

(BEAUTY PLANET)

ENG

1

Raw materials

Where do our raw materials come from?
This is the story of their long journey.



Sustainable and responsible procurement of raw materials

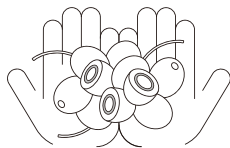
At the Fukuoka Kurume Factory, we handle a variety of raw materials that become cosmetics, containers, cartons, and packages.

Procuring safe and high-quality raw materials while protecting forests and living creatures is an important part of what we do. Our work also involves caring for the workstyles and lives of all people engaged in production across the world.

The Beauty Cycle connects the world.

It is our responsibility to procure raw materials while protecting limited resources, biodiversity, and the human rights of all workers to create a sustainable society.

Palm oil

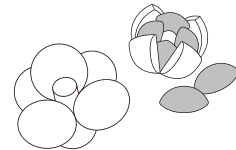


Palm oil is vegetable oil extracted from the fruit of the palm tree. It is a basic cosmetic ingredient that helps promote beautiful skin. It is also the world's most frequently used vegetable oil, in food and various other products.

Its use is increasing every year, and protecting both tropical forests where palms grow, as well as the diversity of creatures living there is a major challenge.

At Shiseido, we procure palm oil and other raw materials for cosmetics while protecting people's lives and human rights without damaging the environment.

Camellia

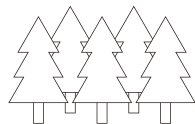


Camellia, which produces beautiful flowers in vivid color, is a nutrient-rich plant. The extract from its seeds is used as camellia oil.

To grow camellia for use in skincare and hair care products, Shiseido also works on planting it.

By creating a cycle in which our employees grow camellia and use it as a raw material in cosmetics, we aim to help realize a sustainable society.

Paper



Large amounts of paper are used for the boxes and packaging of cosmetics.

When producing wood pulp, the source of paper, we must protect local forests and biodiversity.

Cosmetics containers must not only be produced with consideration for the environment but also with special features such as beautiful design and strength.

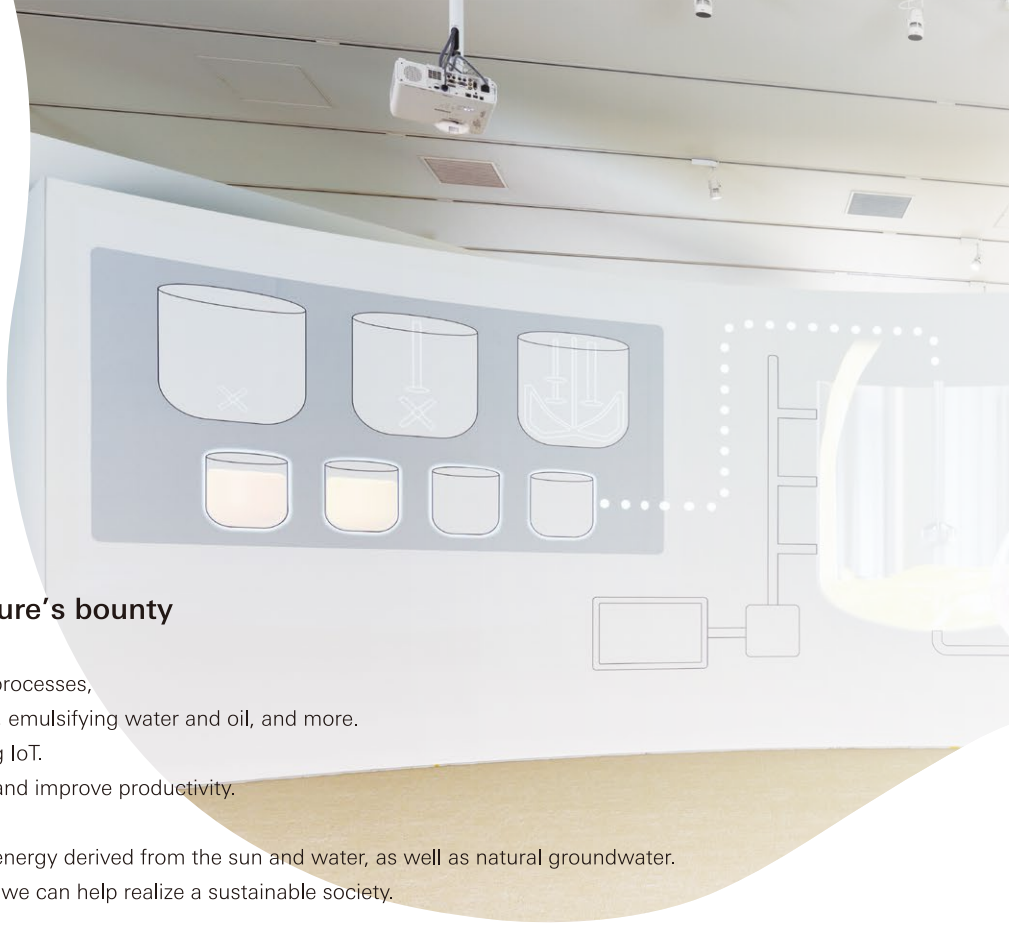
At Shiseido, we are switching to environmentally-conscious paper and aiming to make paper 100% sustainable.

We are also innovating paper containers and packages in collaboration with paper manufacturers.

2

Manufacturing

This is where the manufacturing of cosmetics begins!

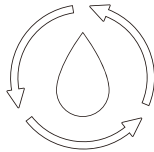


Cutting-edge technology meets nature's bounty

The manufacture of cosmetics involves a variety of processes, such as accurately measuring raw materials, mixing, emulsifying water and oil, and more. Many of these steps are now being automated using IoT. This cutting-edge technology helps stabilize quality and improve productivity.

At the Fukuoka Kurume Factory, we use renewable energy derived from the sun and water, as well as natural groundwater. We manufacture cosmetics every day, knowing that we can help realize a sustainable society.

Water

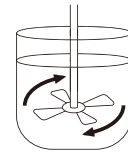


Water is an indispensable resource for cosmetics. At the Fukuoka Kurume Factory, we use abundant, high-quality water as a raw material for our cosmetics and in the manufacturing process.

This groundwater is purified and managed using strict quality tests. Water used for cleaning is filtered in the water reclamation facility for repeated use, which helps save water at the factory. (* This facility is scheduled to go into operation in 2024.)

We will continue mindfully using and protecting water, a shared local resource, along with the people of Kurume to coexist with the natural environment.

Stirring

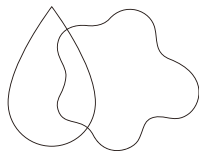


The raw materials used to produce cosmetics are precisely measured and mixed in large production tanks. This mixing process is called stirring.

Production tanks vary in size, and the size used depends on the type of cosmetic being stirred. Their main feature is their impellers, which are propeller-like stirring components. For example, the shape of the impellers and the mixing speed vary significantly depending on whether it is lotion, emulsion, or cream that is being stirred.

In the production tanks, high-quality cosmetics are produced in a stable manner every day.

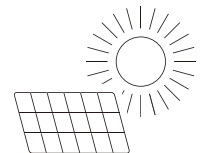
Emulsion and solubilization



Emulsion is a mixture of water and oil. Water and oil do not naturally mix, but when mixed at a fast speed in a special mixer, they emulsify. The white color of emulsion is the color of emulsified water and oil.

Furthermore, solubilization technology helps mix lotion ingredients that are hard to mix with water while keeping the lotion clear. Lotion remains clear thanks to solubilization.

Renewable energy



At the Fukuoka Kurume Factory, we work on reducing CO2 emissions to help mitigate climate change.

The factory is powered by CO2-free renewable energy derived from the sun and water and is equipped with highly efficient facilities to save energy.

The factory has an environmentally-conscious, sustainable design that helps save energy by improving thermal insulation of the building and more.

*Obtained A-rank evaluation in the Comprehensive Assessment System for Built Environment Efficiency (CASBEE)

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Filling

At this stage, lotion and cream are put into containers.

Check out the filling machines, hard at work.

Where advanced technology and innovations come together

Filling refers to the process of putting manufactured lotion, cream and other products into containers.

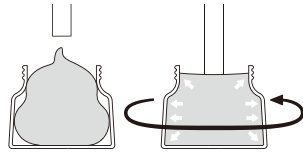
Filling machines are precisely designed according to the type of cosmetics in order to fill containers with an exact amount of product.

Various technologies are used to fill many containers at high speed or rotate containers using centrifugal force.

At Shiseido, we aim to make cosmetics containers and packages sustainable to reduce the burden on the environment.

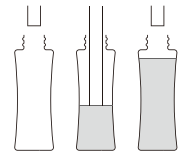


Filling with centrifugal defoaming technology



To fill containers with cosmetics like creams, which have a thicker consistency, the containers are rotated at high speed to create and leverage centrifugal force. This technology is called centrifugal defoaming and helps ensure that the product fills every corner of a container.

Nozzle that moves up and down

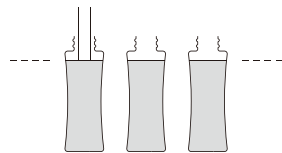


When water is poured into a cup from a distance, the water splashes.

Because lotion is also a liquid, the nozzle moves up to meet the liquid surface that rises as the lotion is poured.

To alleviate the clash between the liquid and containers and fill efficiently, the movement of the nozzle is finely controlled.

Precisely designed filling machine



Without exception, all containers must contain an exact amount of cosmetic.

Therefore, the movement of the filling machines and the shape of the nozzles are meticulously and precisely designed to suit specific types of cosmetics.

4

Inspection

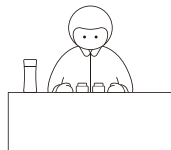
Leveraging the five senses for thorough inspections to ensure the production of high-quality cosmetics.

Visual, tactile, and olfactory experts

From the arrival of raw materials to the shipment of cosmetics, we conduct strict inspections over multiple steps using the eyes of human beings as well as cutting-edge technology. In particular, fragrance, color, texture, and appearance are inspected with the visual, tactile, and olfactory senses of rigorously trained experts called sensory panelists.

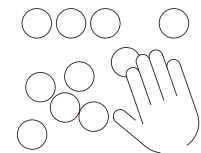
Cosmetics are made for human beings. That is why the sharpened five human senses are the key to effective inspections that ensure reliable quality.

Sensory panelists



The color, fragrance, and texture of cosmetics are inspected using equipment as well as the five human senses. Sensory panelists in charge of sensory inspection must maintain their professional skills and pass an annual qualification test. Each panelist strictly manages his or her skills by avoiding strong-smelling food and more. These professionals support the production of high-quality cosmetics.

Visual training



Sensory panelists undergo various types of training to develop their capacity to recognize nuanced color differences. For example, in training using a tool called the color discrimination tester, panelists must put 100 items of different brightness and saturation in the order of hue within a limited amount of time.

4

Inspection

Olfactory test

Can you tell the differences in fragrance?

Which one has the same fragrance as the sample on the left? A or B?



クレ・ド・ポーポーテ
ル・セラム

Clé de Peau Beauté THE SERUM

クレ・ド・ポーポーテ サンプル
ル・セラム

Clé de Peau Beauté THE SERUM (sample)

THE GINZA
ザ・ギンザ ハイブリッドジェルオイル

THE GINZA HYBRID GEL OIL

THEGINZA サンプル
ザ・ギンザ ハイブリッドジェルオイル

THE GINZA HYBRID GEL OIL (sample)

ELIXIR
エリクシール シュペリエル デザインタイム セラム

ELIXIR Superieur Design Time Serum

ELIXIR サンプル
エリクシール シュペリエル デザインタイム セラム

ELIXIR Superieur Design Time Serum (sample)

Color test

Can you tell the differences in color?

- (1) Place the twenty colored balls in the case in the order of the color gradation. You have two minutes.
- (2) After two minutes, close the case and turn it around. If the numbers are in order, your positioning is correct.
- (3) Return the colored balls in the case to the tray.



Tactile test

Can you tell the differences in touch?

Sponges

- (1) Take out a sample and put it in the frame in front of you.
- (2) Put sponges A, B, and C in the frames in front of you.
- (3) Which one feels the same to the touch as the sample? A, B, or C?

Cotton pads

- (1) Take out a sample and put it in the frame in front of you.
- (2) Put cotton pads A, B, and C in the frames in front of you.
- (3) Which one feels the same to the touch as the sample? A, B, or C?

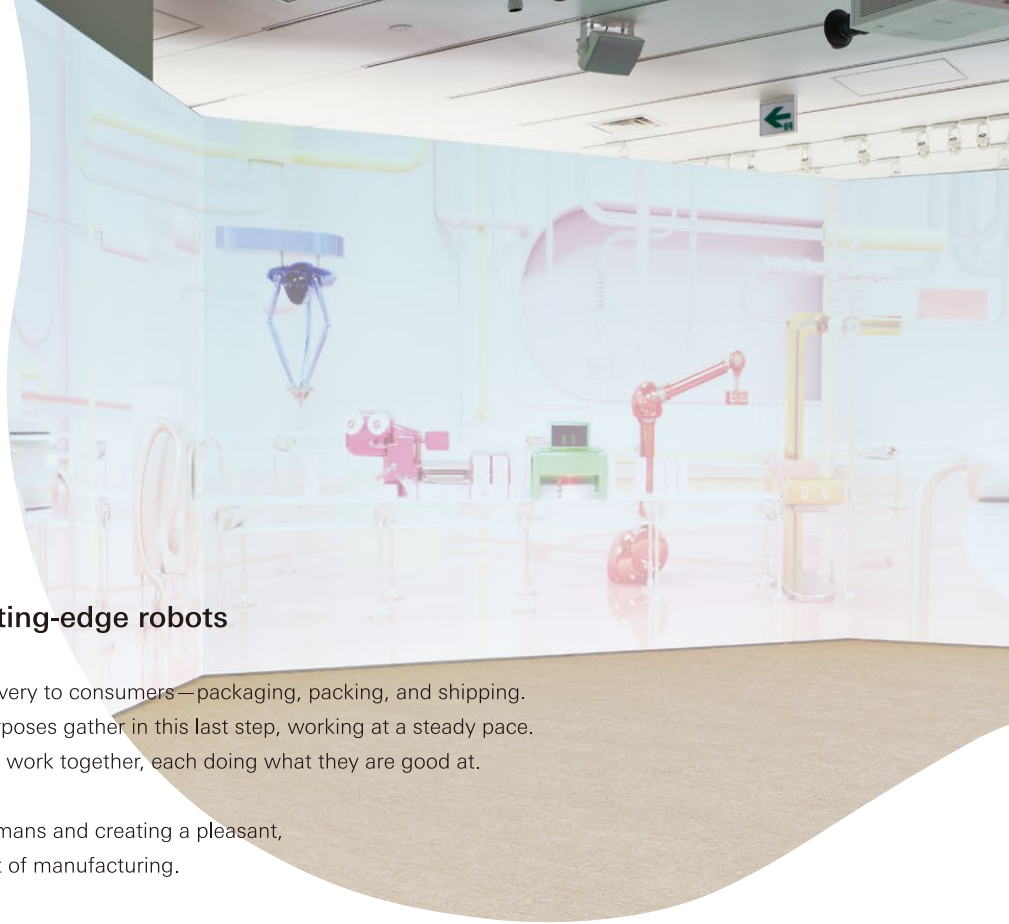


5

Packing and shipping

This is the final phase of cosmetics production.

Check out all the technologies used.

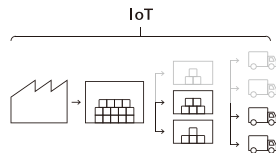


Teamwork between people and cutting-edge robots

The cosmetics are now in the final phase before delivery to consumers—packaging, packing, and shipping. Robots in various shapes developed for different purposes gather in this last step, working at a steady pace. At the Fukuoka Kurume Factory, humans and robots work together, each doing what they are good at.

We believe that reducing the physical burden on humans and creating a pleasant, worker-friendly workplace are also an important part of manufacturing.

Optimizing distribution



From its arrival at the warehouse in preparation for shipping to delivery, product information is managed using IoT.

We optimize distribution by managing and sharing information on when, where, and how many products are produced, transported, and delivered.

This IoT system helps reduce CO2 emissions during transportation.

6

Manufacturing room area

IoT is used in various places during the manufacturing of cosmetics.



Cosmetics production using IoT

Work in the manufacturing room is being automated using IoT.

Movement inside production tanks, where raw materials are mixed, is analyzed and controlled in real time.

Traceability has also been established to enable the tracking of information such as the origin of raw materials even after shipment.

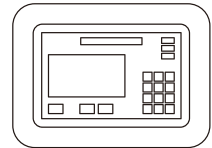
Besides stabilizing quality and improving productivity, IoT helps reduce the burden on human beings and creates a worker-friendly workplace at the Fukuoka Kurume Factory.

Production tank volume



Production tanks vary in size, and the largest has a capacity of 5,000 L. This is enough to fill 38,000 130 mL bottles of emulsion.

Sensing technology in production tanks



The task of checking on raw materials being mixed inside the tanks through the window to adjust the speed of mixing was once handled by human workers, but here at the Kurume Factory, this task is now being automated step by step. Copious data obtained from sensors inside the tanks is processed in real time to automatically control production using IoT.

7

Filling room and packaging/finishing room area

See some of our cutting-edge technologies for yourself.

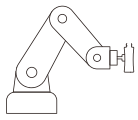


Production lines featuring cutting-edge technology

In this area, containers are filled with lotion and emulsion, placed in cartons, and packaged.

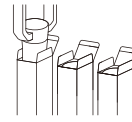
Cutting-edge technology such as filling machines and robots has been used to automate these processes, achieving highly productive cosmetics production.

This is how cosmetics are produced and prepared for their journey from the Fukuoka Kurume Factory to consumers around Japan and the world, possibly also to you.



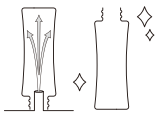
Automated container feeding

Replacing humans, robots now provide containers to the filling line. They are arm robots that move like arms. They pick up many containers at once and quickly and carefully set them on the line. Check out their smooth movement.



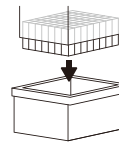
Auto-cartoning machine loading products into cartons

The capped containers are carried to the packaging/finishing room to be put into cartons. Auto-cartoning machines instantly pick containers at a rhythmical speed and accurately place them in cartons. This step was once manual, but now, carton assembly through product loading on this line are now automated. This packing facility even uses a linear motor.



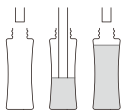
Container cleaning

Containers must be impeccably clean. Before filling them with lotion or emulsion, we remove dust and other foreign substances by strongly blowing air in or sucking air out of the containers.



Auto-casers for loading packaged products into boxes for shipment

A robot called an auto-caser loads packaged products into boxes for shipment. The auto-caser can pick and accurately move multiple boxes at once. By letting robots do strenuous work like this, we realize a highly productive factory where humans and robots collaborate.



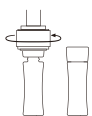
Preventing the formation of air bubbles when filling containers

The movement of the nozzle is finely controlled to prevent air bubbles from appearing when filling containers. Lotion and emulsion are gently poured while the nozzle moves up to meet the liquid surface.



Printing shipment information on boxes

Labels bearing shipment information used to be affixed to boxes, but on this line, the information is directly printed onto the boxes as part of our environmental efforts.



The "perfect" way to close caps

The caps of containers should be neither too loose nor too tight. To tighten them just the right amount, torque is managed by machines. This was once the job of human workers, but today, high-tech machines play this role in the production line.



Delivering to the warehouse

Products loaded into boxes are carried to the warehouse on the ventilator and conveyors where they are stored until shipping.