SAKAI CHEMICAL INDUSTRY CO., LTD.

Cosmetics Raw Materials Business Strategy Briefing

December 2, 2024

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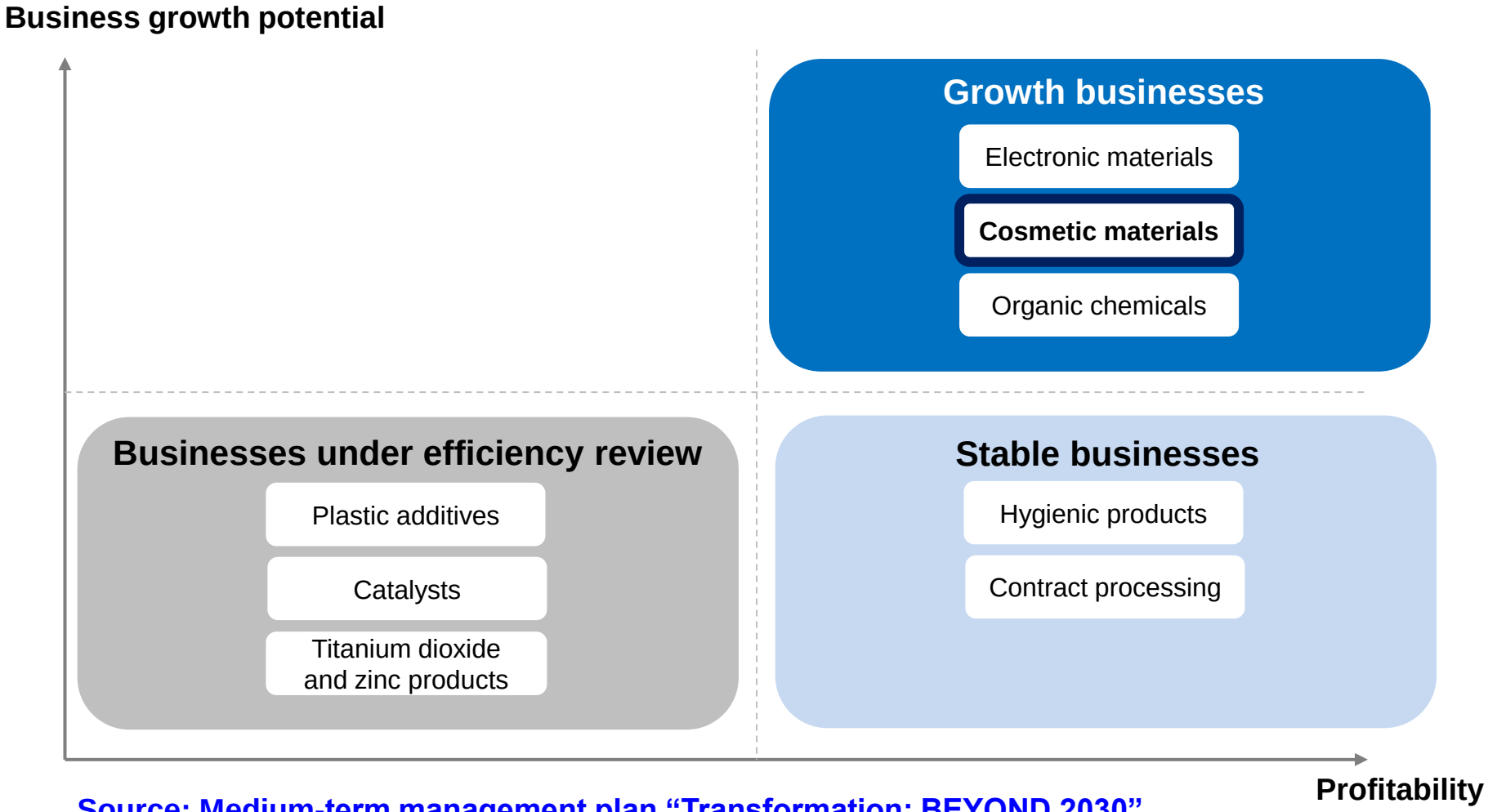
Points for Discussion

Since April 2024, we have been implementing Transformation: BEYOND 2030, our medium-term management plan.

Through this briefing, we will introduce the distinguishing characteristics and strengths of Sakai Chemical's cosmetics raw materials business (a growth business) while providing an overview of structural changes and trends in the market.

Positioning of the Cosmetics Raw Materials Business Within Our Portfolio

We anticipate the cosmetics raw materials business will centrally contribute to our expansion as a core growth business moving forward.



Source: Medium-term management plan “Transformation: BEYOND 2030”

Promoting a Differentiation Strategy Centered on Powder Processing Technology

By delivering a wide range of cosmetic materials worldwide, we promote beauty and health while enriching the lives of our employees.

		Sunscreen materials	Makeup materials
External environment		• **Movement targeting reduced impact on the environment and human health** →Transitioning from organic to inorganic materials • **Rising demand for anti-aging products** →Growing need for UVA protection Increasing focus on **zinc oxide**	• **Movement targeting reduced environmental impact** →Phasing out microplastic beads (MPBs) • **Rising demand for improved texture and additional functionality** Growing need for inorganic texture-enhancing agents other than silica, which has been a leading alternative to microplastic beads
Strengths		**Advanced powder processing technology capable of modifying and adapting a wide range of materials to meet specific needs or applications**	
		• High-quality ultrafine particle zinc oxide	• Additional functionality centered on skincare properties
Strategy	**Existing**	We will steadily capture growing anti-aging demand by leveraging our ultrafine particle zinc oxide as a core strength while also encouraging clients to use our products across more of their brands or product lines.	Instead of merely marketing our makeup materials as simple ingredients, we also leverage our powder processing technology to offer cosmetics manufacturers new formulations or combinations that generate finished products with additional functionality.
	New	Leveraging our strong focus on quality and the trust our products have established through their utilization among major overseas companies, we will push forward with efforts aimed at developing new customers for our ultrafine particle zinc oxide products.	By strengthening our production capacity through capital investment, we will target further sales expansion while capturing demand for MPBs/silica alternatives by offering additional functionality.

Vision for Expansion in the Cosmetics Raw Materials Business

We will target medium- to long-term sales growth through a strategy focused on sunscreen and makeup materials.

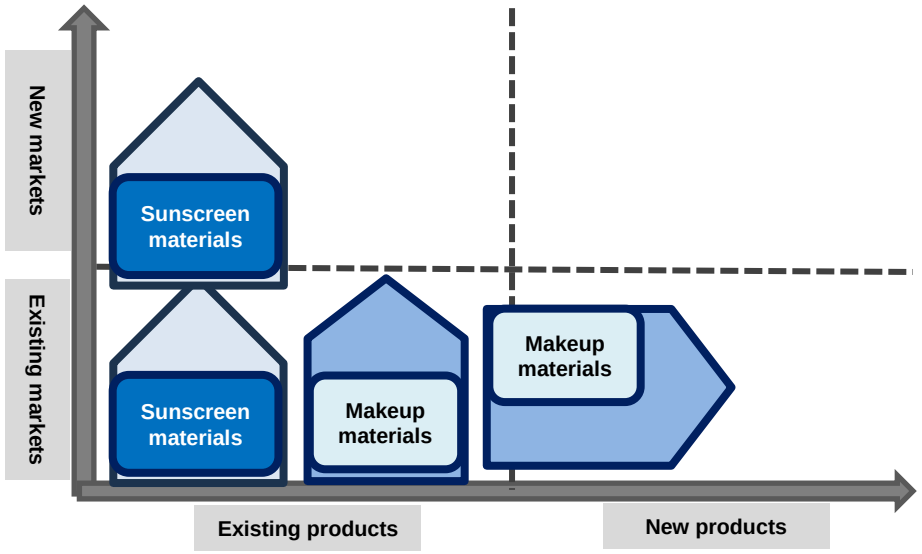
Expansion of target markets and product application

Sunscreen materials

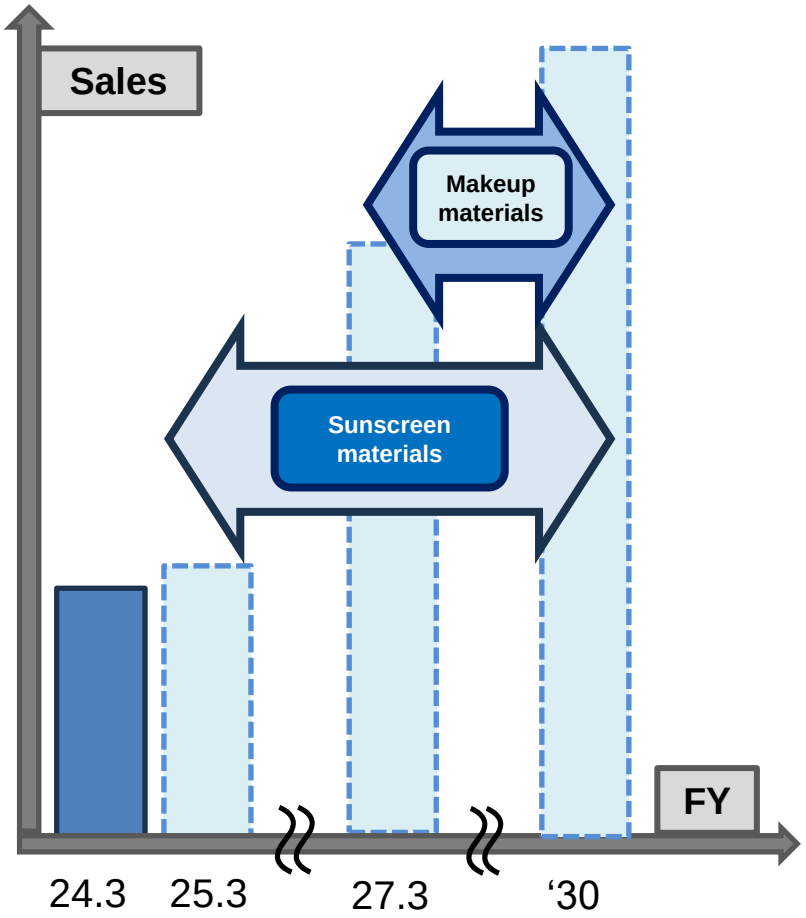
We will accelerate our enticement and acquisition of new customers while maintaining our relationships with existing clients and expanding our market share.

Makeup materials

We will broaden our market share by fully and systematically establishing our existing products in target markets and recommending new formulations that fulfill demand for additional functionality.



Sales Performance



Growth Potential of the Market and the Spreading Use of Inorganic Materials

Change one

The sunscreen market is growing overall, and the use of inorganic materials (titanium dioxide and zinc oxide) is expanding due to heightened awareness of impact on the environment and human health.

Target market

UV-blocking materials

Overall market size

Approx.110 billion yen

Growth potential

Approx. 5% annually
(*Estimate from Sakai Chemical)

Recent market trends

Sakai Chemical	Material	Shipment volume growth rate by material (Indexed to FY2018) 2018	2023	Market share by material 2023
	Organic materials	100	114	64%
○	Titanium dioxide	100	122	26%
○	Zinc oxide	100	117	10%

Source: KLINE (provided through an intermediary agency and partially modified by Sakai Chemical)

Environmental Policies of Individual Cosmetics Manufacturers

Change one

Awareness of the need to reduce environmental impact is growing, particularly among major cosmetics manufacturers.

	Excerpted comments
Major European company A	By 2030, we will switch to sustainable minerals or bio-based ingredients produced through environmentally sustainable, circular processes.
Major Japanese company B	Out of consideration for our impact on coral, we have adopted product formulations that reduce runoff into the sea.
Major Japanese company C	Our products are designed to minimize ecological risks to aquatic environments, accounting for wash-off occurring during daily use and environmental runoff taking place during leisure activities.

Due to change one, we are observing growth in both inquiries from new customers and requests for a transition away from organic materials.

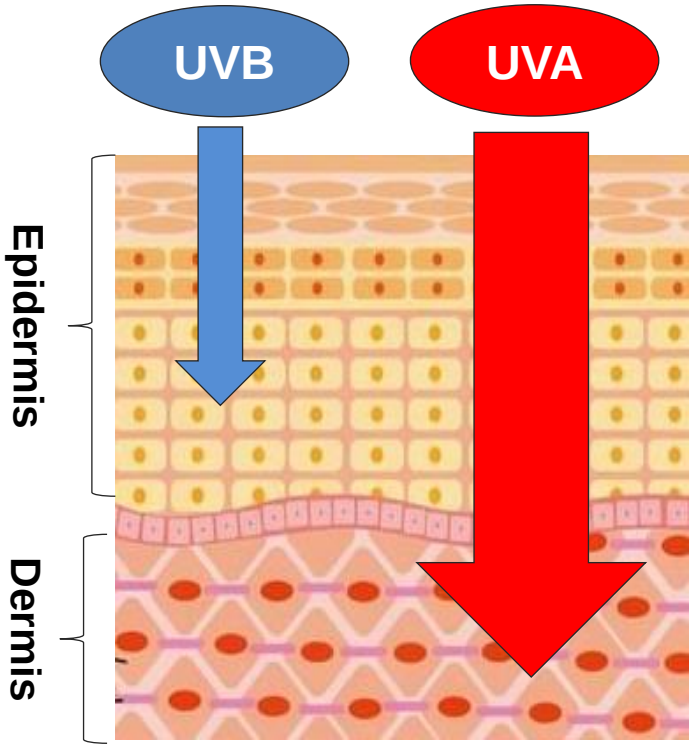
Evolving Sun Protection Needs

Change two

Focus on both UVA and UVB protection continues to grow.

- UVB rays are responsible for causing sunburn during leisure activities such as sports.
- UVA rays cause age spots, wrinkles, and freckles over the medium to long term.

Effects of UV Rays on the Skin



	UV rays	
	UVB	**UVA**
Effects on the skin	Sunburn, skin cancer	Age spots, wrinkles, and freckles
UV ray-blocking materials	Organic materials Titanium dioxide	Organic materials **Zinc oxide**
Performance metrics	SPF Sun Protection Factor Range: 1–50+	PA Protection Grade of UVA Rays Range: PA+ – PA++++
Wavelength	280–320 nm	320–400 nm
Light intensity	○	◎

Characteristics of Individual Deployment Areas and Current Developments

Change three

Change four

- **Overseas zinc oxide markets are less developed than the market in Japan.**
- **Zinc oxide is attracting attention in Europe (due to its inclusion in regulatory lists) and the US (due to its highly transparent properties)**
- **High quality will be necessary for achieving expansion in sales of zinc oxide in Europe and the US (marine pollution countermeasures and FDA compliance).**

Area	Materials used			Characteristics (inorganic UV scattering materials)
	Organic	Titanium dioxide-based	Zinc oxide-based	
Japan	◎	○	○	• **High-quality sunscreen is in demand worldwide** (with enhanced UV protection properties, high transparency, and superior sensory attributes)**.** →**Sakai Chemical has responded to this demand by leveraging its strong powder processing technology.**
Europe	◎	○	▲	• **European markets tend to prefer UV-blocking materials formulated using titanium dioxide.** →**Geographical factors**: Titanium dioxide can be procured more easily than zinc oxide. →**Chemical substance regulations**: The use of zinc oxide was previously discouraged due to **concerns regarding marine pollution**. However, it was added to regulatory lists of approved cosmetic ingredients in 2016, and **its use is gradually spreading**.
US	◎	○	▲	• **The US is the largest market for sunscreen products.** • **Demand for highly transparent sunscreen is growing.** • **Certification from the FDA (U.S. Food and Drug Administration) required** In the United States, sunscreens are categorized as pharmaceutical products, necessitating high-level manufacturing and quality control systems.
China	◎	○	▲	• **Industry players in China tend to closely monitor trends in Europe.** In particular, they demonstrate a strong awareness concerning regulations governing materials used.

※ ◎ > ○ > ▲ : Degree of usage by area

Summary of Environmental Changes

High-quality zinc oxide, favored for its UVA-blocking properties and superior transparency, is a prominent environmentally friendly inorganic material for which demand is expanding.

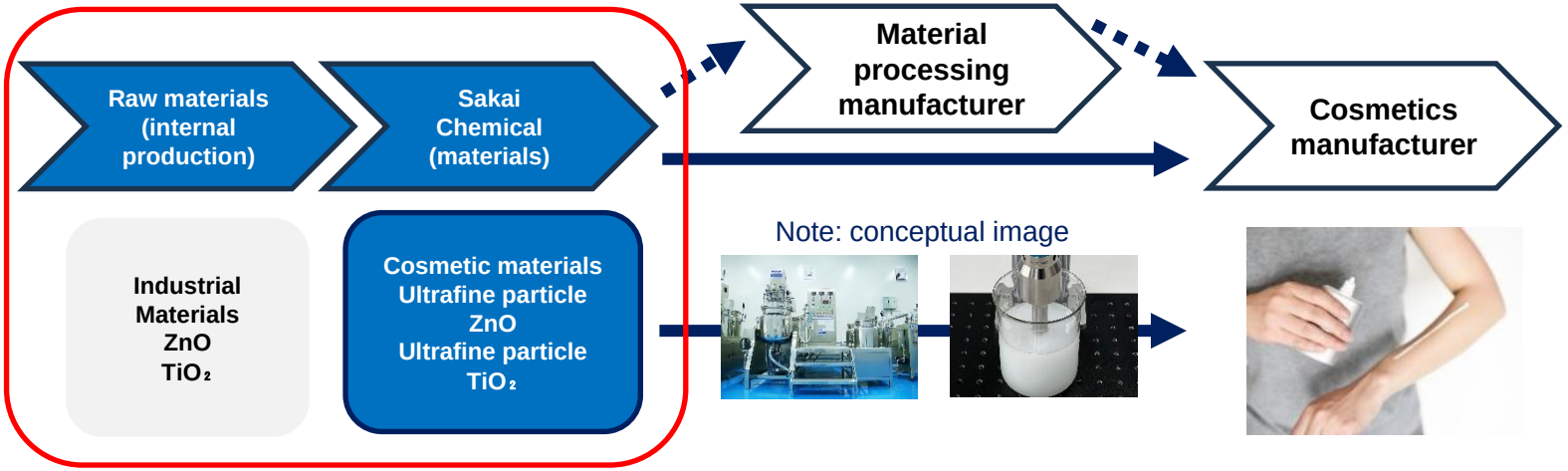
Our Advantages in the Field of Sunscreen Materials

Advantage one

We are capable of delivering high-quality, ultrafine particle zinc oxide.

- Our **advanced powder processing** technology creates ultra-fine particles and facilitates high dispersibility.
- We ensure high safety by complying with the regulatory requirements of the U.S. Food and Drug Administration.
- Our end-to-end production process starts with raw materials and ensures both low costs and a stable supply.

■ Supply Chain



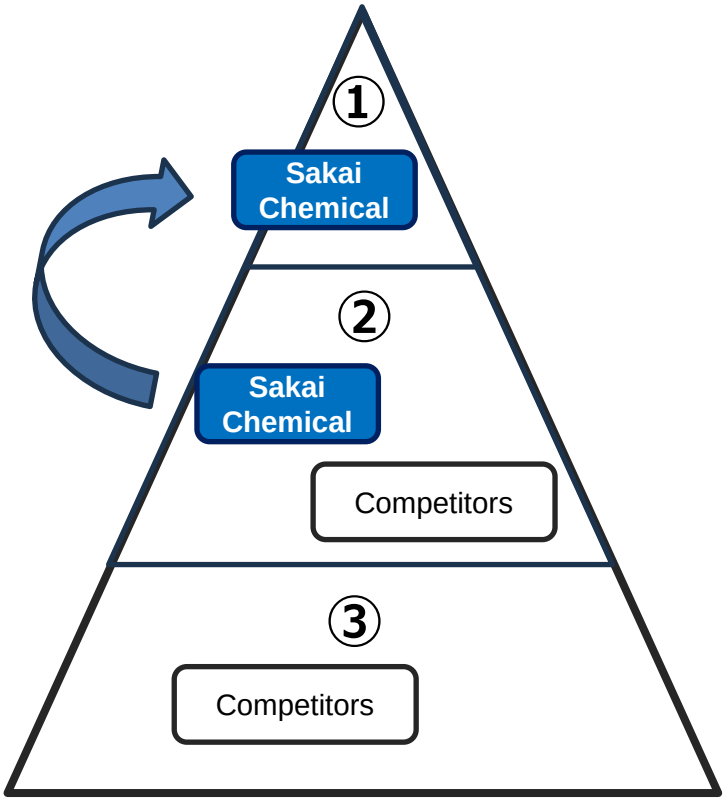
ZnO: zinc oxide; TiO_2: titanium dioxide

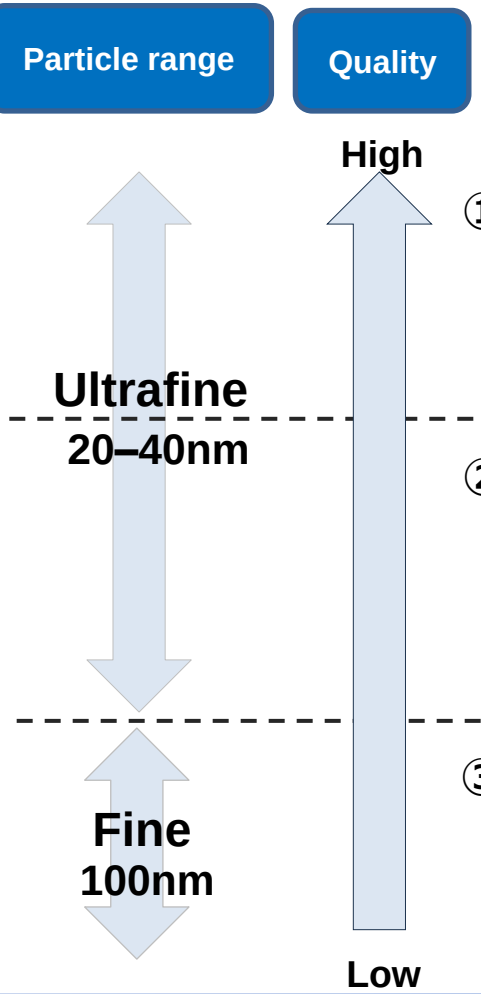
Relationships with Competitors and Competitive Advantages

We stay ahead of competitors by providing ultrafine particle zinc oxide of exceptionally high quality.

Advantage two

Zinc oxide for sunscreen market





①High-quality ultrafine particle zinc oxide

A major overseas company has begun utilizing our ultrafine particle zinc oxide for the first time.

②Manufacturer of ultrafine particle products

We have only a handful of competitors throughout the world. Meanwhile, we hold both a 20% market share and, according to our estimates, the number-two position in the industry.

③Fine particle products are mainstream

Although widely used, the transparency (optical clarity) is inferior due to particle size.

Future-Oriented Strategy Accounting for Circumstantial Changes

Strategy

Moving forward, we will leverage our advanced powder processing technology to further improve the quality of our ultrafine particle zinc oxide while capitalizing on changes in the market and expanding our market share.

Improving the quality of our zinc oxide
(★new competitive advantage)

× **Implementing sales activities** → **Expanding our share**

A major overseas company has begun utilizing our ultrafine particle zinc oxide for the first time.

- **Ultrafine particle zinc oxide utilized for the first time**
  –Achieving differentiation through our high quality
- **Shipments to begin in 2025**
  –Utilized across several subsidiary brands

Moving forward, we will target sales expansion through an enhanced sales system.

- **Proactive promotion through trade shows**
  –Developing new customers
  –Highlighting new benefits for existing customers

We are developing proactive sales activities that will promote our zinc oxide as a material recognized by major overseas companies.

We will keep up with demand for UVA protection and superior transparency (optical clarity).

- **Facilitating beauty and healthy skin**
  –UVA protection
  →Anti-aging demand
  –Achieving transparency (optical clarity)
  →Sunscreen that blends more naturally with the skin

Makeup materials

Market Growth Potential and the Evolution of Makeup Materials

Change one

1. **Petrochemical resin powder-based (microplastic beads [MPBs]) continue to dominate the market.**
2. **Driven by regulations from the European Chemicals Agency and efforts targeting reduced environmental impact, a shift from MPBs to biodegradable resins or silica is underway, particularly in Europe.**

Target market

Markets for MPB and silica alternatives

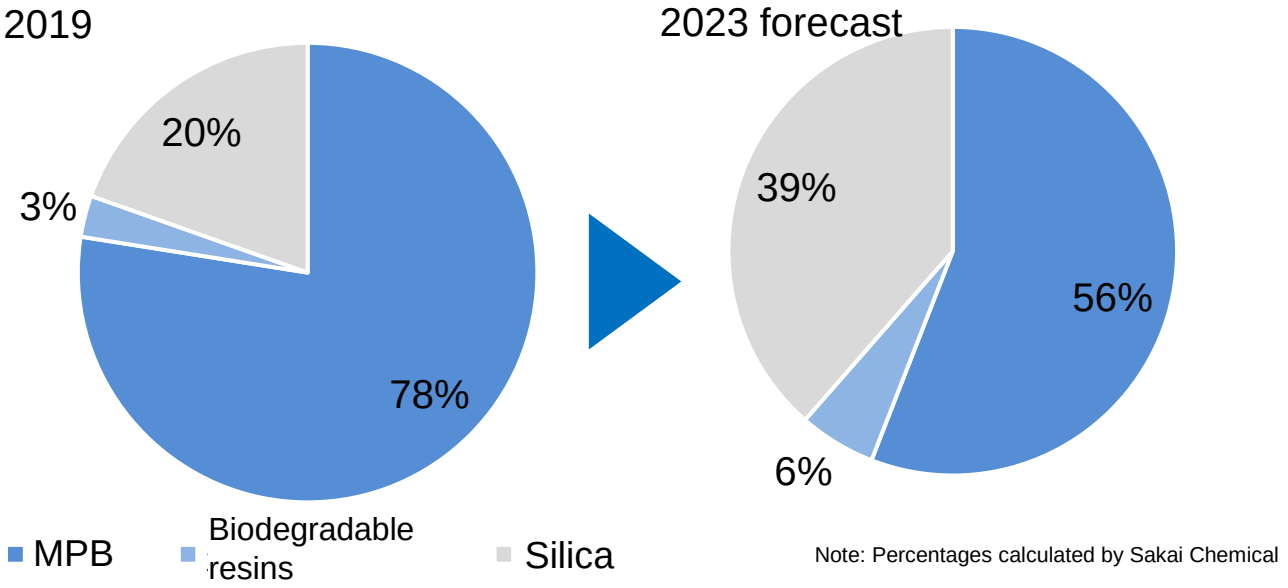
Overall market size

Approximately 20 billion yen
(calculated by Sakai Chemical)

Growth potential

Approximately 5% annually
(Sakai Chemical estimate)

Recent Market Shares (Based on Shipment Volumes)



Note: Percentages calculated by Sakai Chemical

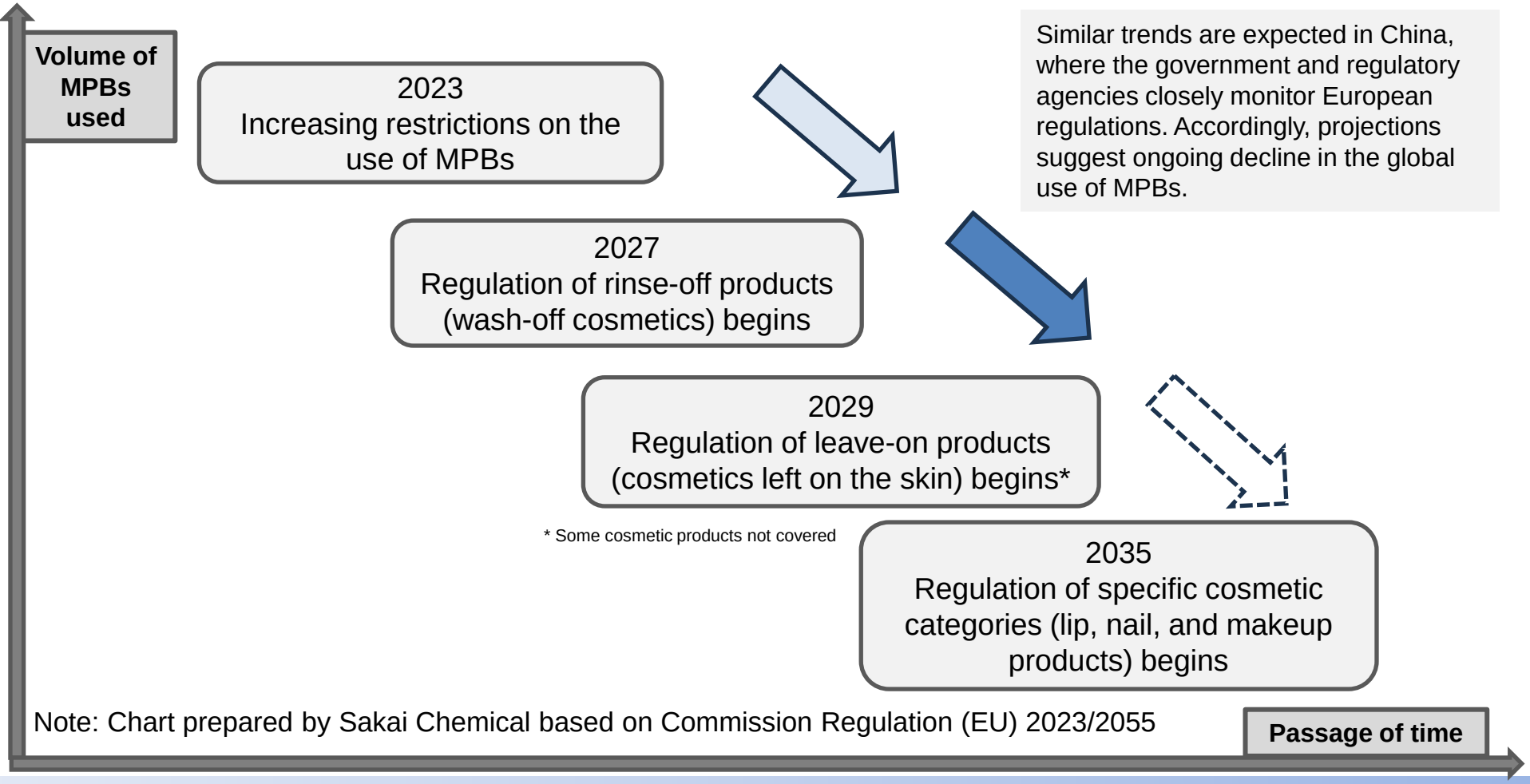
MPB: Depicts internally aggregated values for cosmetic powders (for texture enhancement), petrochemical resins, acrylics, silicones, urethanes, polyamides, and polyethylenes
Biodegradable resins: Marine biodegradable resin powder (cellulose, cellulose acetate)

Source: Fuji Chimera Research Institute, Inc. (2023 Fine Powder Market: Current Trends and Future Prospects); Global Market Forecast for Cosmetic Microbead Alternatives in 2023

Regulations from the European Chemicals Agency (ECHA)

Change one

Restrictions on the sale of cosmetic products containing MPBs within Europe are tightening.



Similar trends are expected in China, where the government and regulatory agencies closely monitor European regulations. Accordingly, projections suggest ongoing decline in the global use of MPBs.

Note: Chart prepared by Sakai Chemical based on Commission Regulation (EU) 2023/2055

Growing Demand for "Functionality"

Change two

- **Makeup products are diverse and use many different materials, each serving specific functions and purposes.**
- **<u>We aim to enhance usability and provide additional functionality, achieving two functions with a single material.</u>**

Makeup products

Liquid foundation, powder foundation, face powder, loose powder, BB/CC creams, makeup base, etc.

	Purpose	Materials
Color formulation	Enhance color correction when applied to the skin while producing a brightening effect	Color pigments, extender pigments, pearl pigments, iron oxides, etc.
Functionality	Provide skincare benefits, extend makeup longevity, protect against UV rays, ensure superior adherence, deliver moisturizing properties, produce a soft-focus effect, and facilitate natural coverage	Talc, mica, oil-based agents, coverage powders, UV-blocking agents, etc.
Usability	Improve comfort and ease of use	Texture-enhancing materials (MPBs, silica, etc.) (MPBs: microplastic beads)

<u>Sakai Chemical</u> Barium sulfate, calcium carbonate, etc.

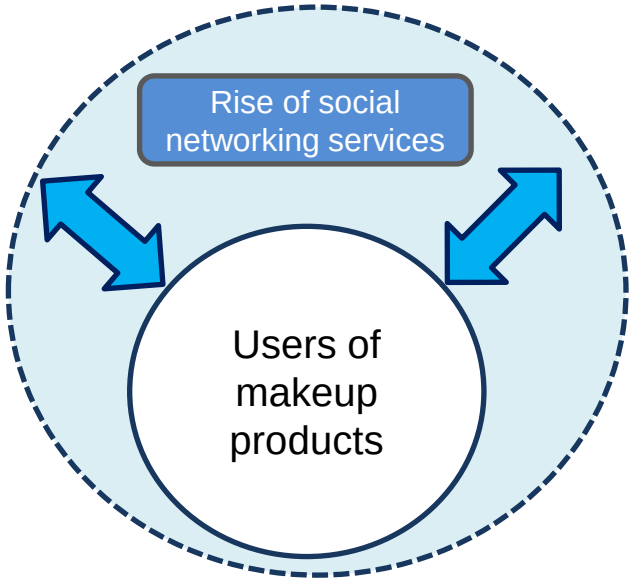
Changes in Consumer Trends

Change three

The range of applications for makeup products is expanding.

- Growth in opportunities to share photos and videos across multiple platforms
- Young consumers are quick to embrace newly emerging trends such as Korean cosmetics

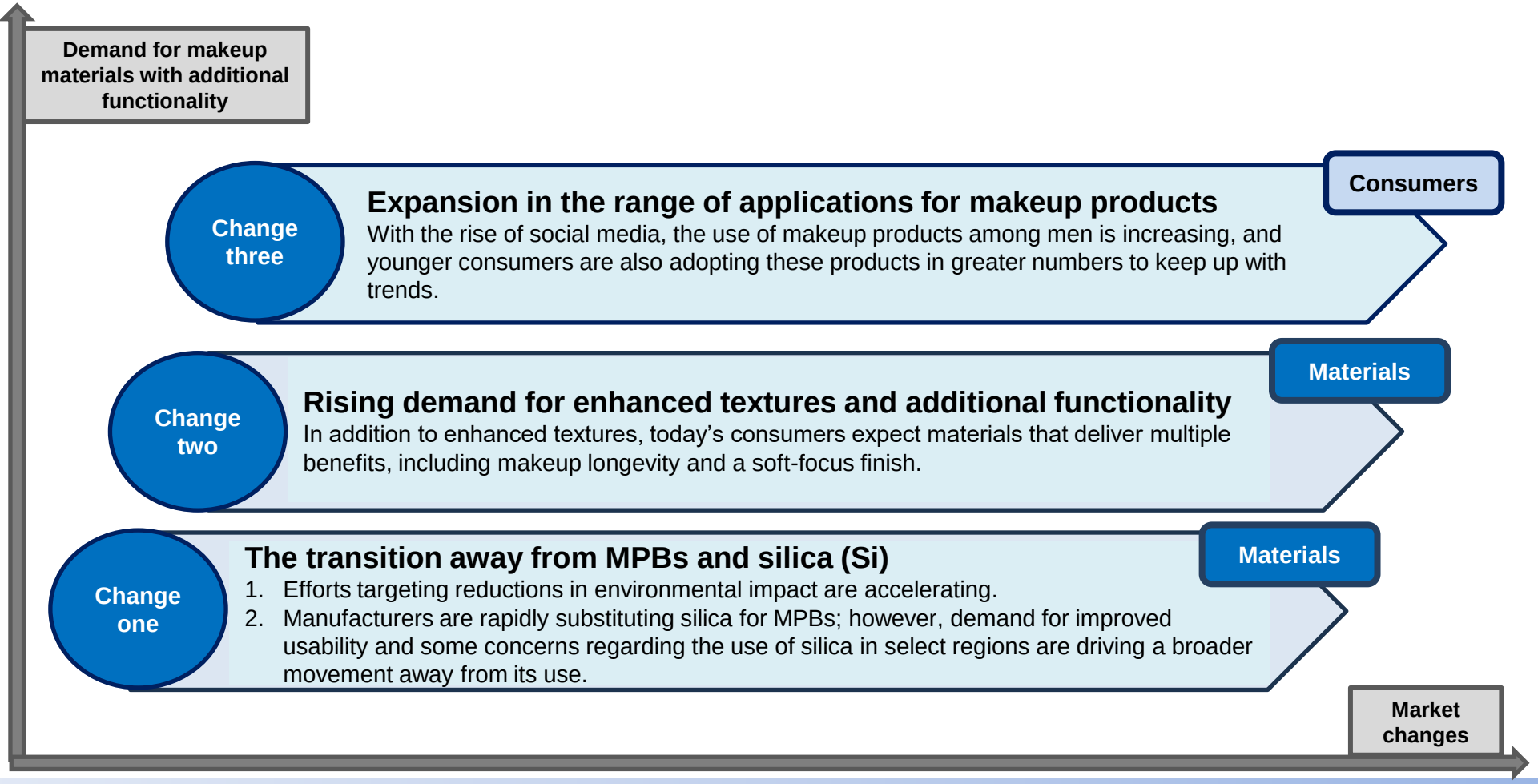
Rising aesthetic awareness among male consumers



Makeup routines becoming more common among younger individuals

Summary of Changes in Market Conditions

Markets are changing due to shifts in both materials and consumer preferences, and demand for additional functionality is on the rise.



Our Advantages in the Field of Makeup Materials

Advantage one

Our products are capable of delivering more than just a pleasant texture, which is crucial for makeup products; they also provide a varied range of additional functionality.

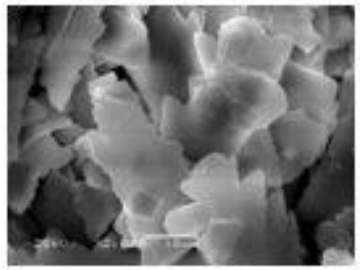
- We handle a wide selection of inorganic materials.
- **Our advanced powder processing technology** enables precise customization of particle size and shape.
- The formulations we create and propose are presented in the form of finished makeup products.

■ Supply chain

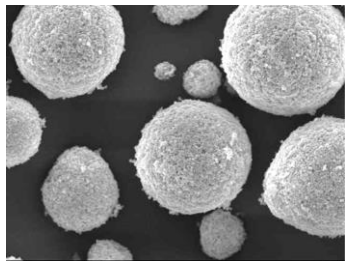
Raw materials (internally produced) → **Sakai Chemical (materials)** → **Cosmetic product manufacturers and OEMs**

Industrial materials
Ba
Ca
Zn
Ti

Cosmetic materials
Plate-like Ba / Spherical Ba and Ca / Ultra-fine particle Zn and Ti



Provably reliable plate-like barium sulfate



Refined spherical barium sulfate

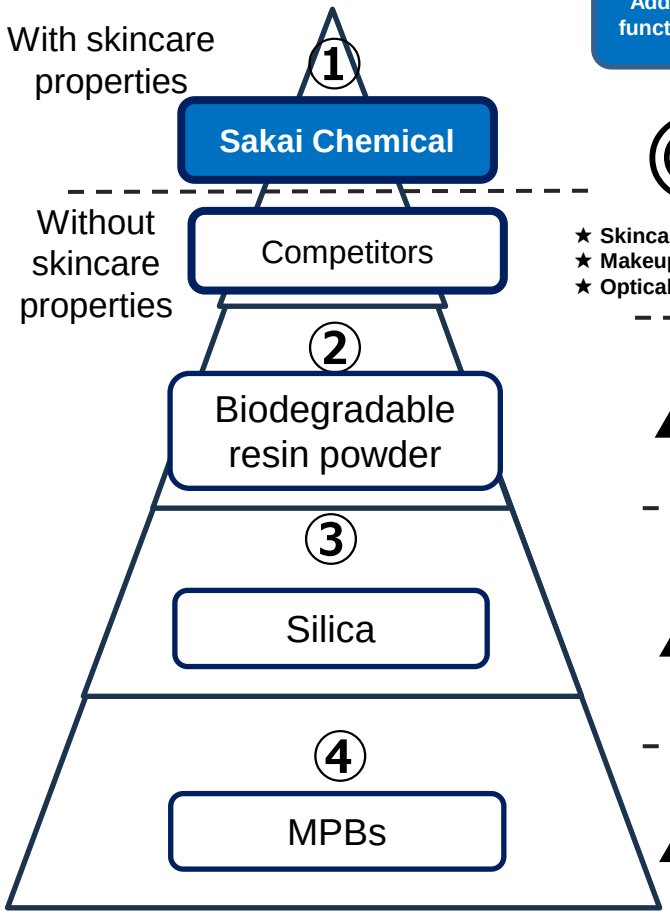
Ba: Barium sulfate
Ca: Calcium carbonate
Zn: Zinc oxide
Ti: Titanium dioxide

- **Improved texture (substitutes for MPBs/silica)**
- **Additional functionality (skincare properties, etc.)**

Relationships with Competitors and Competitive Advantages

Advantage two

We have strengthened our market position with inorganic materials offering distinctive skincare benefits unavailable from competitors.



Additional functionality	Pricing	Texture (Lightness / Softness)
◎	High	▲

★ Skincare
★ Makeup longevity
★ Optical properties, etc.

①Inorganic materials other than silica
- Improved texture and **additional functionality**
- **Our makeup materials deliver unique skincare benefits**

▲	High	▲

②Biodegradable resin powder
- Possible alternatives to silica

▲	High to low	▲

③Silica
- Leading substitute for MPBs
- In Europe, its use is under threat due to strong concerns regarding nanosilica

▲	High to low	◎

④MPBs
- Exceptional texture-enhancer
- **Usage is declining due to upcoming environmental restrictions**

Future-Oriented Strategy Accounting for Circumstantial Changes

We aim to generate growth in sales and profit by focusing on providing additional functionality (skincare benefits, etc.), our ability to recommend formulations that facilitate this functionality, and efforts aimed at developing a robust and flexible supply system.

Strategy

Providing additional functionality (skincare properties, etc.)
★New competitive advantage

× **Supply system development** → **Increase in market share**

Capturing demand for alternatives to MPBs/silica

- **Ongoing reduction in the use of MPBs**
  –Accelerating the mitigation of environmental impact
- **Growing need for additional functionality**
  –Rising demand for alternatives to silica
  –We demonstrate how the functionality we provide (skincare benefits, makeup longevity, optical properties, etc.) is showcased through finished cosmetic products.

Increase in the supply of our unique makeup materials

- **Investment in multiple plants**
  –Amount: 2.59 billion yen
  –Completion date: February 2026

➢ Building a flexible production system capable of responding to changing trends

Responding to the various needs of the makeup materials market

- **Facilitating beautiful and healthy skin**
  –We expand our market share as a makeup material supplier by effectively addressing changes in trends related to materials and consumer preferences.

➢ Instead of limiting our involvement and interactions within the cosmetics industry to sunscreen materials, we are expanding our presence through additional offerings.

We appreciate your kind attention

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