

Data

Scope of environmental management: All domestic offices of Taisho Pharmaceutical (such as the head office, five branch offices and three domestic offices under their control, five logistics centers, three factories, and the Research Center) and Taisho Pharma Co., Ltd., MEJIRO KOSAN Co., Ltd., and Taisho Pharmaceutical Logistics Co., Ltd. out of its group companies are within the scope of environmental management.

Environmental Accounting

Environmental accounting is based on the calculations according to the Taisho Pharmaceutical Environmental Management Accounting Preparation Procedures (Rev. 2), which is based on Environmental Accounting Guidelines 2005 published by the Ministry of the Environment. [Target period: April 1, 2020 to March 31, 2021]

Environmental Conservation Costs

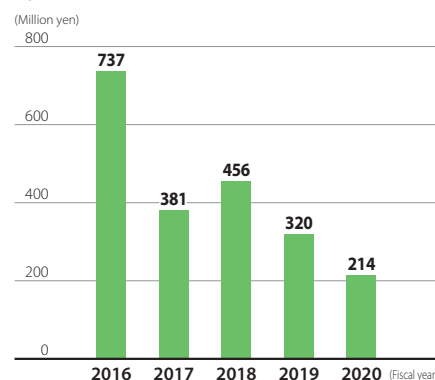
Category	Main initiative	Invested Amount (Million yen)	Cost (Million yen)
Costs in the business area		167	763
Breakdown	Pollution control cost	18	199
	Global environmental conservation cost	149	475
	Resource recycling cost	0	89
Up/Downstream cost	Outsourcing cost for recommodification of containers and packaging/ Waste product treatment	0	232
Management activity cost	Monitoring of environmental loads/ Compliance and operation of ISO 14001	44	54
Research and development cost	Research and development for environmentally friendly products/ Purchasing of raw materials for research	0	0
Social activity cost	Activity costs of and donation to industry groups	0	0
Environmental damage solution cost	Implementation of soil and groundwater pollution measures	3	1
Total		214	1,050

Environmental Conservation Effects

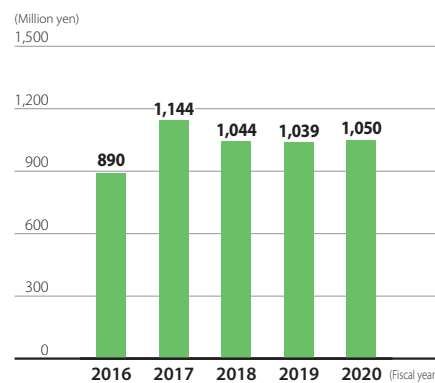
Details of effects		FY2019	FY2020	Reduced volume	Reduction rate (%)	
Effects on environmental conservation that correspond to the costs in the business area (Resources)	Total energy input (thousand GJ)	1,100	1,037	63	5.7	
	Breakdown	Power consumption (10,000 kWh)	6,600	6,278	322	4.9
		Usage of city gas (thousand m ³)	7,596	7,034	562	7.4
		Usage of Bunker A (kL)	1,360	1,270	90	6.6
		Usage of LPG (m ³)	653	678	(25)	(3.8)
		Usage of gasoline (kL)	1,747	1,600	147	8.4
		Usage of light fuel oil (kL)	0	0	0	0.0
	Breakdown	Usage of water (thousand m ³)	777	639	138	17.8
		Usage of groundwater	521	386	135	25.9
		Usage of tap water (domestic water)	231	222	9	3.9
		Usage of industrial water	22	27	(5)	(22.7)
		Usage of greywater (rain water)	3	4	(1)	(33.3)
		Transaction volume of specific chemical substances* (tons)	132	50	82	62.1
Effects on environmental conservation that correspond to the costs in the business area (Emissions)	Volume of CO ₂ emissions (tons)	56,440	51,884	4,556	8.1	
	Breakdown	Emission volume from production and office work activities	52,394	48,173	4,221	8.1
		Emission volume from sales and logistics activities	4,046	3,711	335	8.3
	Total waste volume (tons)	4,425	3,952	473	10.7	
	Final landfill disposal volume (tons)	13	31	(18)	(138.5)	
	Total emission volume (thousand m ³)	529	429	100	18.9	

* Based on the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

Invested Amounts



Costs



Economic Effects Regarding Environmental Conservation Costs

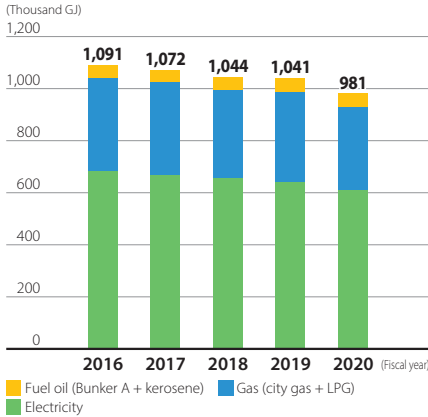
Details of effects	Amount (Million yen)	
Revenue	Economic income regarding recycling	0.8
Reduced cost	Reduced cost from energy saving	2.5
	Reduced cost from reduction of product containers	0.0
Total		3.3

Items	Amount (Million yen)
Total invested amount during the relevant period	15,121
Total R&D cost during the relevant period	20,251

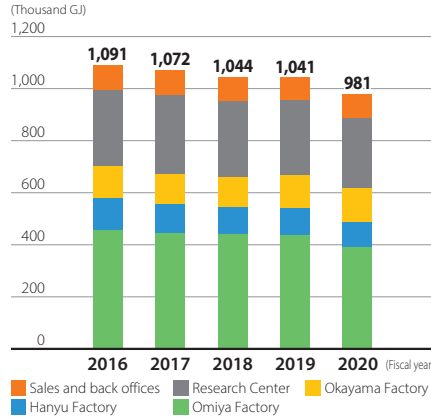
Resource Loading Volume

Energy

Energy Input (by Type)

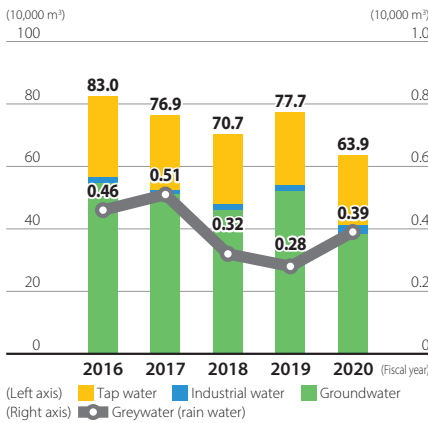


Energy Input (by Office)

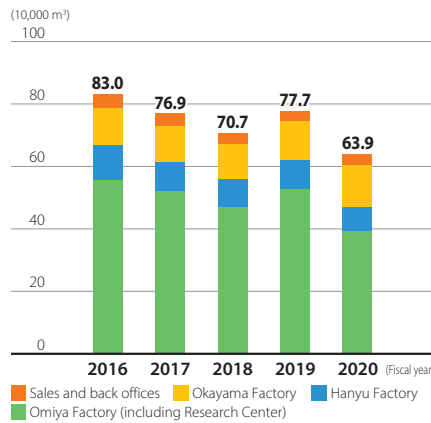


Water

Usage of Water (by Type)

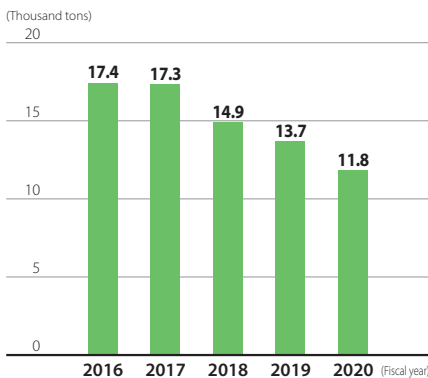


Usage of Water (by Office)

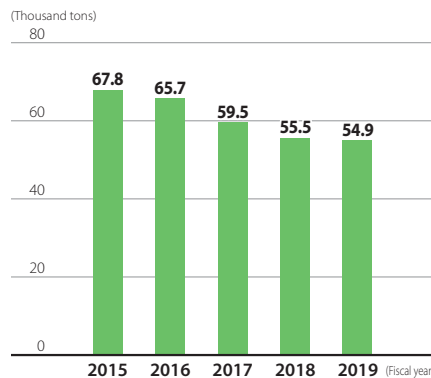


Raw Materials

Usage of Raw Materials

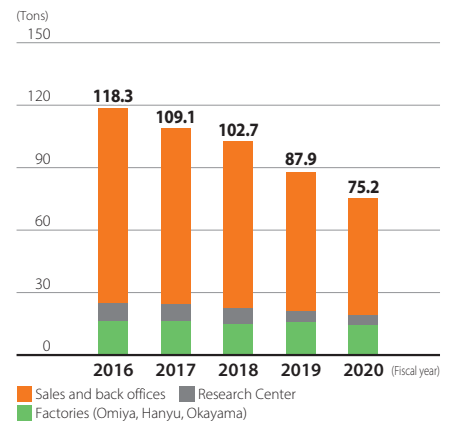


Usage of Materials (Four Materials Specified in the Containers and Packaging Recycling Act)



Copier Paper

Purchased Volume of Copier Paper



Chemical Substances

Transaction, Release, and Displacement Volumes of Chemical Substances Based on the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof—Omiya Factory (including Research Center)

No.	Chemical substance	Cabinet ordinance No.	Transaction volume	Release volume into the atmosphere	Release volume into public water	Displacement volume into the sewer	Release volume into soil	Decontamination treatment volume	Displacement volume to waste
1	Acetonitrile	013	5,200	2.6	0.0	0.0	0.0	0.0	5,200
2	Chloroform	127	2,100	2.4	0.0	39	0.0	0.0	2,100
3	Normal-hexane	392	1,500	13	0.0	1.5	0.0	0.0	1,500

(Unit: kg)

Transaction Volume of Specific Chemical Substances Based on the Ordinance on Living Environment Conservation in Saitama City (Article 74, Paragraph 2)—Omiya Factory (including Research Center)

No.	Chemical substance	Category of specific chemical substance	Transaction volume	Breakdown of the transaction volume		
				Usage	Produced volume	Transaction volume
4	Hydrogen chloride (including hydrochloric acid)	Other specific chemical substances (Item 5)	11,000	11,000	0	0
5	Methanol	Other specific chemical substances (Item 35)	4,500	4,500	0	0
6	Sulfuric acid (including sulfur trioxide)	Other specific chemical substances (Item 41)	600	600	0	0

No. 1 to 3 chemical substances are the same as specified in the notification that is based on the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof.

(Unit: kg)

Transaction, Release, and Displacement Volumes of Chemical Substances Based on the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof—Okayama Factory

No.	Chemical substance	Cabinet ordinance No.	Transaction volume	Release volume into the atmosphere	Release volume into public water	Displacement volume into the sewer	Release volume into soil	Decontamination treatment volume	Displacement volume to waste
1	Methylnaphthalene	438	14,000	72	0.0	0.0	0.0	0.0	0

(Unit: kg)

Transaction Volume of Specific Chemical Substances Based on the Ordinance on Living Environment Conservation in Saitama Prefecture—Hanyu Factory

No.	Chemical substance	Category of specific chemical substance	Transaction volume	Breakdown of the transaction volume		
				Usage	Produced volume	Transaction volume
1	Hydrogen chloride (including hydrochloric acid)	Other specific chemical substances (Item 5)	11,000	11,000	0	0

(Unit: kg)

Various Emissions

Factors used to calculate the CO₂ emission volume

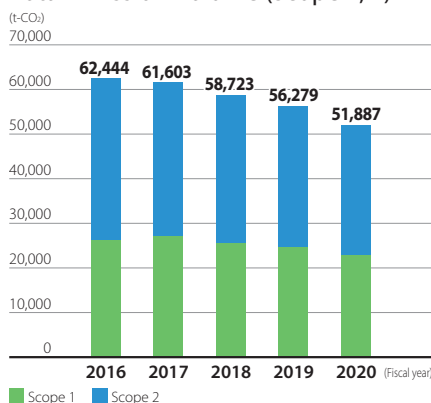
Emission factors for CO₂ and energy are those from the Act on Promotion of Global Warming Countermeasures (List of calculation methods and emission factors on calculation, report, and publication methods)

Electricity: Emission factors after adjustment for each electricity utility operator as specified by the Ministry of the Environment's paper on "Factors Related to Emissions by Electricity Utility Operators (for Calculating Carbon Dioxide Equivalents for Greenhouse Gas Emissions from Specified Emitters)";

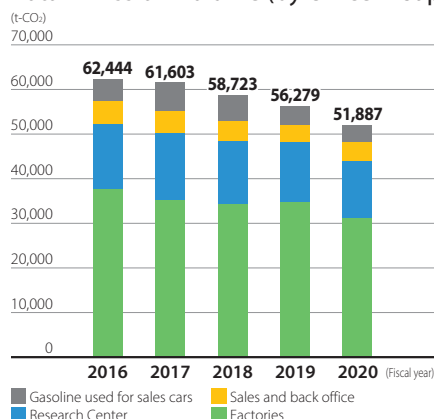
Bunker A: 2.710 t-CO₂/kL; Light fuel oil: 2.585 t-CO₂/kL; Propane gas: 2.999 t-CO₂/t; City gas: 2.244 t-CO₂/1000 m³; Gasoline 2.322 t-CO₂/kL; Non-industrial steam: 0.057 t-CO₂/GJ

CO₂

Total Emission Volume (Scope 1, 2)



Total Emission Volume (by Office in Japan)



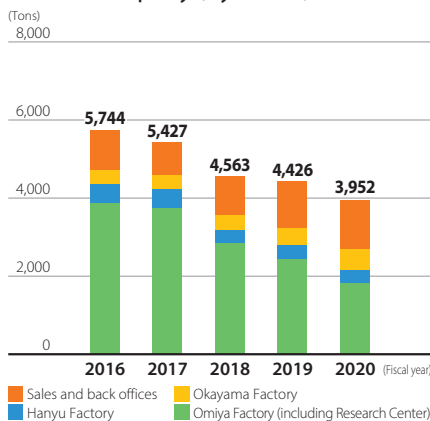
Calculation of CO₂ Emissions (Scope 3) within the Value Chain (Scope of Data Collection: Taisho Pharmaceutical Holdings (Offices in Japan))

Category	CO ₂ emission volume (t-CO ₂)		Basic unit of emissions, etc.
	FY2019	FY2020	
Scope 1	24,844	22,947	Uses global warming potential based on the Act on Promotion of Global Warming Countermeasures
Scope 2	31,434	28,940	
Scope 3			
1 Purchased products and services	47,581	52,448	Calculated by aggregating each purchased raw material, then multiplying by the basic units
2 Capital goods	26,797	42,792	Calculated by multiplying the amount of capital investment in the fiscal year by the basic units
3 Fuel and energy-related activity not included in Scope 1 and 2	4,537	4,329	Calculated by multiplying the amount of used electricity/heat by the basic units for the amount of energy used
4 Transport, delivery (upstream)	8,894	8,094	Calculated by multiplying the delivery volume from suppliers to factories, between factories, and from factories to shipping destinations by the basic units
5 Waste of business activities including manufacturing	1,567	525	Calculated by categorizing the waste generated by factories and research centers by treatment, then multiplying the weight of treated waste by the basic units
6 Business trips	2,114	538	Calculated by multiplying the expense amount supplied to use aircraft (domestic and overseas) by the basic units
7 Commute of employees	2,434	2,438	Calculated by multiplying the expense amount supplied for commuting expenses for each mode of transportation by the basic units
8 Lease asset (upstream)	Outside scope of calculation	—	
9 Transport, delivery (downstream)	Outside scope of calculation	—	
10 Manufacturing of sold products	Outside scope of calculation	—	
11 Usage of sold products	Outside scope of calculation	—	
12 Waste of sold products	815	936	Calculated by multiplying the usage amount of each material at the time of application under the Containers and Packaging Recycling Act by the basic units
13 Lease assets (downstream)	Outside scope of calculation	—	
14 Franchise	Outside scope of calculation	—	
15 Investment	Outside scope of calculation	—	

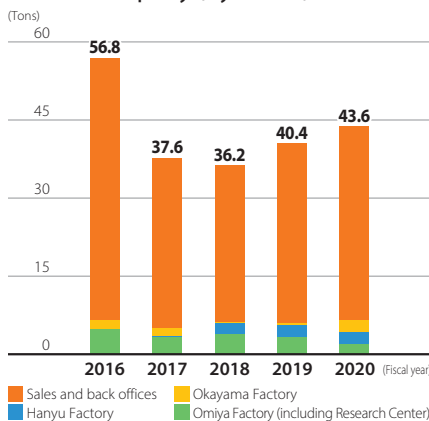
Basic units: Using a coefficient referenced from the Ministry of the Environment's Basic Guidelines on Accounting for Greenhouse Gas Emissions throughout the Supply Chain (Ver. 3.1)

Waste

Total Emission Volume—Whole Company (by Office)

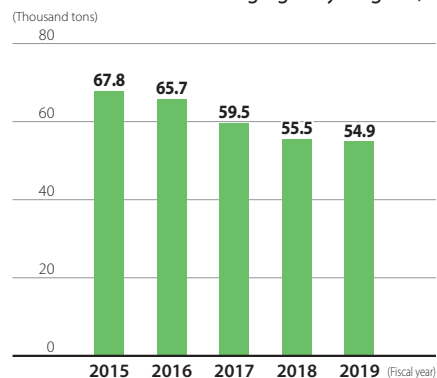


Final Landfill Disposal Volume—Whole Company (by Office)



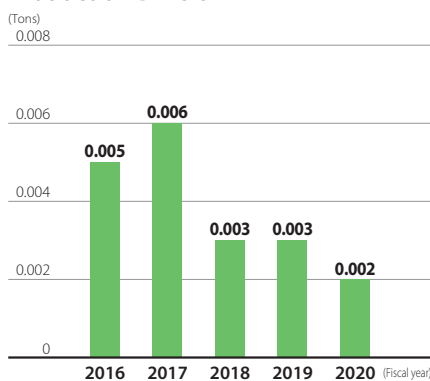
Data Associated with the Containers and Packaging Recycling Act

Usage of Materials (Four Materials Specified in the Containers and Packaging Recycling Act)

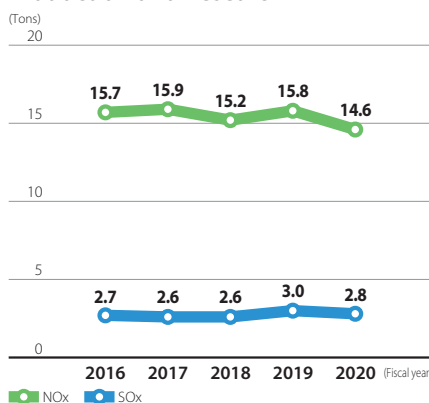


Emissions into the Atmosphere

Chloroform—Production Division

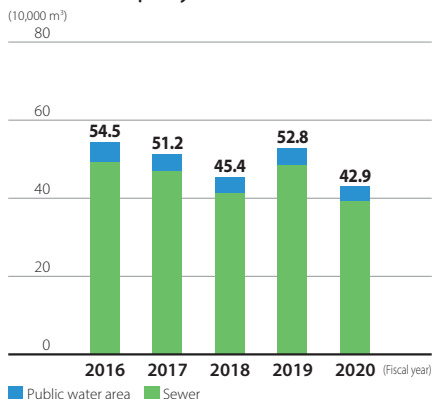


NO_x and SO_x Emission Volumes—Production and Research

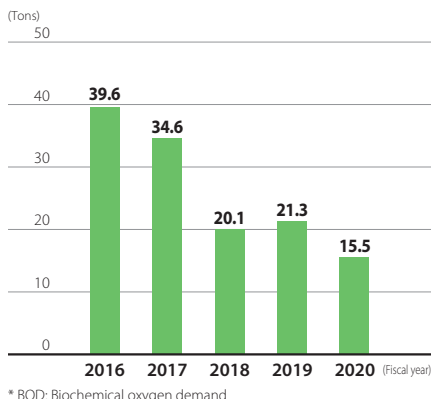


Water Quality

Total Emission Volume—Whole Company



BOD* Emission Volume—Production and Research



* BOD: Biochemical oxygen demand

PCB Waste

PCB Waste and PCB Devices in Use

	Storage	Devices in use
Reagent	—	—
Low-pressure capacitor	—	—
High-pressure capacitor	—	—
Fluorescent ballast	1 device (high density)	—
Mercury lamp ballast	—	—
High-pressure transformer	1 device (low density)	11 devices (low density)

Data Associated with Sales and Transport

Conversion factors used to calculate CO₂ and NO_x emission volumes from the usages of gasoline and light fuel oil

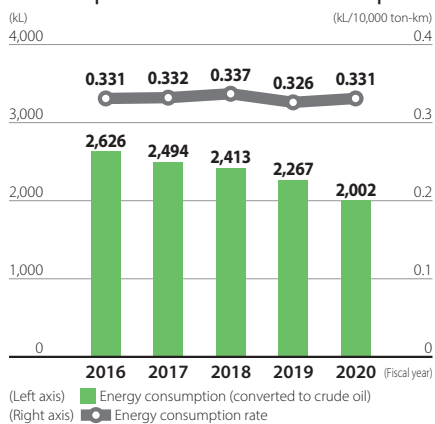
[CO₂ emission volume] Gasoline: 2.322 kg-CO₂/L; Light fuel oil: 2.585 kg-CO₂/L

(According to the Guidelines for Calculating CO₂ Emissions Caused by Energy in the Global Warming Countermeasures Planning System and Targeted Emission Volume Transaction System (Revised in September 2017) based on the Saitama Prefecture Ordinance to Promote Measures Against Global Warming)

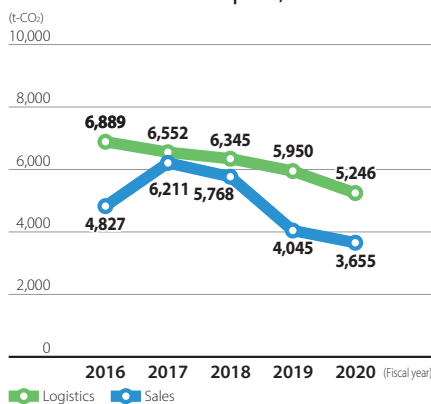
[NO_x emission volume] Gasoline: 8.2 kg/kL; Light fuel oil: 18.3 kg/kL

(According to the Environmental Activity Evaluation Program (Eco-Action 21), March 2001)

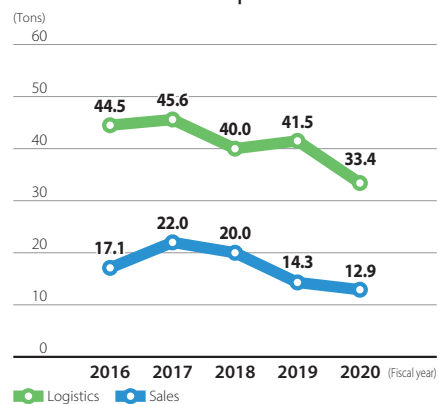
Energy Consumption and Specific Energy Consumption Associated with Transport



CO₂ Emission Volume Associated with Sales and Transport, etc.



NO_x Emission Volume Associated with Sales and Transport



Transported Quantity of Products by Transport Method

Fiscal year	2016		2017		2018		2019		2020	
	Transport amount (10,000 ton-km)	Percentage	Transport amount (10,000 ton-km)	Percentage	Transport amount (10,000 ton-km)	Percentage	Transport amount (10,000 ton-km)	Percentage	Transport amount (10,000 ton-km)	Percentage
Total transport amount	7,934	100.0	7,507	100.0	7,169	100.0	6,953	100.0	6,053	100.0
Truck	5,708	71.9	5,451	72.6	5,078	70.8	4,910	70.6	4,433	73.2
Railway	868	10.9	754	10.0	684	9.5	761	10.9	714	11.8
Ship	1,358	17.1	1,302	17.3	1,406	19.6	1,281	18.4	906	15.0

Data by Office

❁ Measurement Results of Regulated Items in FY2020

Omiya Factory (including Research Center)

Regulated item		Reference value	Actual value
Atmosphere	NOx	Once-through boiler	—
		Water-tube boiler	Less than 130 ppm
		Suction-type cool and warm water generator	Less than 150 ppm
		Gas turbine	Less than 70 ppm
Water quality	Industrial sewage	Hydrogen-ion concentration (pH)	More than 5–Less than 9
		Biochemical oxygen demand	Less than 600 mg/L
		Suspended solids	Less than 600 mg/L
		Nitrogen	Less than 240 mg/L
		Phosphorus	Less than 32 mg/L

Hanyu Factory

Regulated item		Reference value	Actual value
Atmosphere	Once-through boiler	NOx	—
		Dust	—
Water quality	Industrial sewage	Hydrogen-ion concentration (pH)	Not less than 5.8–not more than 8.6
		Biochemical oxygen demand	Less than 5 mg/L
		Suspended solids	Less than 10 mg/L
		Nitrogen	Less than 25 mg/L
		Phosphorus	Less than 3 mg/L

Okayama Factory

Regulated item		Reference value	Actual value
Atmosphere	Once-through boiler	NOx	—
		Dust	—
Water quality	Industrial sewage	Hydrogen-ion concentration (pH)	More than 5–Less than 9
		Biochemical oxygen demand	Less than 600 mg/L
		Suspended solids	Less than 600 mg/L
		Nitrogen	Less than 240 mg/L
		Phosphorus	Less than 32 mg/L

Data on Overseas Manufacturing Subsidiaries (Reference)

		PT. Taisho Pharmaceutical Indonesia Tbk	Hoepharm Holdings Sdn. Bhd.	Taisho Co., Ltd. Shanghai	Taisho Pharmaceutical (M) SDN. BHD.	Taisho Vietnam Co., Ltd.	Compañía Internacional de Comercio S.A.P.I. de C.V. (CICSA)	UPSA SAS	DHG
Energy consumption	Electricity (kWh)	2,773,730	3,344,585	1,010,800	561,161	735,989	1,193,280	34,315,578	25,379,190
	Heavy fuel oil (kL)	—	—	—	—	5	—	—	920
	Light fuel oil (kL)	2	—	217	—	1	—	6	27,000
	LPG (m ³)	4,678	—	—	—	8	5	—	23
	City gas (m ³)	—	—	—	90,445	485	—	2,043,749	—
Waste volume	Recycled volume (tons)	75	23	20	—	16	6	1,742	454
	Incineration disposal volume (tons)	61	65	0	—	—	80	1,598	203
	Landfill disposal volume (tons)	52	—	—	—	—	576	—	—
Sewage water quality	Chemical oxygen demand (mg/L)	14–109	56–126	3–356	0–39	4–126	—	275–9,938	7–62
	Biochemical oxygen demand (mg/L)	8–88	15–35	—	0–187	2–46	—	230–3,020	4–31