



Life Science Business Division Business Briefings

September 29, 2023

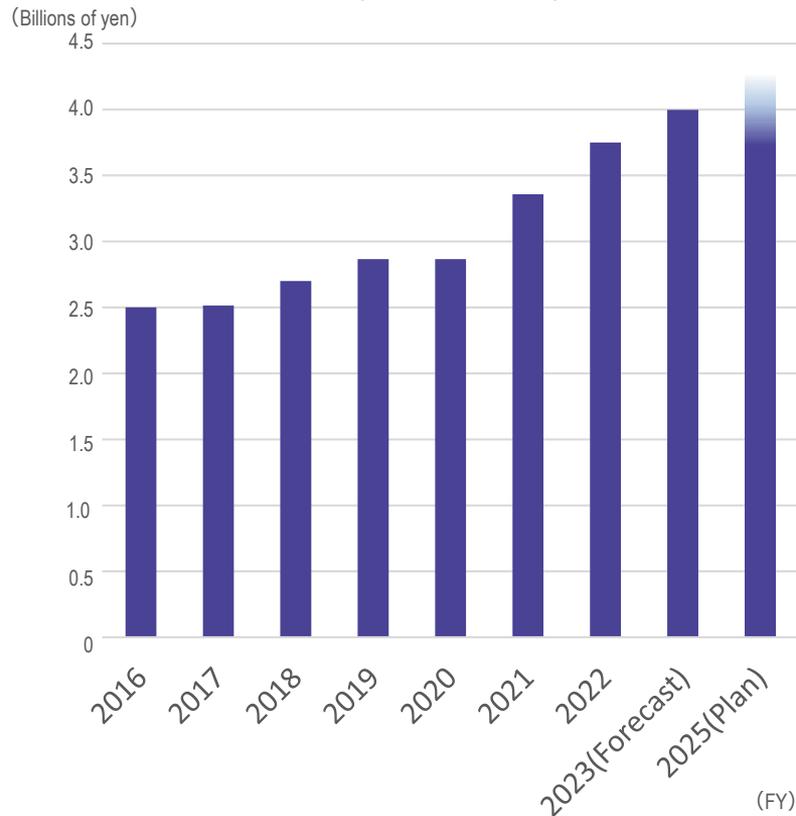
Tokuyama Corporation

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and Intermediates
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1. Life Science Business Field

Trends in Net Sales (From FY2016)*



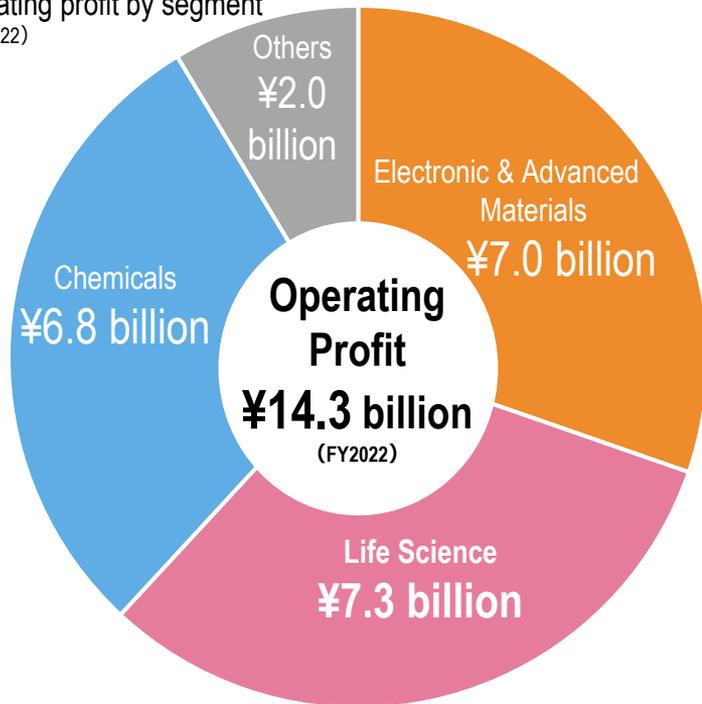
*Until fiscal 2020, prepare data based on the total sales of the relevant profit center

Business Domain

- ▶ **Active Pharmaceutical Ingredients (APIs) and Intermediates**
- ▶ **Eyeglass Lens Materials**
- ▶ **NF (Microporous films)**
- ▶ **Healthcare Materials**
- ▶ **Dental Materials and Equipment**
(Tokuyama Dental Corporation)
- ▶ **Medical Diagnosis Systems (A&T Coporation)**

Use unique technology to capture top niche market share in areas where we can differentiate our products from competitors': vision, dental, and diagnostics

Operating profit by segment
(FY2022)



Adjustment and corporate-wide expenses . . . ¥ - 5.3 billion

Eco Business ¥ 0 billion

Cement ¥ - 3.7 billion

Priority Measures

- ▶ Strengthen the marketing system and accelerate expansion of production capability to further boost market share of dental materials outside Japan
- ▶ Develop new products and strengthen sales activities to further expand the photochromic market outside Japan
- ▶ Strengthen the medical diagnostic systems business

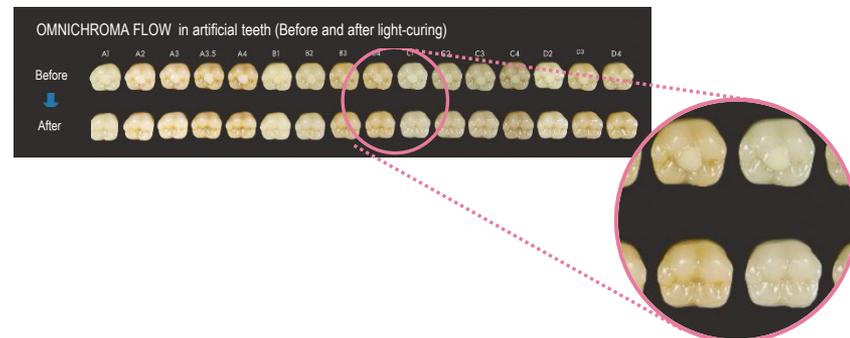
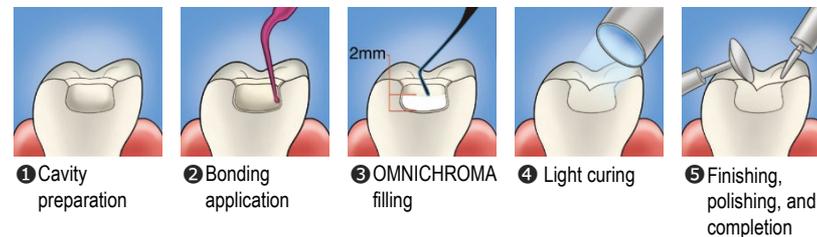
2. Dental Materials and Equipment

FY2022 Results

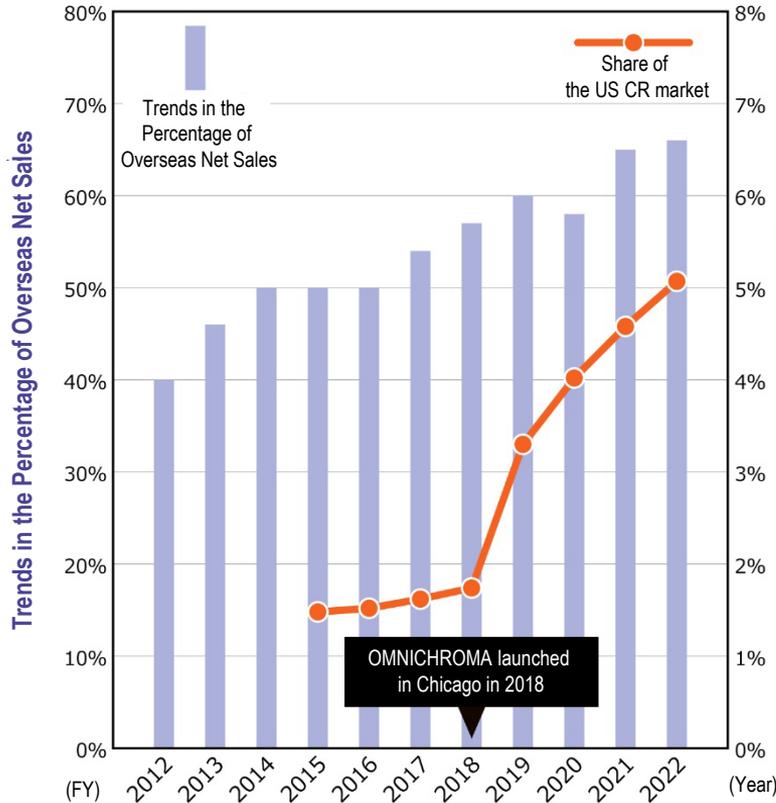
- ▶ Tokuyama Dental Corporation began commercial operations of a new production line (MD-7) at the Kashima Factory in October 2022
- ▶ Composite resin business expanded worldwide due to increased shipments to overseas markets and increased sales to Europe, the US, and emerging countries
- ▶ Sales of blocks for dental crowns increased

Future Plans and Investments

- ▶ Further grow overseas market share by reinforcing the sales structure
- ▶ Accelerate improvements to the supply system by adding a new production line (construct a new facility (MD-8))



Tokuyama Dental Corporation



Share of the US CR market / Source : SDM Northcoast Data

Sales Expansion Strategy Centered on OMNICHROMA

- ▶ Steady progress in acquiring customers in the US, the company's most important market; jumped to third place in terms of market share by product in the CR market
- ▶ Work to further bolster sales promotion by making full use of exhibitions, online marketing, and sampling
- ▶ Sales also on a growth trajectory in the Middle East and Brazil

CR Share in Major Countries

Country	CR Share* /%	Population** /Billions	USD GDP** /Person
Italy	16	0.059	34,113
France	10	0.066	42,636
Germany	8	0.084	48,636
Poland	8	0.038	18,280
United States	5	0.334	76,348
Brazil	5	0.214	8,995
India	5	1.423	2,379
China	0	1.413	12,814
Indonesia	N.D.	0.275	4,798
Japan	14	0.125	33,822

*CR share : our estimate
 **Based on 2022 IMF data

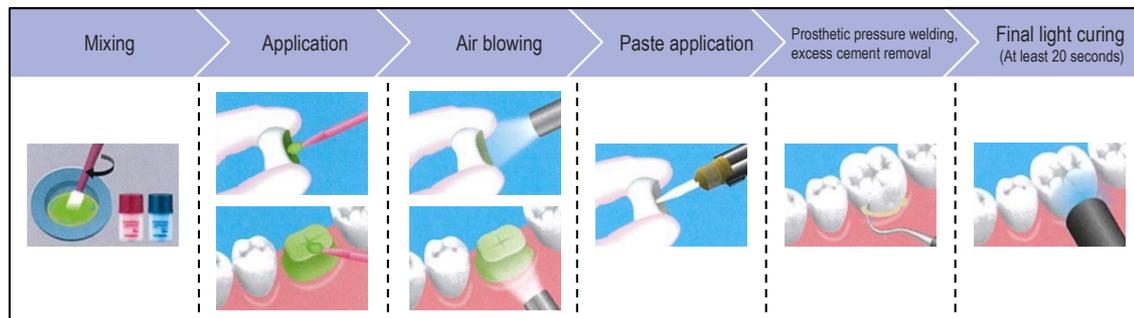
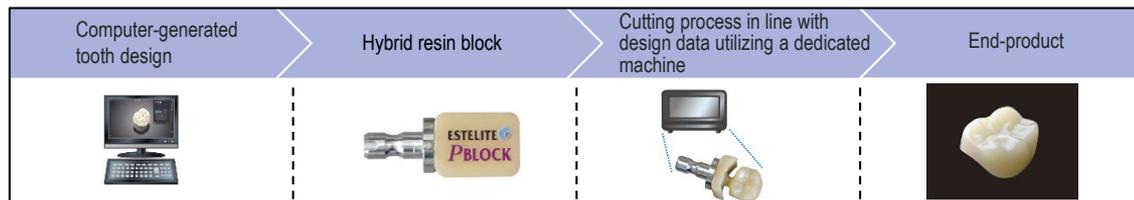
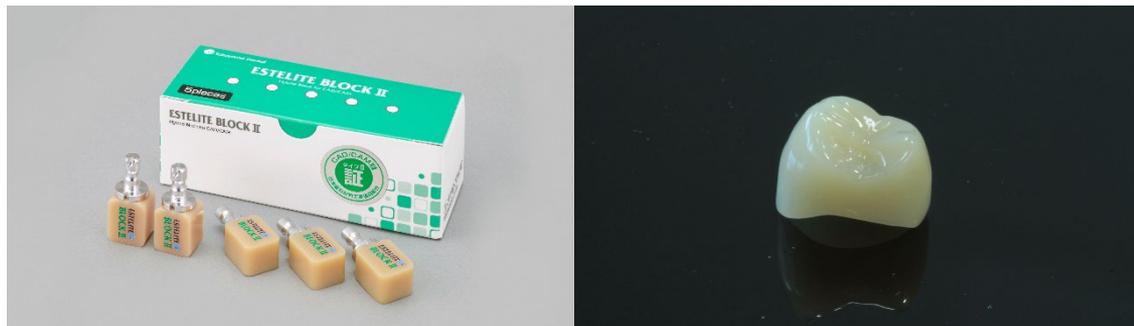
Map Showing the Relative Sizes of Global Markets for Dental Materials and Equipment



Circle size: Market size Color: Growth potential

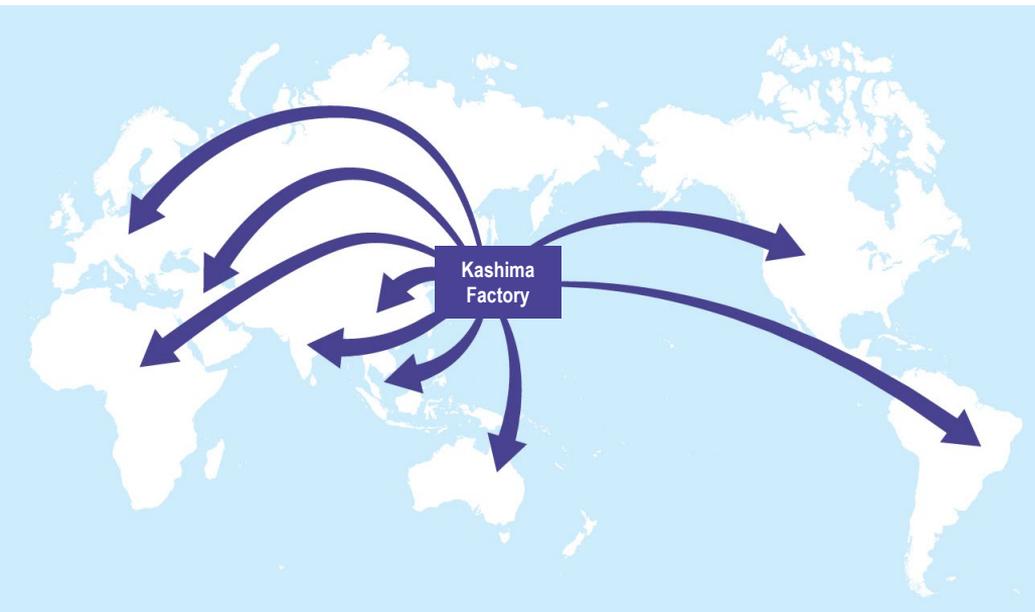
Introduction of New Product Categories as Digital-Related Products

- ▶ Rapid expansion in domestic demand for blocks for dental crowns (start of insurance coverage)
- ▶ Further growth in the customer base centered on technical laboratories going forward amid positive steps to resolve supply shortages and rapid expand in domestic sales
- ▶ Further sales expansion with the start of overseas sales
- ▶ Dental 3D printing
Recognizing the significant improvement in workflows at dental clinics and laboratories as well as the substantial reduction in patient chair time, the dental 3D printing market continues to grow amid the ongoing development of dental-related materials, including 3D printing resins





- ▶ Above-ground two-story facility (on the grounds of the Tokuyama, Kashima Factory) located in Kamisu-shi, Ibaraki Prefecture with a total floor area of approximately 6,000 m²
- ▶ Construction commenced in April 2023; scheduled to come online in October 2024
- ▶ Manufacture of composite resin and CAD/CAM resin blocks
- ▶ On completion, this facility will roughly double the manufacturing capacity for product kneading, filling, packaging, etc.



Tokuyama Dental America (US, Canada)

Most important region

CR share 5.7% ⇒ Over 10%; strengthen digital marketing

Tokuyama Dental Deutschland

Tokuyama Dental Italy (Europe, Turkey, Africa)

Brazil, Latin America

Expand sales in whitening/CR veneers

Middle East, India

Commence full-scale sales to the world's most populated market

China

Conduct market research for future strategic planning

Africa

Consider full-scale entry from the second half of FY2023

3. Eyeglass Lens Materials



FY2022 Results

- ▶ Global market share increased steadily due to the strong performance of photochromic materials for eyewear lenses

Future Plans

- ▶ Further differentiate performance through the development of next-generation photochromic materials
- ▶ Expansion into product lineups other than lenses (Sheets, digitally compatible lens materials, etc.)



Molecular design of photochromic colorings and matrixes (polymer)

Assigning technology to maximize coloring performance

Manufacturing technologies and quality control that enable the production of a wide variety of products in small quantities

Responding to various customer needs

4. Active Pharmaceutical Ingredients (APIs) and Intermediates



FY2022 Results

- ▶ Increase in earnings owing mainly to robust sales volumes of generic pharmaceuticals
- ▶ Impact also on the buildup of inventory by generic drugmakers
- ▶ Favorable evaluation of the Company's quality control

Future Plans

- ▶ Build a supply chain for stable supply
- ▶ Develop high-rarity APIs and strengthen competitiveness

Highly reliable supply system based on organic synthesis technology

Provide cost and quality that satisfy the expectations and requirements of our business partners

Strengthen collaborative ties including CDMOs in India and China in addition to Japan

(partial equity investment in Japan)

Development of high-rarity generic APIs



Kashima Factory

5. Technology Topics

Radiation Protection Materials
Cosmetics Materials [Airlica™]

[Development] Steps are also being taken to develop soft rubber-like, sheet-type protective materials for a wide range of applications in fields such as medicine.

Built-in type full-face dust mask (inner shield)

Design



Assembly



built-in mask

Rubber sheet protective materials



【Overview】

Development of lead-free, eye-protecting materials used in decommissioning work at the Fukushima Daiichi Nuclear Power Plant under the supervision of Tokyo Electric Power Company Holdings, Inc. Tokuyama is looking into developing goggle-type masks for stand-alone use, shields for use with full-face dust masks, and rubber-like sheets for use as window materials.

While protection against X-rays at 120 kV is about 0.10 ± 0.02 mmPb/2.5mm $\sim 0.12 \pm 0.02$ mmPb/2.5 mm*) (2.5 mm thick material is equivalent to 0.1-0.12 mm lead foil), final radiation protection performance, shape, and specifications are currently being adjusted.

* Measurement results by Tokyo Metropolitan Industrial Technology Research Institute

Radiation protection goggle



Type A (Lightweight type)



Type B (Combination type with corrective eyewear)



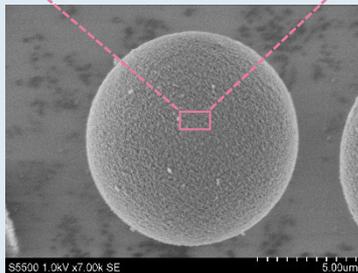
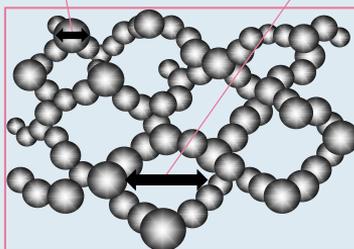
Spherical silica aerogel powder manufactured by the Company's patented technology.
Useful characteristics as a raw material for cosmetics.

Product Attributes

- ▶ Extremely porous
- ▶ Spherical and uniform particle size
- ▶ 10 μ m spherical particles
- ▶ Naturally derived ingredients, etc

Primary particle diameter : 4nm

Pore diameter : approx.40 nm

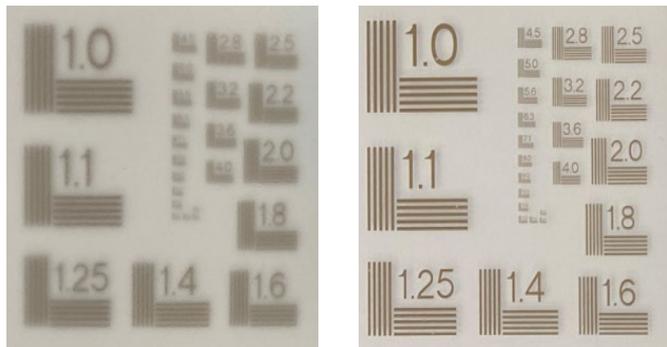


Effects

- ▶ **High oil absorption**
Adsorbs sebum and prevents makeup from fading
- ▶ **Smooth skin feel**
Superior feel compared with general aerogel
- ▶ **Soft focus (Light diffusion effect)**
Conceals roughness of skin and yields beautiful skin effect
- ▶ **Highly safe**
Attractive to cosmetics manufacturers with a high sensitivity to safety and the environment

Favorable evaluation toward the level of efficacy; decision by a major cosmetics manufacturer to adopt for use in its high-end line; sales from the next fiscal year

Soft Focus Effect



Airlica™

Resin beads

Comparison with the soft focus properties of silicone resin with 2% Airlica™ and the addition of resin beads; soft focus (blurring) effect is higher with Airlica™

Cultivate users
and expand sales
through
formulation
proposal-based
marketing

Examples of application

- ▶ Powder foundation
- ▶ Liquid foundation



Airlica™ formulated samples
(in-house formulation)

For the People of Tomorrow

TOKUYAMA 