensity and freshwater ecotoxicity. Raw indicator data are converted into unified environmental impact units, normalized against the average environmental impact benchmark of the European cosmetics industry with weighted coefficients assigned, and summed to generate a comprehensive product environmental impact score.

III. China Domestic Regulatory Framework for Green Product Certification

1. Policy Background

In November 2016, the General Office of the State Council issued the “Opinions on Establishing a Unified System of Green Product Standards, Certification and Labeling” (Guobanfa 2016 No. 86), the top-tier foundational document for China’s green product system. It integrates environmentally friendly, energy-efficient, water-saving, circular, low-carbon, recycled and organic products under the unified "green product" umbrella, and sets a 2020 target to preliminarily establish a standardized green product system featuring "one set of standards, one positive list, one certification process and one unified label per product category".

In December 2025, the State Administration for Market Regulation (SAMR) and multiple central ministries jointly released the “Measures for the Administration of Green Product Certification and Labeling” (Guoshijianrenzheng Gui 2025 No. 5). Revising and refining the original framework, and focusing on full-process supervision of green product certification, the Measures introduce tiered classification management covering full-attribute certification and partial-attribute certification: full certification requires all green attributes of a product to meet evaluation benchmarks, while partial certification only mandates compliance with single or multiple selected green attributes, catering to diversified industrial management and market demands. It further elaborates on certification implementation, certificate administration, label usage and supervision responsibilities, clarifying coordinated oversight mechanisms among the SAMR, relevant central ministries and local market supervision agencies, and providing concrete policy guidance for green certification execution.

2. Relevant Standards

China has issued a total of 48 green product evaluation standards, including 38 currently effective standards and 10 standards slated for implementation this year. The effective standards comprise "General principles for green product assessment" plus 37 sector-specific standards covering building materials, furniture, household appliances, textiles, paper products, plastic goods and other categories; the upcoming standards cover fertilizers, cement, construction materials and electrical appliances.

"General principles for green product assessment" (GB/T 33761-2024), released and implemented on November 28, 2024 to replace the 2017 version, serves as the fundamental national standard underpinning China's green product evaluation system. Centered on the full life cycle concept, it stipulates baseline requirements for green products including environmental safety, resource conservation, low energy consumption, superior quality and carbon emission reduction. It builds a five-core indicator framework covering resources, energy, environment, product quality and low carbon emissions, newly adding requirements for low-carbon performance and carbon footprint, and establishes two evaluation tiers: Green Product and Benchmark Green Product. The standard unifies evaluation principles, indicator frameworks and judgment criteria, forming consistent technical specifications for drafting sector-specific green evaluation standards for all product types.

In 2019, the Ministry of Ecology and Environment issued "Technical requirement for environmental labeling products - Cosmetics" (HJ 1060-2019), which contains five chapters: general requirements, product requirements, production process requirements, packaging material requirements and product Specification requirements. General requirements stipulate that manufacturers must comply with national and local pollutant discharge standards, implement clean production practices, and ensure products meet mandatory quality and safety regulations. Product requirements specify that 11 categories of substances including alkylphenol ethoxylates and phthalates are banned; strict VOC concentration limits apply to six product lines such as nail polish and hair conditioner; capped thresholds are specified

for lead, phosphate content and surfactant biodegradability. Production process requirements prohibits the use of 11 substances, including methylene chloride and trichloroethylene, as solvents. Packaging material requires that packaging recyclability rate ≥ 80% with standardized recycling logos; HCFCs are forbidden as foaming agents; phthalates, bisphenol A and chlorine-containing additives are banned; the total content of lead, cadmium, mercury and hexavalent chromium shall not exceed 100 mg/kg. Product labeling specify usage guidelines, storage conditions, and recycling information.

IV. Reflections and Recommendations

On January 5, 2026, the Ministry of Commerce and eight other central departments jointly issued the "Notice on Launching the Green Consumption Promotion Campaign", which calls for guiding green development of the cosmetics industry. Nevertheless, no dedicated national standard for cosmetic green products has yet been formulated, highlighting an urgent need to develop targeted standards aligned with industrial realities.

Against the national policy backdrop of building a unified green product standard, certification and labeling system, this paper proposes developing a dedicated standard system for cosmetic green products anchored to the "General principles for green product assessment" (GB/T 33761-2024), adopting full life cycle assessment as the core technical logic, and drawing on indicator frameworks and calculation methodologies from mature international cosmetic green certification schemes to guide and standardize corporate green transformation. Key elements of the proposed standard system are outlined below:

1. Establish Unified Baseline Requirements to Encourage Advanced Technology and Low-Carbon Manufacturing

Unified baseline requirements form the foundation for tiered evaluation of cosmetic green products. They must balance mandatory compliance thresholds with industrial development orientations to prevent fragmented standards and provide a consistent

benchmark for tiered grading. First, formulate harmonized compliance baselines: integrate provisions from China's cosmetic safety supervision and administration regulations, foundational environmental labeling requirements in HJ 1060-2019 and internationally recognized eco-compliance criteria, and set full regulatory compliance as a prerequisite for tiered certification. Second, prioritize advanced green technologies and low-carbon production: incorporate green innovation and carbon emission reduction as core grading indicators.

2. Develop a Scientific Quantifiable Evaluation Indicator System with Enhanced Environmental and Human Health Assessment

A tiered, quantifiable indicator framework constitutes the core of green product grading. Indicator design shall adopt reference benchmarks based on the overall technical maturity of the cosmetics sector, and absorb evaluation logics from internationally recognized environmental and human health impact standards to ensure scientific validity and operability.

Firstly, clarify standardized scoring rules aligned with industrial technical levels with defined numerical thresholds for tiered grading. Combine quantitative measurable indicators with qualitative judgment criteria: assign explicit numerical limits to quantifiable metrics with tier-specific threshold values; entrust qualified third-party institutions to assess qualitative indicators such as ingredient traceability systems for objective, impartial results.

Secondly, adopt mature quantifiable international environmental and human health impact indicators as core grading metrics. China's existing "Safety and Technical Standards for Cosmetics" bans 1,388 ingredients and restricts 47 substances, while the 2021 edition of the "Technical Guidelines for Cosmetic Safety Assessment" establishes a complete risk assessment procedure to guarantee no harm to human health under normal product use. However, current China domestic frameworks fail to quantify ecological and human health impacts generated during other life cycle stages including manufacturing and post-consumer disposal. Drawing on mature

international scoring systems, targeted thresholds and quantitative calculation methodologies should be introduced to fill this gap.

3. Build a Public Information Platform for Green Product Certification to Strengthen Public Oversight

To incentivize enterprises to pursue green certification, amplify publicity for eco-friendly cosmetics and steer consumers toward sustainable purchasing, a dedicated public information platform should be developed alongside the formulation of sectoral standards. The platform shall disseminate green certification standards to enterprises and consumers, publish verified information on certified green products, and deliver product lookup, certification verification and consumer review functions. Additionally, linkage with unqualified product announcements released by the National Medical Products Administration (NMPA) can be integrated: certification credentials shall be revoked for green products repeatedly failing official sampling inspections.

Laws and Regulations

- Systematically Sorting Out the Full-Chain Cosmetic Supervision & Administration System; New Policies Empower Industrial Innovation and High-Quality Development

- Regulatory Improvement & Service Efficiency-Boosting: Eight Optimization Measures to Fuel Innovation Vitality in the Cosmetics Industry

Systematically Sorting Out the Full-Chain Cosmetic Supervision & Administration System; New Policies Empower Industrial Innovation and High-Quality Development

CACHCA

In recent years, China's cosmetic regulatory supervision and administration system has undergone continuous iteration and improvement. Centered on the "Cosmetic Supervision and Administration Regulation"(CSAR), a law-based regulatory framework covering the entire lifecycle - ingredients, registration, production, operation, and in-market surveillance - has been established. At the end of 2025, the National Medical Products Administration (NMPA) issued 24 deepening reform measures, balancing safety bottom lines and industrial innovation, and transforming the supervision and administration model from single access control to scientific regulation and industrial empowerment. Combining the complete legal framework, full-process compliance requirements and the latest reform dividends, this article systematically interprets the current landscape of cosmetic supervision and administration in China, providing clear guidelines for enterprises on compliant operation and R&D innovation.

I. Establish a Tiered Legal System as the Foundation of Modern Supervision and Administration

China's cosmetic supervision and administration adopts a three-level complete structure: administrative regulations - departmental rules - supporting normative documents, enabling full-chain and refined risk control. The top level is the CSAR, which came into force in 2021 as the fundamental legal basis of the industry, replacing the thirty-year-old old regulations. It defines four core supervision and administration principles: registrant/notifier primary responsibility system, risk-based classified administration, mandatory safety assessment, and traceable efficacy claims. The second level consists of departmental rules including the Administrative Measures on Cosmetic Registration and Notification, the Supervision and Administration Measures

on Cosmetics Manufacture and Operation, and the Measures for the Supervision and Administration of Toothpaste, specifying statutory rights and obligations for all links. The third level comprises more than 200 cumulative normative documents covering subdivided areas such as registration application, GMP production specifications, inspection and testing, policy Q&As, and technical guidelines for safety assessment, with relevant standards and detailed rules being continuously updated and improved.

For supervision and administration implementation, a four-level medical products administration linkage mechanism (national, provincial, municipal, county) has been set up. The National Institutes for Drug Control (NIDC) provides technical support including technical review and standard testing, forming a closed-loop integrated management system covering legislation, approval, technical inspection and market sampling. After the implementation of the new regulations, six core upgrades have been realized: Consolidate enterprises' primary responsibilities throughout the full product lifecycle; Adopt a dual-track registration and notification system for new ingredients; Mandate safety assessment for all cosmetic categories; Refine requirements for label information disclosure; Standardize the evidence submission mechanism for efficacy claims; Greatly increase penalties for illegal acts, and implement dual disciplinary mechanisms for enterprise legal representatives and operators to safeguard consumer safety through rigid constraints.

II. Clarify Responsible Parties Across the Full Industrial Chain and Define Compliance Rights & Obligations of All Stakeholders

The laws and regulations clearly define five statutory responsible parties with distinct boundaries of rights and obligations: registrants/notifiers, entrusted manufacturers, China domestic responsible persons, enterprise principal persons-in-charge, and quality safety persons-in-charge.

1. Registrants/Notifiers: The primary responsible party for cosmetic products, who takes overall charge of quality safety and efficacy management. They are required to appoint a quality safety person-in-charge with more than five years of industry

experience, who shall be fully responsible for product safety assessment, factory release, retention of efficacy evidence, bear legal liability for all public claims, and publicly release abstracts of efficacy supporting documents as required.

2. Enterprise Principal Persons-in-Charge: Take overall charge of establishing enterprise quality management systems, guarantee investment in compliance resources, address major safety risks, and bear corresponding legal consequences for corporate illegal acts.

3. Entrusted Manufacturers: Strictly implement the Good Manufacturing Practice (GMP) for cosmetics, organize production in accordance with filed formulas and techniques, appoint quality safety persons-in-charge and full-time quality inspectors, and bear responsibility for quality release during production.

4. Domestic Responsible Persons: A dedicated role for imported cosmetics, responsible for registration and notification of overseas products in China, cooperating with regulators on product recalls, submitting adverse reaction reports on a regular basis, and ensuring imported products comply with Chinese regulatory requirements.

III. Implement Risk-Based Classified Administration with Differentiated Control Over Various Products

Cosmetics are divided into two major categories according to usage risk level, matched with distinct approval systems:

1. Special Cosmetics

It includes spot-removing and whitening, sunscreen, hair dyeing, hair perming, anti-hair loss, and products with new efficacy claims. These are subject to the registration system. China domestic and imported products must submit applications to the NMPA before production and import, with a 90-working-day technical review period and strict approval thresholds.

2. General Cosmetics

All cosmetics outside the scope of special cosmetics, covering 21 conventional efficacy types such as moisturizing, repairing and cleansing, hair care. These adopt the notification system: enterprises submit documents online before market launch, and provincial medical products administrations complete document collection within 5 working days. Toothpaste is regulated by reference to general cosmetics; general soap is not classified as cosmetics, while soap claiming special efficacy falls under cosmetic supervision and administration.

IV. Build a Closed-Loop Control System for Ingredients to Fuel Innovation of China Domestic Ingredients

As the source of cosmetic safety, ingredients are governed by a dual mechanism: catalog control + classified administration of new ingredients, forming a solid frontline defense for source safety.

1. Catalog Administration of Existing Ingredients. The current "Cosmetic Classification Rules and Catalogs I" contains 8,972 conventional ingredients, and Volume II contains 6 newly added ingredients. Enterprises may only use ingredients listed in the catalog. Restricted and permitted ingredients must comply with control rules in the "Safety and Technical Standards for Cosmetics" (STSC), with strict limits on scope of use and maximum added concentration. The "Catalogue of Prohibited Cosmetic Ingredients" and "Catalogue of Prohibited Cosmetic Plant/Animal Ingredients are dynamically updated to cover over 1,400 prohibited items; intentional addition constitutes an illegal act. Complete records of ingredient specifications, sources and safety data must be retained to realize full traceability.

2. Dual-Track Administration of New Ingredients. Ingredients (naturally derived or synthetic) used in cosmetics for the first time in China are defined as cosmetic new ingredients, subject to risk-classified approval: High-risk ingredients falling into five categories - preservatives, sunscreens, colorants, hair dyes, spot-removing & whitening agents - follow the registration approval process; all other low-risk new ingredients

adopt the notification regime. All new ingredients are subject to a three-year safety monitoring period. Those with no safety hazards identified upon expiration of monitoring will be incorporated into Inventory of Existing Cosmetic Ingredients in China (IECIC) II, completing closed-loop management. As of June 2026, a total of 467 new ingredients have completed registration and notification nationwide, including 464 filed items and 3 registered items, with China domestic new ingredients accounting for nearly 90%. R&D of characteristic native plant ingredients is witnessing rapid growth.

V. Phased Rollout of Mandatory Safety Assessment to Consolidate the Bottom Line of Product Safety

The mandatory cosmetic safety assessment system has been implemented in three phases to grant enterprises sufficient compliance buffer time:

1. May 2021–April 2024: Simplified safety assessment rolled out, leveraging the existing ingredient catalog to reduce initial compliance burdens for enterprises;

2. May 2024–April 2025: Transitional optimization period, with classified management policies issued and more than ten supporting technical guidance documents released by NIDC;

3. May 2025 onwards: Full version safety assessment fully enforced. Complete assessment reports for special cosmetics shall be submitted together with registration materials; general cosmetics must complete full assessment and retain assessment conclusions for inspection, enabling scientific pre-judgment and mitigation of potential product safety risks.

VI. Refine Rules for Efficacy Evaluation to Ensure Substantiated Claims

Regulations divide cosmetic efficacy claims into three categories with clear verification pathways for each:

1. Mandatory human clinical trial category (6 types): Spot-removing & whitening, sunscreen, anti-hair loss, anti-acne, nourishing and repairing claims must be

supported by clinical trial reports issued by CMA-qualified institutions.

2. Multi-source verification category (9 types): Moisturizing, anti-wrinkle, soothing, oil control and other claims may be verified via optional approaches including human testing, consumer panel testing, instrumental detection, and authoritative literature (literature alone is acceptable only for partial claims).

3. Sensory identification category (11 types): Cleansing, fragrance, makeup removing, hair perming and other claims identifiable merely via sight, smell and touch require no additional testing.

Abstracts of supporting evidence for all product efficacy claims must be disclosed on official platforms for public supervision, fundamentally eliminating false and exaggerated advertising.

VII. Standardize Full-Spectrum Production & Operation Processes to Establish a Circulation Supervision and Administration Barrier

1. Access Control at the Production End

Cosmetic production adopts a license system: provincial medical products administrations conduct on-site inspections and issue production licenses valid for 5 years, with license renewal implemented via enterprise self-inspection commitment system. Special labeling is required for children's cosmetics and eye cosmetics in licensed production items. The entire production process must comply with GMP; formulas, processes and technical requirements shall not be arbitrarily altered and must remain consistent with contents declared in product registration and notification dossiers.

2. Obligations of Distribution & Operation Entities

Both offline physical stores and online e-commerce platforms must implement certificate retention and purchase-sales ledger systems to realize traceable product sources. E-commerce platforms shall set up quality management posts to review

qualification documents of settled merchants. Operators shall proactively collect and report cosmetic adverse reactions, and cooperate with enterprises on recalls and risk control of defective products.

VIII. Regular In-Market Supervision and Administration to Form a Closed-Loop Full-Lifecycle Risk Control System

Registration and notification do not mark the end of supervision and administration; in-market surveillance operates under parallel enterprise self-management and governmental oversight mechanisms.

Enterprise Mandatory Routine Obligations

1. Collect consumer and medical institution adverse reaction reports through multiple channels and submit real-time data to the monitoring system;

2. Submit annual reports for general cosmetics one year after notification, disclosing production & sales volume and risk control status;

3. Submit annual safety usage data for new ingredients during the three-year monitoring period; suspend ingredient use and initiate product recalls proactively upon identification of safety risks.

Multi-Dimensional Government Supervision and Administration Tools

Medical products administration authorities carry out regular on-site production inspections, unannounced flight inspections, market circulation sampling, and authenticity verification of overseas documents, alongside cross-industry safety risk monitoring to rapidly identify and dispose of non-compliant products, achieving early detection and early mitigation of risks.

IX. Full Implementation of 24 Reform New Policies to Unleash Industrial Innovation Dividends

In November 2025, NMPA issued the “Opinions on Deepening Cosmetic Regulatory Reform to Promote High-Quality Industrial Development”, launching 24 systematic

reform measures covering five major directions: encouraging innovation, optimizing supervision and administration, strengthening risk control, empowering supervision with technology, and advancing international coordination, shifting supervision and administration from rigid control to industrial empowerment.

1. Encourage industrial innovation: Real-time acceptance and review for products with new efficacy claims; overseas products making their debut in China are exempted from submitting proof of domestic market launch in their country of origin, shortening the market launch cycle for overseas new products; R&D of characteristic China domestic ingredients receives targeted policy support.

2. Optimize review, supervision and administration: Formulation-similar products may share complete safety and efficacy testing reports; simplified application documents for changes to production premises and China domestic responsible persons; ingredient submission codes and safety data may be retained internally by enterprises, drastically reducing repetitive testing and declaration workload; partial categories are exempted from animal toxicology testing to advance a green evaluation system.

3. Strengthen risk-based classified control: Implement classified tiered supervision and administration of enterprises; deepen joint review mechanisms between national and provincial authorities; improve a full-chain adverse reaction monitoring network.

4. Technology-enabled smart supervision and administration: Explore AI applications in review and inspection; electronic label pilots launched in six provincial/municipal jurisdictions starting 2026 to lower enterprises' packaging and compliance costs.

5. Deepen international coordination: Accelerate alignment with internationally accepted efficacy and ingredient standards; expand the scope of applicable alternative animal testing methods; establish a dynamic update mechanism for permitted ingredients to support China domestic cosmetic brands going global and overseas brands entering the Chinese market.

Follow-up phased optimization measures continue to be rolled out: personalized beauty customization pilot scope expanded in October 2025; new ingredient regulatory provisions released in July 2026 to narrow the scope of high-risk new ingredient control and fully recognize alternative toxicology testing methodologies, comprehensively cutting enterprises' overall costs for R&D, declaration and testing.

Conclusion

China's current cosmetic supervision and administration system strictly upholds safety bottom lines while reserving room for industrial innovation and development. A complete full-lifecycle legal framework together with continuously optimized new policies safeguards the high-quality development of the industry. For enterprises, thoroughly mastering laws and regulations and leveraging policy dividends to conduct compliant innovation based on native ingredients and standardized efficacy evaluation is the key to boosting core competitiveness. All industry stakeholders should strictly abide by compliance red lines, leverage optimized review and approval measures to deepen R&D, and jointly drive the domestic beauty industry toward standardization, scientization and globalization.

Regulatory Improvement & Service Efficiency-Boosting: Eight Optimization Measures to Fuel Innovation Vitality in the Cosmetics Industry

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Introduction

In November 2025, the National Medical Products Administration (NMPA) issued the "Opinions on Deepening Cosmetics Regulatory Reform to Promote High-Quality Industrial Development" (Guo Yao Jian Zhuang 2025 No.18, hereinafter referred to as the Opinions). To implement the Opinions, continuously advance the reform of cosmetics registration and notification administration, accelerate the supply of high-quality cosmetics and foster high-quality industrial development, the NMPA released the "Announcement on Matters Concerning Cosmetics Registration and Notification" (hereinafter referred to as the Announcement). It refines administrative requirements for cosmetics registration and notification, delivers actionable concrete measures for enterprises in optimizing registration and notification administration and simplifying application documents. The reform dividends of review and approval systems are clearly communicated, translating institutional advantages into tangible outcomes that empower industrial development and boost enterprise vitality. Relevant measures shall take effect upon the release of the Announcement, injecting new momentum into numerous cosmetics enterprises.

As an important instrument for improving the long-term cosmetics regulatory system and refining registration and notification administration, the Announcement also serves as a key policy tool to further optimize the business environment of the industry, unleash industrial innovation momentum, and safeguard public beauty-related health.

Specifically, the Announcement optimizes registration and notification administrative requirements in eight aspects, translating macro-level reform policies into practical

measures directly implementable by enterprises:

1. Facilitate China domestic first-launch of international new products and build a global beauty-product debut market

Where international new cosmetics make their first-ever launch in China or are launched simultaneously in China and overseas markets, enterprises may be exempted from submitting sales-proof documents for marketed products from the registrant/notifier's home country or producing region upon submission of a commitment statement for China-first launch. In addition, design drawings may replace commercial retail packaging for sales packaging submitted at the application stage, greatly shortening the time-to-market for overseas brands entering China and attracting global beauty new-product launches in the China domestic market.

2. Further exempt animal testing, promote green-oriented safety evaluation and facilitate cosmetics international trade

The scope of animal-testing exemption is expanded. For permanent-wave products, non-oxidative hair-dye products, special cosmetics with freckle-whitening claims relying solely on physical masking effects, and general cosmetics using new cosmetic ingredients (excluding children's cosmetics): where enterprises obtain production quality-management system qualification certificates issued by competent governmental authorities of the relevant country/region, and product safety risk assessment results sufficiently verify product safety, toxicological testing reports may be waived during application. This policy lowers enterprises' testing costs while driving the industry to reduce animal testing. It also advances research and innovation in cosmetic safety-assessment technologies, improves the scientificity, accuracy and applicability of safety assessment work, aligns with relevant international standards, facilitates cosmetics international trade, and provides strong support for high-quality Chinese cosmetics to go global.

3. Enterprises shall archive ingredient safety information documents for inspection, further subjecting enterprises to main-responsibility obligations

For the registration and notification of cosmetics (including toothpaste), ingredient

safety information documents and ingredient submission codes are no longer required for form-filling; only the names of ingredient manufacturers need to be entered. Relevant documents shall be kept on file by enterprises for regulatory inspection. This reduces enterprises' form-filling workload while further consolidating enterprises' primary responsibilities for product quality and safety.

4. Share safety-related technical documents for formula-similar cosmetics (including toothpaste) to cut redundant testing costs

Products under the same registrant or notifier and of the same brand shall be deemed formula-similar cosmetics, provided that only the types and contents of colorants, fragrances, pH regulators, polymer-based thickeners and pearlescent agents (together with corresponding adjusted contents of solvents and fillers) differ, while all other ingredient types and contents, product dosage forms and usage methods remain identical. Enterprises may conduct tests on one representative product; for other similar products, explanatory documents together with scientific and rational assessment confirmation shall be submitted. Shared access to microbial and physicochemical testing reports, toxicological and human-safety testing reports is permitted, effectively lowering registration and notification testing costs and shortening application cycles.

5. Simplify application procedures for production site changes to enable flexible deployment of China domestic and overseas production capacity

For China domestic or imported cosmetics with newly-added manufacturers or cross-border production transfers: where the registrant/notifier, product name, formula and substantial product standard provisions remain unchanged, enterprises may share test evaluation reports including toxicological testing reports, human-safety testing reports, safety assessment reports and efficacy-claim evaluation reports, provided that microbial-physicochemical inspection reports and original cosmetic registration certificates or notification dossiers are submitted. This measure effectively addresses enterprises' pain points of high costs and long lead-times caused by repeated testing when adjusting supply chains or switching production sites, and supports flexible global production-capacity layout for enterprises.

6. Broaden the scope of testing methods for efficacy-claim evaluation and grant enterprises independent R&D space

Except for efficacy claims for freckle-whitening, sun protection and anti-hair-loss, for all other cosmetic efficacy claims, enterprises may independently adopt industry standards, international standards, technical guidelines or validated in-house developed methods to conduct efficacy-claim evaluation testings on the premise of complete scientific evidence. This removes previous restrictions on the priority order of evaluation-method selection, and accommodates enterprises' R&D demands for innovative product efficacy.

7. Share efficacy-claim evaluation testing data for formula-similar cosmetics to reduce enterprises' compliance costs

For formula-similar cosmetics under the same registrant/notifier and of the same brand, enterprises may complete efficacy testings on a representative product. After equivalent-effect assessment for other similar products, shared use of efficacy-claim evaluation testing data is allowed. This regulatory measure greatly cuts repeated-testing expenditures for enterprises, facilitates formula upgrading and modification, and fully unlocks the industry's innovation vitality.

8. Simplify document requirements for China domestic responsible person changes to remove cross-border business bottlenecks

When changing the China domestic responsible person for cosmetics (including toothpaste), mandatory requirements for consent-stamped documents from the original China domestic responsible person or court judgements confirming the effectiveness of China domestic responsible person changes are abolished. This lowers document-preparation and communication costs for changing China domestic responsible persons for imported cosmetics and improves operational flexibility for brands engaged in cross-border business.

The new cosmetics regulatory-reform policies and supporting optimization measures represent a systematic reform package rolled out by the NMPA after in-depth field research and accurate identification of pain points across enterprises' full-chain R&D,

registration and production processes. A closed-loop long-term regulatory-reform mechanism has been formed: top-level opinions set the framework, supporting detailed rules ensure implementation, and dynamic optimization drives continuous improvement. These measures will substantially reduce enterprises' costs in R&D, testing and application, empower China domestic brands to participate in international trade, encourage global beauty new-products to debut in China, foster a debut-driven economy for cosmetics in China, simplify cross-border production-capacity adjustment workflows, and open two-way access between domestic and overseas markets. Meanwhile, new product time-to-market will be markedly shortened, product innovation will be incentivized, cutting-edge global beauty products will be accelerated for launch in China, domestic beauty-product supply categories will be continuously enriched, and the public's sense of gain, happiness and safety in cosmetic use will be comprehensively enhanced.

Formulation of these new policies adhered to open-door policy-making and extensive public consultation. Public opinions on the eight optimization measures were solicited across society in March this year. All sectors of the industry actively raised demands and offered suggestions, fully reflecting the industry's high expectations for an innovative and modern regulatory system.

With the official implementation of this Announcement, innovation vitality across the cosmetics industry will be fully stimulated, R&D iteration of China domestic brands will be accelerated, and global beauty-innovation resources will be aggregated. It is expected that the whole industry will work together to strictly uphold product-safety bottom lines, deepen independent R&D and innovation, and jointly march toward a new journey of high-quality development for China's cosmetics industry.

International Exchange

- A turning point for sustainable by design: the EU Packaging and Packaging Waste Regulation
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A turning point for sustainable by design: the EU Packaging and Packaging Waste Regulation

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Abstract: The EU Packaging and Packaging Waste Regulation (PPWR) marks a shift in the regulatory landscape for the cosmetics industry, transforming packaging from a marketing-driven element into a core component of compliance and sustainability strategy. By introducing stricter requirements on recyclability, recycled content, labelling, and extended producer responsibility, the Regulation challenges long-established packaging practices – particularly in a sector characterised by complex, multi-material formats. At the same time, it accelerates the transition towards circular models, including reuse and refill systems, while increasing the need for robust data, traceability, and cross-value chain collaboration. As implementation will be phased and further defined through secondary legislation, companies must navigate evolving requirements while anticipating future developments. Ultimately, the PPWR not only raises compliance expectations but also creates opportunities for innovation, differentiation, and improved environmental performance within the European Single Market.

Keywords: PPWR, Cosmetic packaging, Packaging Directive, Circular economy, Recyclability, Extended Producer Responsibility (EPR)

Driven by a combination of consumer, investor and regulatory demands the cosmetics industry is undergoing a profound transformation, as sustainability moves from a 'nice-to-have' marketing concept to a mandatory regulatory requirement. In recent years, the highest policy momentum has been linked to the European Union, particularly through its Green Deal – a strategy adopted in 2020 by the European Commission aiming to transform Europe's economy, energy, transport, and industrial systems to a more sustainable model, with the overarching goal of making the EU climate-neutral by 2050.

A centrepiece legislative reform has been the replacement of the **Packaging and Packaging Waste Directive (PPWD)**[1], which first entered into force in the mid-1990s. The PPWD had three key objectives: to reduce packaging, to reduce waste from packaging, and to reduce hazardous substances. Together, these formed the 'essential requirements' of the legislation.

A core part of the reform was the introduction of a harmonised regulatory approach resulting in the **Packaging and Packaging Waste Regulation (PPWR)**[2]. The shift to a Regulation from a Directive ensures directly applicable rules across all Member States, helping to avoid a fragmented regulatory landscape within the European Single Market, while also setting a clearer framework to improve the environmental performance of packaging.

For the cosmetics sector, this change brings greater clarity from a single rulebook, but also new challenges, as sustainability requirements and standards become more stringent and comprehensive than before. Given cosmetics is a sector where packaging is commonly linked to brand identity, the implications of this revision are particularly significant.

Regulatory priority, new responsibilities

Packaging plays a central role in cosmetics. Beyond its functional purposes - protecting formulations, ensuring safety, and enabling precise application – it is also a key part of the frontline to consumer awareness and appeal. The choice of materials, designs, and multi-layered packaging have traditionally been used to signal quality and differentiate brands.

The PPWR officially entered into force on 11 February 2025, challenging the traditional model by introducing requirements that directly target excess and redundant packaging. These introductions widen the scope from the PPWD by not only reducing

[1] https://eur-lex.europa.eu/eli/dir/1994/62/oj/eng

[2] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202500040&pk_campaign=todays_OJ&pk_source=EUR-Lex&pk_medium=X&pk_content=Environment&pk_keyword=Regulation

(over)packaging and packaging waste, but also with measures to promote packaging reuse, improve recycling, and increasing the uptake of recycled content in packaging.

The PPWR scope is horizontal and wider than covering simply what is received by a consumer. Indeed, it covers packaging at every stage: from raw materials to processed goods, through storage and distribution. As such, primary (e.g., sold to end consumer), secondary (e.g., grouped products), and tertiary (e.g., transport) packaging can fall under the requirements.

Key obligations include:

• Packaging minimisation: limits on weight, volume, double walls, and maximum empty space in e-commerce packaging

• Substances: reduction of 'substances of concern'; the combined total of lead, cadmium, mercury, and hexavalent chromium (sum of) should not exceed 100 mg/kg; food-contact packaging containing PFAS above specific concentrations is restricted

• Labelling: clear information on packaging composition to facilitate consumer sorting (by 2028)

• Recycled content: from 2030, a minimum amount of post-consumer recycled (PCR) content must be incorporated into plastic packaging (e.g., 30% for PET)

• Recyclability: all packaging should be recyclable via material recycling by January 2030 and 'at scale' by January 2035; recyclability will be graded A, B and C. Also, from January 2038, only grades A and B may be used.

• Reusability: targets for reusable packaging

• Prohibition of packaging types: e.g., single-use plastic packaging for foods and beverages filled and consumed on site.

• Extended Producer Responsibility: not new, but the Regulation is likely to strengthen the focus on Extended Producer Responsibility (EPR), with fees modulated based on recyclability

The introduction of recyclability requirements for all packaging, including **design for recycling criteria** from January 2030, and the **recyclability at scale obligation** from January 2035, are key milestones.

From 12 August 2026, the legislation will apply EU-wide, setting requirements on packaging for any operator placing a product on the Union market. Furthermore, application of the PPWR will also lead to secondary legislation, including delegated and implementing acts. Implementation resources[3] and a FAQ guide[4] have already been published by the European Commission, as well as from representatives of the packaging industry value chain, who have published a guidebook to the PPWR[5] to help stakeholders navigate the new requirements.

Design for recycling: A technical challenge

One of the most consequential aspects of the PPWR is the requirement that **all packaging placed on the EU market must be recyclable by 2030**. While this objective is straightforward in principle, its implementation is complex - especially for cosmetics.

Cosmetic packaging is often inherently multi-material. Airless pumps, droppers, and dispensing systems combine plastics, metals, and sometimes glass to ensure product integrity and user convenience. Innovative new packaging is therefore required to bridge any gaps, ensuring that materials can be effectively separated and processed within existing recycling systems, which are not always designed to handle complex, multi-material formats.

Indeed, compliance with the legislative landscape will require integrating an eco-design strategy into any project. To this end, packaging would need to be designed for optimised resource use, sustainable sourcing, reduced waste and environmental impact, and improved recycling. Given the focus on a circular economy approach, the need for recyclates that are not only high quality, but for which the traceability of that quality can be monitored throughout the chain of custody, become essential elements. This is particularly important to ensure that recycled materials incorporated into the packaging for finished cosmetic products can be properly assessed and safely used, without triggering non-compliance to cosmetic legislation or posing any risk to consumer's health.

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[3] https://green-forum.ec.europa.eu/packaging-and-packaging-waste-regulation-implementation_en

[4] https://ec.europa.eu/commission/presscorner/detail/en/ip_26_664

[5] https://www.ppwr-guidebook.eu/

The push towards simplified component solutions seems a logical step, as does the use of mono-material solutions. However, these changes are not without trade-offs. Packaging must still protect sensitive formulations from contamination, oxidation, and degradation. Achieving recyclability without compromising product safety or performance is therefore one of the central technical challenges, alongside ensuring that products remain practical to transport and appealing and convenient for consumers to use.

A fundamental question for recycling is whether there is a sufficient grade of recycled packaging materials on the market for cosmetic manufacturers, at a price that is affordable and with a quality that is permissible by law for safety. Furthermore, there is the question of how to calculate and verify recycled content in a consistent and reliable way. To answer this, by January 2029, the Commission will adopt delegated acts and establish a methodology by assessing the available recycling technologies.

The role of guidance

Although the PPWR sets out the overarching framework, many of its most critical elements will be further defined through guidance and secondary legislation developed by the European Commission. This evolving regulatory layer is especially important for the cosmetics sector, where compliance often hinges on technical detail.

One key area is packaging labelling. The PPWR foresees the introduction of harmonised EU-wide waste sorting labels, replacing the current patchwork of national systems. These labels are expected to focus on material composition, enabling consumers to sort packaging correctly regardless of where they are in the EU. Recently, a technical proposal on waste sorting labels was published by the European Commission's Joint Research Centre[6].

For cosmetics, this presents a particular challenge. Packaging frequently consists of multiple components - such as bottles, caps, pumps, and applicators – each of which

[6] https://publications.jrc.ec.europa.eu/repository/handle/JRC141706

may consist of different materials. Understandably, the PPWR infers the need for close coordination between packaging designers, regulatory specialists, and supply chain partners to ensure overall compliance for operators placing products the market.

Recognising the constraints of small packaging formats, the Commission has also signalled support for digital labelling solutions. These may allow companies to provide detailed information – such as material composition and recycling instructions – through QR codes or similar technologies, complementing physical labels where space is limited.

Defining compliance

The PPWR is highly reliant on implementing and delegated acts to establish the technical rules that underpin compliance. While the Regulation sets the direction, these secondary measures will ultimately determine how its provisions are applied in practice and interpreted across Member States.

Among the most forthcoming measures are design-for-recycling criteria, recyclability performance grades, and methodologies for assessing "*recycled at scale*". These elements are particularly important, as they will translate broad regulatory objectives into concrete, measurable requirements.

For cosmetics companies, these measures are critical. They will influence material choices, packaging formats, and even product architecture. At the same time, their phased adoption creates a moving regulatory target, requiring companies not only to respond to current requirements, but also to anticipate future developments and adapt their strategies accordingly.

Reuse, refill, and new business models

Beyond recyclability, the PPWR promotes a general shift toward all methods to support circularity by encouraging reuse and refill systems. While the Regulation does not impose uniform reuse targets across all cosmetic categories, it clearly signals a policy preference for reducing single-use packaging and moving towards more circular models.

Refillable packaging is therefore gaining traction across the industry. From reusable fragrance bottles to refillable skincare containers, brands are experimenting with new formats that extend the lifecycle of packaging. However, scaling these models presents practical challenges, including safety considerations, reverse logistics (i.e., the collection, cleaning, and redistribution of packaging), and consumer acceptance of return-and-reuse formats.

Equally, the PPRW can impact segments of the cosmetics industry that rely on high-volume, low-size packaging, such as the hospitality industry, which has traditionally depended on single-use formats, including small hotel toiletries.

A new compliance landscape

The PPWR fundamentally changes the compliance landscape for cosmetics companies. Packaging can no longer be treated as a secondary consideration or a purely marketing-driven element. Instead, it becomes a central pillar of regulatory strategy.

The PPWR see a significant expansion of extended producer responsibility (EPR), with mandatory digital reporting systems for all EPR schemes, harmonised methods for calculating fees across the EU, new eco-modulation criteria based on packaging recyclability, an extended scope to cover all packaging types and formats, and increased transparency requirements for cost calculations.

Compliance now requires a detailed understanding of material composition, recyclability, and supply chain dynamics. Companies must invest in data collection, testing, and documentation to demonstrate that their packaging meets evolving EU standards. Collaboration across the value chain is key.

Following its application across all 27 EU Member States in August 2026, sequential implementation will take place, with rolling and improving targets from 2030 through to 2040. Key milestones in 2035 and 2038 will further restrict the use of low-grade recyclable materials and contribute to the reduction of packaging waste.

Conclusion: redefining cosmetic packaging

The PPRW represents a turning point, given it challenges established practices and compels companies to rethink their approach. Yet it also creates an opportunity as sustainability considerations remain a feature of the European Single Market, offering companies a path to differentiate themselves through innovation, transparency, and environmental performance.

In this new context, packaging is no longer just a container for the product, but rather an additional reflection to a brand's sustainability commitments. The key action points for operators now remain to understand the new requirements and navigate legal uncertainties, conduct an audit on the current and future compliance, establish a compliance strategy with supplier involvement, implement the strategy alongside appropriate due diligence systems for data recording and storing of information, and final ensure monitoring and adaptation as new requirements are phased in.

Lastly, to work as intended, its ambitious policy goals must be supported by the timely adoption of secondary legislation. The main risk lies in regulatory uncertainty for businesses: even if there is strong support for regulatory enforcement, the need to secure and sustain investment in innovation is paramount to drive greater efficiency, ensure compliance, and enable the transition to more sustainable packaging systems.

Brazil: The First Stop for Chinese Cosmetics "Going Global" in South America

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In recent years, the global beauty and personal-care market has maintained robust growth. As Latin America's largest economy and populous nation, Brazil occupies a pivotal position in the global cosmetics market. According to the latest report from Euromonitor International, Brazil has become the world's third-largest cosmetics-consuming market, second only to the United States and China. Home to 220 million people, this culturally diverse and multi-ethnic country has a continuously expanding middle- and high-income group, boasting a huge consumer base and untapped market potential.

Research by Brazilian consultancy NielsenIQ shows Brazil ranks among the world's most avid cosmetics-consuming countries. Seventy-two percent of respondents reported that they never stop purchasing cosmetics - 12 percentage points higher than the figure for the United States. Furthermore, Brazil features one of the world's most diverse spectrums of skin tones and ethnic groups, giving rise to pluralistic cultures and aesthetics and fostering a highly inclusive cosmetics market. While market-size statistics for Brazil's cosmetics sector vary across sources, all reports point to sound growth prospects. For instance, Mordor Intelligence projects that Brazil's cosmetics market will expand from USD$ 36.97 billion in 2025 to USD 52.56 billion in 2030, representing a compound annual growth rate (CAGR) of 7.29 %.

Against the backdrop of the accelerating internationalization of China's cosmetics industry, alongside ASEAN as the primary outbound destination for Chinese cosmetics, Brazil may emerge as the next frontier for Chinese cosmetics brands going global.

I. Current Status of China-Brazil Cosmetics Trade

Brazil's beauty and personal-care sector accounts for roughly 2% of the country's gross domestic product (GDP). In 2025, sector exports surpassed USD$ 1 billion for the first time, further consolidating Brazil's strategic standing within the global beauty and personal-care industry. Statistics from the Foreign Trade Secretariat of Brazil's Ministry of Development, Industry, Trade and Services (SECEX), compiled by the Brazilian Association of Personal-Care, Perfumery and Cosmetics Industry (ABIHPEC), indicate that exports of beauty and personal-care products reached USD$ 1.061 billion in 2025, a year-on-year rise of 20.1%. Products were shipped to nearly 200 countries and regions, yet Latin America remained the dominant export destination, absorbing approximately 80% of total exports.

Development of China-Brazil Cosmetics Trade

Overall China-Brazil cosmetics trade volume remains modest, with Chinese exports constituting the overwhelming majority. Over the past decade (2016-2025), bilateral cosmetics trade has advanced substantially: total trade value climbed from USD$ 13.72 million to USD$ 131 million, with Chinese exports consistently making up more than 99.5% of this total. Virtually all growth in bilateral cosmetics trade has been driven by rising Chinese exports to Brazil, reflecting growing Brazilian acceptance of Chinese cosmetics over the ten-year period.

The development of Chinese cosmetics exports to Brazil can be divided into three phases:

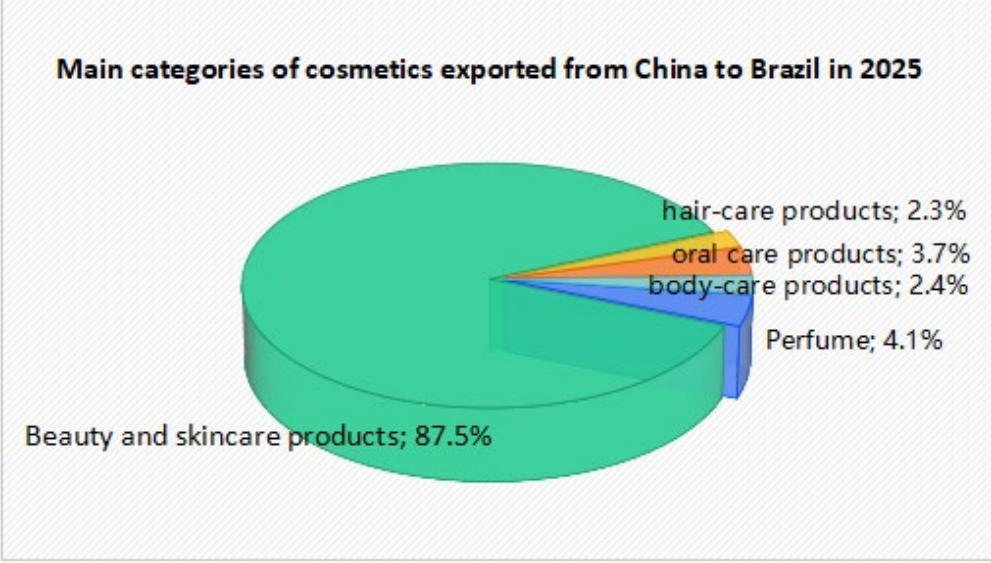
1. 2016-2018: Period of hyper-rapid growth. Exports soared from USD$ 13.71 million to USD$ 47.03 million, registering an extraordinary CAGR of 85.2%.

2. 2019-2021: Downward phase amid multiple headwinds. Due to the COVID-19 pandemic, Brazilian real depreciation and tightened cosmetics-industry regulation, export values trended downwards, falling to USD$ 24.68 million in 2021.

3. 2022-present: Recovery and robust growth. Exports rebounded and maintained high growth rates, breaking the USD$ 100-million threshold for the first time in 2025. Between 2022 and 2025, export values rose from USD$ 37.51 million to USD$ 130 million at a CAGR of 51.4 %.

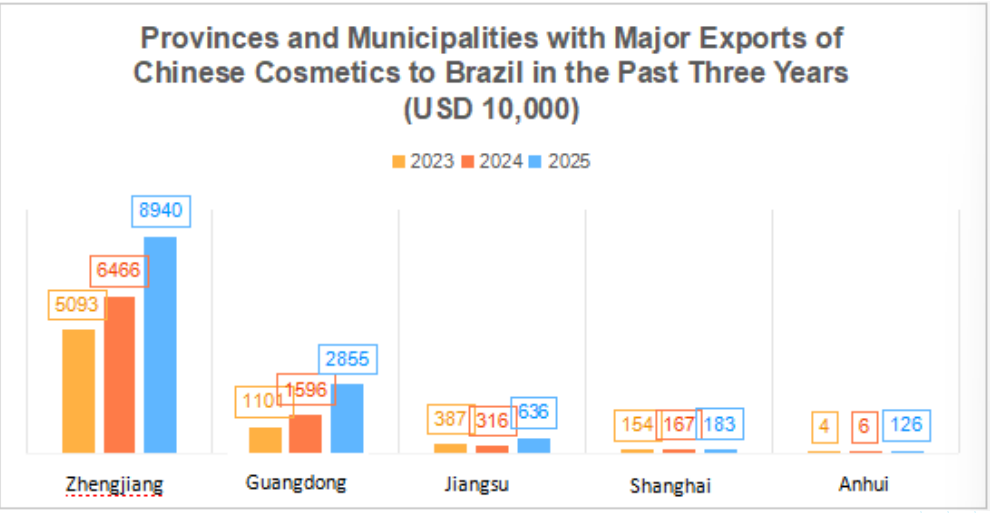
Profile of Chinese Cosmetics Exports to Brazil

By product category, beauty and skincare products dominate Chinese cosmetics exports to Brazil. In 2025, China exported USD$ 114 million worth of beauty and skincare goods to Brazil, accounting for 87.5% of total exports. The top three sub-segments within this category were lip cosmetics, eye cosmetics and powder cosmetics, with export values of USD$ 37.47 million, USD$ 19.02 million and USD$ 11.85 million respectively. Perfumery (including floral waters) ranked second, and oral-care products third, with exports of USD$ 5.39 million (4.1%) and USD$ 4.85 million (3.7%). Within oral care, dental floss represented the largest export item, followed by toothpaste. Body-care and hair-care exports each stood at roughly USD$ 3 million and held comparatively small shares. Body-care shipments centred on bath products, depilatories and deodorants; hair-care exports mainly covered hair-styling preparations and shampoo-conditioner products.



In terms of export origins, Chinese cosmetics shipments to Brazil are highly geographically concentrated in a fixed set of provinces and municipalities. The top five are Zhejiang, Guangdong, Jiangsu, Shanghai and Anhui. In 2025, these five regions together contributed 97.8% of China's total cosmetics exports to Brazil. Nationwide, Guangdong and Zhejiang rank first and second for overall cosmetics exports, reaching USD$ 3.14 billion and USD$ 2.06 billion respectively in 2025, equivalent to 40.2% and

26.3% of China's national total. For exports specifically bound for Brazil, Zhejiang stands far ahead at USD$ 89.40 million - around three times Guangdong's figure - capturing 68.6 % of China's Brazil-directed cosmetics exports. Ranking third, Jiangsu saw a sharp year-over-year jump in 2025 to USD$ 6.36 million, widening its gap with Shanghai and Anhui.



II. Overview of Brazilian Cosmetics Regulation

Cosmetics oversight in Brazil falls to the Agência Nacional de Vigilância Sanitária (ANVISA, National Health Surveillance Agency). Its regulatory remit covers food, pharmaceuticals, cosmetics, medical devices, health-related goods, cleaning products, tobacco and pesticides. Manufacturing, importation, storage, transportation and sale of these goods within Brazil require certificates issued by ANVISA. As the core authority for cosmetics governance, ANVISA oversees the full product lifecycle: definition, classification, registration, manufacturing specifications and post-market surveillance, all intended to guarantee the safety, efficacy and quality of cosmetics sold in Brazil.

Definition and Classification of Cosmetics under Brazilian Rules

Under RDC Resolution No. 211/2005, cosmetics are defined as substances or preparations intended for external application to the human body (skin, hair system, nails, lips, external genitalia, teeth and oral mucosa). Their purposes include cleansing, appearance modification, odour correction and bodily protection, without altering

human bodily structure or functions. The definition encompasses personal-hygiene products, cosmetics and perfumes.

Per RDC Resolution No. 211/2005, cosmetics are split into two categories:

- Class 1 Products: Low-risk personal-hygiene, cosmetic and perfumery articles whose core properties require no prior proof, and for which detailed instructions or usage-restriction documentation is not mandatory. Examples include soap, shampoo, body wash, skin toners, face creams, lipsticks, liquid foundation, concealers, mascara, shaving foam and fragrance items without special-effect claims.
- Class 2 Products: Relatively higher-risk personal-hygiene, cosmetic and perfumery goods for specific-use applications. Evidence for safety and efficacy plus instructions and usage-limitation warnings are required. Examples include anti-dandruff shampoo, anti-cavity and anti-plaque toothpaste, intimate-area deodorants, under-arm antiperspirant-deodorants, chemical exfoliants, sunscreen, tanning products, skin-whitening preparations, hair-dyeing, perming and straightening agents, and chemical depilatories. In addition, all children-targeted cosmetic products fall into Class 2.

Brazil's Cosmetics Regulatory System

ANVISA applies a risk-based tiered-management system for personal-hygiene, cosmetic and perfumery products, governed by RDC Resolution No. 07/2015 (amended by RDC Resolution No. 237/2018), which sets out market-access authorisation procedures.

RDC Resolution No. 07/2015 stipulates that only the 23 product types listed in Annex VIII require pre-market approval (Registo). This list includes all children's cosmetics, sun-protection products, tanning preparations, hair-dye, perm and straightening agents, topical insect repellents and antibacterial hand-sanitisers. Enterprises must submit comprehensive product dossiers to ANVISA containing extensive technical documentation and test data to substantiate product safety, efficacy and quality. ANVISA conducts in-depth technical assessment of submitted files. Only after full review and formal ANVISA approval can a product obtain a registration number and

legally enter the Brazilian market. Approved registrations are valid for 10 years and may be renewed for successive ten-year terms.

Products not listed in Annex VIII - whether Class 1 or Class 2 - are exempt from pre-market approval and may be launched via the cosmetic notification (Notificação) procedure, also referred to as prior communication (Comunicação prévia). Companies submit exemption applications and supporting documentation online through SGAS (Sistema de Gerenciamento de Produtos Cosméticos, Cosmetic Product Management System). Goods may be placed on the market without waiting for ANVISA's explicit approval. Once complete information is filed, the notification remains valid for 10 years and is renewable for successive ten-year cycles.

Rules for Imported Cosmetics in Brazil

Any entity engaged in storage, distribution, packaging, transportation, export, extraction, manufacturing, repackaging, importation, processing or reprocessing of human-use pharmaceuticals, pharmaceutical ingredients, cosmetics, personal-hygiene goods, perfumes, disinfectants or medical-gas filling in Brazil must hold an Operating Licence for Enterprises (Autorização de Funcionamento de Empresa, AFE). Without an AFE, an enterprise cannot complete cosmetic registration or notification procedures on the SGAS platform. That said, pursuant to Article 1.2, Chapter IV of the amended Regulatory Decree No. 81/2008, businesses importing raw materials for cosmetics, perfumes, personal-hygiene articles, medical devices, in-vitro diagnostic products and disinfectants are exempt from AFE requirements.

It should be noted that Article 1134 of Brazil's "Civil Code" specifies: "Foreign companies, regardless of business scope, may not operate within national territory without administrative authorisation, including establishing local branches. Foreign entities may, however, hold equity stakes in Brazilian joint-stock companies." Accordingly, ANVISA does not accept AFE applications directly from foreign-registered firms. To export cosmetics into Brazil, non-local enterprises have two viable options: ① Partner closely with a legally incorporated local Brazilian firm holding a valid AFE to act

as your local representative (Representante local), who bears all corresponding legal liability for domestic operations in Brazil. ② Establish a joint-stock company through a joint venture with local Brazilian partners, and conduct AFE applications, product registration-notification and import-export activities under this local corporate entity. For foreign-owned businesses, selecting an experienced, reputable local partner with deep expertise in Brazilian cosmetic regulations is critical.

III. Outlook for China-Brazil Cosmetics Economic and Trade Cooperation

Within today's global cosmetics-industry landscape, China and Brazil - major emerging-market representatives from the Eastern and Western Hemispheres and both BRICS members - are entering a window of strategic opportunity for enhanced economic-trade collaboration.

Diplomatic Relations Underpin Bilateral Cooperation

China has remained Brazil's largest trading partner for 17 consecutive years. Bilateral ties are at an all-time high, elevated to the strategic vision of "building a China-Brazil community with a shared future for a more just world and a more sustainable planet". High-level meetings between the two sides have affirmed commitments to strengthen strategic collaboration and uphold multilateralism and free trade, delivering unprecedented political safeguards for deepened commercial cooperation.

Brazil has demonstrated unprecedented openness toward Chinese-market collaboration. In January this year, President Lula announced partial short-term visa-free entry for Chinese citizens, reciprocating China's existing visa-free policy for Brazilian nationals. This measure will greatly facilitate business visits, market research, investment negotiations, lower commercial costs and boost trade-and-investment efficiency. Moreover, Brazil is exploring the possibility of negotiating a partial trade agreement between Mercosur (the Southern Common Market) and China, which would unlock new collaborative opportunities for China-South America commerce.

Market Complementarity Consolidates the Basis for Cooperation

As the world's third-largest cosmetics market, Brazil benefits from a large population base and growing consumer demand, with per-capita beauty-product spending among the highest globally. From the perspective of demand-product matching, Brazilian consumers show strong preference for cost-effective formulations, natural-ingredient goods, sun-care items and curly-hair repair products. These preferences align naturally with China's mature cosmetics supply chains, capacity for developing specialty botanical-ingredient formulations, smart-manufacturing strengths and cost-competitive advantages. Furthermore, demands arising from Brazil's multi-ethnic population - for example deep-shade foundation, curly-hair care and high-SPF sunscreen - create excellent opportunities for Chinese brands to pursue differentiation and market breakthroughs in niche segments.

E-Commerce Growth Enables Market Entry

Brazil is Latin America's largest e-commerce market, sustaining steady expansion. Data from Brazilian e-commerce operator Edrone shows that Brazil's e-commerce sector generated revenue exceeding 200 billion reais in 2025, a year-on-year increase above 10 %. Revenue is projected to reach 258 billion reais in 2026, with per-capita online spending of 564.96 reais and 2 million new buyers added. Over the past five years, the sector recorded an average annual growth rate of 17 %, peaking above 40 % year-on-year during the COVID-19 pandemic.

In 2026, TikTok surpassed 120 million monthly active users in Brazil, driving explosive growth in live-stream e-commerce. Centennial brand Granado sold 18 000 beauty-product units within a ten-hour live-stream; hair-care brand Amend multiplied its GMV by 173-fold within half a year via influencer portfolios. It is clear that content-driven e-commerce has become a fresh engine for China-Brazil cosmetics collaboration. Chinese brands may capitalise on this trend by adopting an "online brand building plus offline conversion" model to enter the market rapidly, upgrading traditional B2B bulk trade toward consumer-facing branded operations.

Coexisting Opportunities and Challenges

Notwithstanding enormous market opportunities, Chinese cosmetics firms entering Brazil still face hurdles including cultural divergence, market-access barriers, logistical inefficiencies, high tax costs and channel-development complexities. Additionally, Brazil's cosmetics space features a dual competitive landscape of "domestic giants plus international heavyweights". New entrants must compete against entrenched incumbents. Local champions such as Natura & Co and Grupo Boticário boast deep-rooted domestic supply chains and loyal consumer bases, securing mass-market share through price stability, brand credibility and cultural resonance. Multinational groups including L'Oréal, Unilever and Procter & Gamble have well-established footprints in the mid-to-high-end segment with strong brand recognition and comprehensive channel coverage. Accordingly, enterprises targeting Brazil must conduct thorough market research, form realistic competitive expectations, pinpoint niche track-records and select appropriate sales channels.

China-Brazil cosmetics economic and trade relations stand at a historic turning point: shifting from pure commodity trade toward industrial integration. Companies that complete compliance arrangements early-on, pursue thorough localised operations and harness content-e-commerce momentum will seize the upper hand in this South-American blue-ocean market. Looking ahead, bilateral cosmetics sector collaboration is expected to evolve beyond conventional merchandise trade toward deeper industrial chain coordination and digital-ecosystem integration. Over the next five-to-ten-year horizon, we may witness a cohort of Chinese cosmetics enterprises establishing solid operations within Brazil.

Integrated Development

- Integration of Pharmaceuticals, Medical Devices and Cosmetics: Restructuring a New Ecosystem for Hair Health Management
- Innovative Practices in Developing Localized Efficacy Standards for Cosmetics Under Global Scientific Research Vision - Based on Native Skin Types and Multi-Dimensional Evidence System

Integration of Pharmaceuticals, Medical Devices and Cosmetics: Restructuring a New Ecosystem for Hair Health Management

Nowadays, the integration of pharmaceuticals and cosmetics has become a core development trend in the beauty industry. Pharmaceutical-grade technologies and clinical medical standards are continuously penetrating the functional skincare segment. Coupled with gradually relaxed regulatory restrictions on innovation and consumers' evolving skincare mindset from "ingredient-focused enthusiasts" to "evidence-based advocates", the "hair health" is embracing brand-new development opportunities.

At the 43rd China Pharmaceutical Industry Information Annual Conference - Forum on Integrated Innovation and Development of Pharmaceuticals and Cosmetics, co-hosted recently by China National Pharmaceutical Industry Information Center, Cosmetics Advancement Committee of China Health Care Association (CACHCA) and China Cosmetics International Trade Committee (CCITC) of China Chamber of Commerce for Import and Export of Medicines and Health Products(CCCMHPIE), Wang Yaqin, Head of Skin & Hair Health Science Division of Imeik Technology Development Co., Ltd., took the hair health sector as the entry point and shared a full-cycle integrated solution of "treatment, repair and maintenance" through the integration of pharmaceuticals, medical devices and cosmetics.

Four Overlapping Industrial Trends Bring Dual Policy and Market Dividends for Integrated Pharma-Device-Cosmetic Development

The industry is undergoing four core transformative trends: shared origins of pharmaceuticals and cosmetics, medical-research co-creation, upgraded efficacy performance, and compliance-driven growth. Stringent ingredient quality control, purification techniques and safety assessment systems from the pharmaceutical industry have been fully applied to cosmetics. Medical aesthetics, dermatology and

synthetic biology technologies are deeply integrated with skincare R&D, accelerating the iteration of functional scalp care products. Instead of merely chasing natural ingredient concepts, consumers now prioritize complete clinical data, ingredient mechanisms of action and safety supporting evidence, pushing the industry toward scientific and evidence-based development.

Regulatory agencies continue to release favorable policies for innovation. The "Provisions for Management of New Cosmetic Ingredient Registration and Notification Dossiers", formally implemented on July 15, 2026, greatly optimizes the control rules for new cosmetic ingredients. Efficacy ingredients for anti-hair loss, anti-dandruff, anti-wrinkle and other functions are removed from the high-risk ingredient management catalogue, leaving only five categories of high-risk ingredients under strict control: preservatives, sunscreens, colorants, hair dyes and spot-removing & whitening agents. All other ingredients adopt the notification system uniformly. Meanwhile, regulators encourage enterprises to promote alternatives to animal testing, significantly lowering the thresholds for corporate R&D and declaration. Multiple national agencies have jointly issued implementation opinions on the reform of pharmaceutical and cosmetic supervision and administration, providing comprehensive support for industrial innovation and removing institutional barriers for ingredient innovation and multi-category layout in the hair health sector.

Meanwhile, market demand for anti-hair loss products is exploding. China has over 339 million people suffering from hair loss, among which young groups under 35 account for 80%. The China domestic anti-hair loss care market scale is expected to exceed 30 billion RMB by 2030. The traditional single minoxidil treatment only addresses the single goal of stopping hair loss and stimulating new hair growth, with prominent pain points including treatment without long-term maintenance, recurring scalp inflammation and chronically weakened hair follicle vitality. The market is in urgent need of an integrated solution covering treatment, barrier repair and long-term scalp maintenance.

Imeik's Full Industrial Chain Layout: Entering the Scalp Health Track with Accumulated Medical Aesthetics Technologies

Drawing on years of capabilities in medical-grade biological R&D, clinical evaluation and standardized production, Imeik has launched the brand Yuanyuanchu as the core carrier for the Group's integrated pharma-device-cosmetic strategy. Positioned as full-cycle companion-style hair health management, the brand targets pain points of people at different hair loss stages and develops targeted combined product portfolios, expanding business coverage from high-net-worth medical aesthetics consumers to the mass scalp care market.

Different from single therapeutic products available on the market, Yuanyuanchu innovatively builds a three-in-one collaborative system, realizing an industrial model upgrade from "simple anti-hair loss treatment" to "full-cycle scalp health management":

- Pharmaceuticals (Minoxidil) - Therapeutic core: Activates telogen hair follicles to stop hair loss and stimulate the growth of new hair;
- Medical Devices (Recombinant Collagen) - Repair core: Repairs damaged scalp barrier, optimizes the microenvironment for hair follicle survival and amplifies hair regrowth effects;
- Cosmetics (Licochalcone A) - Long-term maintenance core: Delivers sustained anti-inflammatory and oil-control effects, stabilizes scalp homeostasis and prevents recurrent hair loss.

The three segments form a complete hair regrowth closed loop, covering all hair loss stages: initial hair thinning, moderate shedding and severe alopecia. The product system accurately matches three consumer groups: individuals intolerant to minoxidil, users pursuing high-efficiency efficacy, and quality-focused consumers prioritizing daily scalp maintenance. Mass authentic clinical cases verify the efficacy of this integrated solution: subjects aged 22 to 38 with varying degrees of hair loss received 12-week cyclic care, showing significant improvements in vertex thinning, receding hairlines and male pattern baldness. New hair growth can be observed within 2 to 4 weeks, and long-term application stabilizes hair growth effectively.

In response to the industry trend of "evidence-based skincare", the brand adheres to a medical-research co-creation R&D roadmap and rejects conceptual marketing by supporting product value with comprehensive scientific data. It collaborates with top China domestic hair specialists to conduct multi-dimensional clinical verification, establishes a standardized evaluation system via high-throughput target screening and AI scalp data analysis, and fully retains all supporting evidence including in vitro tests, human subject trials and long-term follow-up records. In addition, a co-creation R&D system with consumers is established, with customized solutions for B-end distribution channels and C-end individual users. Formulas and application protocols are continuously optimized based on real usage feedback, achieving bidirectional optimization from R&D to end-user deployment.

Industry Outlook: Leading the Integrated Pharma-Device-Cosmetic Track with Pharmaceutical-Grade Standards

The cross-border integration of pharmaceuticals, medical devices and cosmetics has become an irreversible development trend in the beauty industry. The scalp health sector features both rigid medical demand and daily consumption attributes, boasting broad growth potential. Drawing on over 20 years of medical aesthetics research accumulation, full industrial chain ingredient layout and a sound compliance system, Imeik has successfully translated pharmaceutical technologies into mass beauty scenarios. This practice proves that transferring pharmaceutical-grade quality control, medical biomaterials and evidence-based clinical thinking to the cosmetics industry is an effective path to build differentiated core competitiveness.

In the future, Imeik will continue to deepen its presence in the hair health sector, continuously advance ingredient innovation, clinical research and product portfolio expansion. It will define scalp care with pharmaceutical-grade standards, win consumer trust through complete scientific evidence, drive industrial upgrading via compliant innovation, and continuously deliver replicable models for integrated pharma-device-cosmetic operation. Imeik strives to facilitate high-quality innovative development of China's beauty and health industry.

Innovative Practices in Developing Localized Efficacy Standards for Cosmetics Under Global Scientific Research Vision - Based on Native Skin Types and Multi-Dimensional Evidence System

Against the backdrop of continuous improvement in cosmetic regulatory systems and rising consumer skincare awareness, “verifiable efficacy, interpretable mechanisms, and perceptible experience” have become rigid benchmarks for industrial development. The previous R&D model that copied evaluation systems developed for Western populations can no longer match the skin characteristics, skincare demands and local usage scenarios of Chinese consumers.

At the 43rd China Pharmaceutical Industry Information Annual Conference – Forum on Integrated Innovation and Development of Pharmaceuticals and Cosmetics, co-hosted recently by China National Pharmaceutical Industry Information Center, Cosmetics Advancement Committee of China Health Care Association (CACHCA) and China Cosmetics International Trade Committee (CCITC) of China Chamber of Commerce for Import and Export of Medicines and Health Products(CCCMHPIE), Zhong Yan, Senior Director of Clinical Research and Efficacy Claims, Estée Lauder (China) Innovation R&D Center, delivered a presentation themed “Construction and Innovative Practice of Localized Efficacy Standards from a Global Scientific Research Perspective”. Drawing on decades of accumulated global scientific research and big data on native Chinese skin populations, Estée Lauder has built a complete, implementable localized efficacy standard system. Through a closed-loop of multi-dimensional evidence, the system links the full industrial chain spanning “consumer insight - R&D innovation - compliance claims - market communication”, setting a benchmark for translating localized scientific research into real-world outcomes for the beauty industry.

Multiple Practical Demands Driving the Development of Localized Efficacy Standard Systems

The establishment of exclusive efficacy evaluation criteria tailored to the Chinese market is a shared imperative for the industry, enterprises and consumers alike.

From an industrial perspective, skin science worldwide is advancing rapidly, while regulators impose increasingly stringent requirements on standardized efficacy claims and testing methodologies. Unified evaluation metrics adapted to local populations lay the foundation for standardized industrial development. From an enterprise development perspective, compliance serves as the baseline, mandating complete scientific evidence for all efficacy claims. The industry has long been trapped in homogeneous ingredient competition. Only differentiated evidence supported by localized data can help brands build core product competitiveness and complete the transformation from experience-driven R&D to evidence-driven R&D. From a consumer perspective, public skincare demands have undergone comprehensive upgrades. Consumers no longer merely care whether a product claims to deliver effects; they pursue authentic, reliable, mild and safe results with long-term skin improvements across diverse daily scenarios such as seasonal transitions and air-conditioned indoor environments. Generic, one-size-fits-all efficacy evaluations fail to address refined skincare needs.

Natural physiological differences in skin across ethnic groups form the fundamental rationale for localized standards. Compared with Western populations, Chinese consumers develop wrinkles later and experience slower wrinkle progression, yet are more prone to perceiving facial sagging, dull complexions, uneven pigmentation and sallow skin. Distinct disparities exist between Chinese and Western individuals in stratum corneum structure, melanin activity, facial skeletal contours, and exposure to external irritants including ultraviolet radiation and environmental pollution. Directly adopting Western universal grading scales leads to insufficient evaluation sensitivity, significant data deviations and weak supporting evidence for efficacy claims, highlighting an urgent need for exclusive evaluation tools to fill industry gaps.

Six-Step Standardized Framework to Build a Complete Localized Efficacy Evaluation System

Drawing on massive skin samples from Chinese populations and long-term clinical research, Estée Lauder has developed a six-step standardized framework for constructing localized efficacy standards, forming a replicable, standardized scientific research workflow:

1. Local demand identification: Accurately pinpoint core skincare pain points of Chinese consumers, and define core efficacy propositions (barrier repair, anti-aging, brightening, etc.) and corresponding target consumer groups.
2. Scientific problem interpretation: Translate lay skincare demands of consumers into dermatological research directions, and clarify hypothesized product action mechanisms and evaluation pathways.
3. Multi-tiered indicator system construction: Integrate quantitative metrics across four dimensions: mechanistic research, clinical trials, instrumental testing, and consumer sensory perception.
4. Standardized research design: Specify sample size, testing cycles, control grouping and environmental control rules to ensure consistent, comparable data.
5. Evidence grading and claim boundary matching: Define compliant promotional scopes based on evidence weight to avoid exaggerated or overreaching descriptions.
6. Data transformation and implementation: Apply scientific research data to new product development, compliance support for registration and notification, and accumulation of brand trust assets.

The core of this standardized framework lies in creating a six-dimensional closed-loop multi-evidence system covering six pillars: formulation, mechanism, clinical trial, instrumental testing, consumer perception and real-scene verification. Formulation evidence is the fundamental basis of product efficacy, clarifying active ingredient ratios, delivery systems and formulation stability. Mechanistic evidence is to elaborate the underlying pathways of skin improvement via in vitro testing and biomarker analysis. Clinical evidence is based on intuitive documentation of skin changes through professional physician grading and standardized image

capture. Instrumental evidence includes objective quantification of skin conditions via equipment testing including transepidermal water loss (TEWL), skin colorimetry, wrinkle depth and elasticity measurement. Consumer perception evidence is to capture subjective usage experience through questionnaires and daily usage logs. Real-scene evidence is to restore authentic daily skincare routines by incorporating regional geographic variations, seasonal shifts and indoor/outdoor environmental conditions unique to China.

Taking barrier soothing efficacy evaluation as an example, targeting the large local population with sensitive skin and impaired skin barriers, the six-dimensional evidence system can fully substantiate a product's efficacy in alleviating redness, itchiness and skin instability. Compliant phrasing includes "strengthen skin barrier, relieve dryness and redness, boost skin resilience", while terminology implying therapeutic medical effects such as "permanently cure sensitive skin" or "medical-grade repair" must be avoided.

Two Benchmark Implementation Cases: Precision Scientific Innovation Enabled by Local Skin Databases

Leveraging a nationwide skin database covering Chinese populations across all age brackets, Estée Lauder has delivered two landmark localized standard innovations, integrating global scientific research with indigenous Chinese skincare demands.

1. Development of an Exclusive 10-Point Refined Grading Scale for Facial Aging in Chinese Populations

Conventional Western aging grading scales are optimized for wrinkle characteristics of Caucasians and fail to accurately capture hallmark aging manifestations of Chinese skin, such as facial sagging, infraorbital volume loss and pigment dullness. The R&D team collected standardized facial images from 5,310 Chinese women aged 18-69 to build a dedicated facial image library covering four key areas: forehead lines, glabellar lines, crow's feet and nasolabial folds, and developed a refined 0-9 ten-point grading scale.

Multiple rounds of consistency verification confirm intra-rater and inter-rater

Intraclass Correlation Coefficient (ICC) values above 0.8. The scale demonstrates strong correlation with 3D instrumental measurements of wrinkle depth and volume, delivering superior sensitivity in detecting mild-to-moderate skin improvements induced by skincare products. Compared with generic Western grading scales, this localized standard drastically reduces data extrapolation bias across ethnic groups, supporting multi-center long-term human clinical trials and providing precise, credible data for anti-aging product R&D and compliant efficacy claims.

2. Refined Skin Tone Management Strategy Adapted for Chinese Populations

Bright, even, non-dull complexions rank among top skincare priorities for Chinese consumers, with sallow skin and pigmentation worsening markedly after age 30. Traditional skin tone research lacks refined data for populations over 45 years old. The R&D team consolidated 2.36 million mobile dermatological big data samples from consumers across 337 Chinese cities, mapping clear patterns of skin darkening, warming tone and uneven pigmentation with age. Over 110,000 standardized facial images were collected to extract 478 facial feature landmarks; machine learning was deployed to build a skin tone typing model, identifying two critical intervention windows: pigmentation surges around age 30 and loss of skin translucency starting at age 40.

This skin tone system distinguishes inherent genetic baseline complexion from dynamic surface skin tone, quantifying skin tone concerns across dimensions including melanin deposition, glycation, micro-texture and skin radiance. It guides targeted R&D of anti-pigmentation brightening skincare and base makeup products, while enabling brands to shift consumer communication from the narrow single concept of “whitening” to more science-aligned expressions consistent with local demands such as even skin tone and healthy radiance.

Future Industrial Development Direction: A Two-Way Innovation Cycle Empowered by Localized Standards

In the long run, localized cosmetic efficacy standards will reshape the industrial scientific research ecosystem through four major development upgrades.

1. Continuous localization of evaluation criteria: Iterate highly accurate, sensitive localized evaluation endpoints targeting core consumer concerns including anti-aging, skin tone management and sensitive skin barrier repair.
2. Platformization of evidence systems: Integrate mechanistic, clinical, instrumental and real-scene data to build reusable standardized evidence libraries that unify data benchmarks for R&D, compliance and marketing communication.
3. Intelligent data capabilities: Deploy artificial intelligence on massive facial image datasets and long-term follow-up samples to realize automatic skin typing and efficacy outcome prediction, facilitating targeted product development.
4. Globalization of indigenous innovations: Feed research findings on Chinese skin populations back into global scientific research frameworks, turning localized evaluation standards into core assets for worldwide product innovation and cross-border market communication.



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