Data Sheet 2022

Environment 1

Safety / Quality 22

Intellectual Property 31

Human Resources 32

【Third-Party Assurance】

For data of indicators related to climate change and environment protection from April 1, 2021 to March 31, 2022, we have received the third-party assurance by KPMG AZSA Sustainability Co., Ltd. to ensure the reliability and transparency of Data Sheet 2022. The indicators subject to assurance are marked with the "★" symbols.

【Data of Indicators Related to Environment】

For details, please refer to "Calculation Methods for Data of Indicators Related to Environment" starting on P39.

Environment

Basic Policy

In keeping with our corporate philosophy, we at the Kaneka Group will contribute to realizing sustainable development and the enrichment of society by conserving resources and reducing environmental impacts at each stage of the entire product lifecycle.

Environmental Management Systems

■ISO 14001 Certification

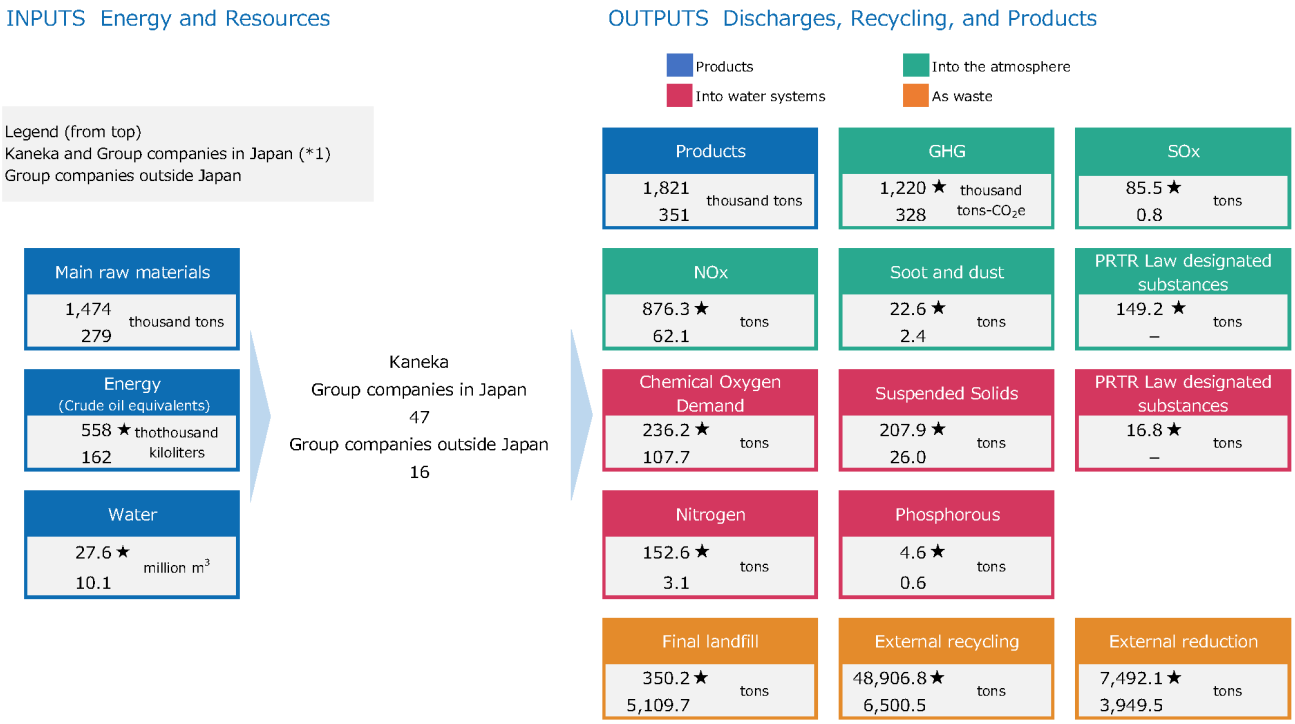
Manufacturing Sites and Group Companies	Registration No.
Takasago Manufacturing Site	JCQA-E-0105
Osaka Manufacturing Site	JCQA-E-0053
Shiga Manufacturing Site	JCQA-E-0015
Kashima Manufacturing Site	JCQA-E-0054
Vienex Corporation	JSAE1511
Osaka Synthetic Chemical Laboratories, Inc.	JCQA-E-0343
Kaneka Solartech Corporation	JQA-EM6704
Kanto Styrene Co., Ltd.	JEN-2024.0
Sanvic Inc.	JMAQA-E841
Showa Kaseikogyo Co., Ltd. Hanyu Headquarters Factory	E0062
Cemedine Co., Ltd. Ibaraki Plant, Mie Plant	JCQA-E-0366
Cemedine Co., Ltd. Kinuura Plant	497791UM15
Tatsuta Chemical Co., Ltd. Koga Plant	4357081
Tochigi Kaneka Co., Ltd.	JCQA-E-0256
Kaneka Belgium N.V.	97 EMS 002g
Kaneka (Malaysia) Sdn. Bhd.	EMS00400
Kaneka Innovative Fibers Sdn. Bhd.	EMS00400
Kaneka Eperan Sdn. Bhd.	EMS00400
Kaneka Paste Polymers Sdn. Bhd.	EMS00400
Kaneka Apical Malaysia Sdn. Bhd.	EMS00400
Kaneka MS Malaysia Sdn. Bhd.	EMS00400
Kaneka (Thailand) Co., Ltd.	EMS727351

■ Eco-Action 21 Certification

Group Company		Certification and Registration No.
OLED Aomori Co., Ltd.		0010329
Kaneka Kanto Styrol Co., Ltd.		0004259
Kaneka Sun Spice Corporation		0003556
Kaneka Chubu Styrol Co., Ltd.		0006600
Kaneka Tohoku Styrol Co., Ltd.		0010773
Kaneka Nishinippon Styrol Co., Ltd.	Headquarters, Saga Plant, Kagoshima Plant, and Nagasaki Plant	0003949
Kaneka Foods Manufacturing Corporation		0003491
Kaneka Foam Plastics Co., Ltd. Moka Plant		0003247
Kaneka Hokkaido Styrol Co., Ltd.		0001805
Kaneka Medix Corporation		0001893
Kyushu Kanelite Co., Ltd.		0001637
Kochi Styrol Co., Ltd.		0011039
Taiyo Yushi Corporation		0003575
Tokyo Kaneka Foods Manufacturing Corporation		0003473
Nagashima Shokuhin Co., Ltd.		0003093
Hokkaido Kanelite Co., Ltd.		0001905

Environmental Performance

■Material Balance (Fiscal 2021 results)



*1 Kaneka, 40 Kaneka consolidated subsidiaries in Japan, and seven non-consolidated subsidiaries. Consolidated subsidiaries in Japan do not include subsidiaries of Cemedine Co., Ltd.

Note: For indicator data, some calculation methods have been changed. For details, please refer to “Calculation Methods for Data of Indicators related to Environment" starting on P39.

Environmental Accounting

■ Environmental Costs (Investments, Expenditures)

(Millions of yen)

Cost Classifications	Main Efforts	Fiscal 2019		Fiscal 2020		Fiscal 2021	
		Invest-ments	Expendi-tures	Invest-ments	Expendi-tures	Invest-ments	Expendi-tures
Business Area		1,314	5,647	1,049	5,637	3,987	6,048
1. Pollution Prevention	Air and water pollution prevention	1,293	3,550	947	3,338	3,737	3,881
2. Environmental Conservation	Addressing climate change and energy saving	-	-	-	-	-	-
3. Resource Recycling	Waste processing, recycling, and reduction	20	2,096	102	2,299	250	2,167
Upstream and Downstream	Product recycling, collection, and processing	0	8	0	25	0	25
Management Activities	Environmental education for employees and environmental impact monitoring and measurement	7	463	0	397	1	419
Research and Development	Research and development of products contributing to environmental conservation	-	9,364	-	9,169	-	9,219
Social Activities	Greening, beautification, and disclosure of environmental information	0	113	1	114	0	107
Environmental Damage	Payment of sulfur oxide emission charges	0	9	0	8	0	2
Total		1,321	15,604	1,050	15,350	3,988	15,820

We calculate these costs and effects based on the 2005 edition of the Environmental Accounting Guidelines by Japan's Ministry of the Environment with Kaneka's own unique way of thinking, targeting all parent manufacturing sites and 30 Group companies in Japan (manufacturing companies).

Note: Figures do not include global environment conservation investments and expenditures and research and development investments.

Amounts reported here may not fully match, due to rounding.

■Quantitative Impact of Environmental Conservation Efforts

Category	Initiatives	Items	Units	Fiscal 2019	Fiscal 2020	Fiscal 2021
Pollution Prevention	Atmospheric and water discharges of hazardous substances	SOx emissions	Tons	86.7	61.7	85.5
		NOx emissions	Tons	871.7	877.1	876.3
		Chemical oxygen demand	Tons	234.7	220.9	236.2
		PRTR Law–designated chemical emissions	Tons	186.2	188.3	166.0
Environment	Greenhouse gas emissions	GHG emissions	Thousand tons-CO_2e	1,189.6	1,177.1 (*2)	1,219.6
	Energy consumption	Crude oil equivalents	Thousand kiloliters	508.0	520.4	557.6
Resource Recycling	Final landfill	Landfill	Tons	760.8	479.5	350.2
	External recycling	Amounts recycled	Tons	47,263.3	55,750.8	48,906.8

*2 In making group companies in Japan subject to third-party assurance starting with fiscal 2021 results, we reviewed fiscal 2020 data to confirm year-on-year changes. As a result, we discovered input and other errors, and have corrected fiscal 2020 figures.

■Economic Impacts of Environmental Measures

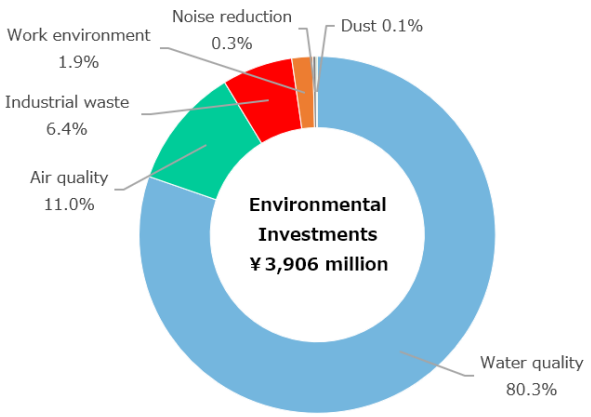
(Millions of yen)

Measures	Fiscal 2019	Fiscal 2020	Fiscal 2021
Revenue from recycling	131	189	184
Cost reductions by better resource efficiency (output per unit of input)	8	1,335	202
Waste disposal cost reductions by recycling	253	481	120
Cost reductions by energy conservation	227	24	422
Total	619	2,028	927

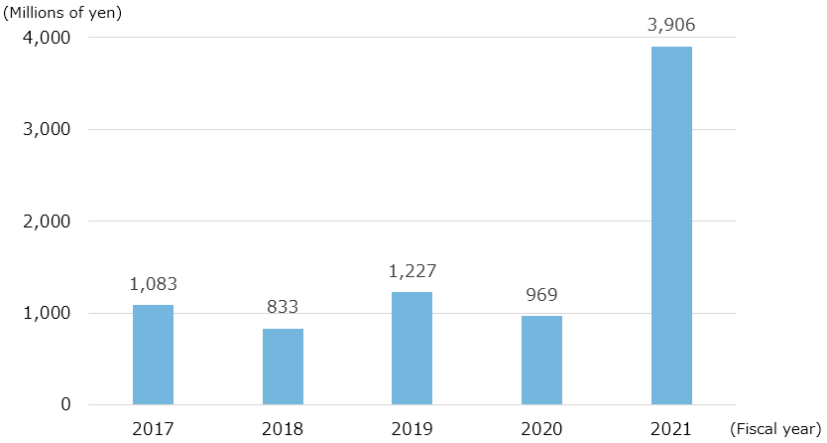
Note: Amounts reported here may not fully match, due to rounding.

Environmental Investments (Kaneka)

■Environmental Investments in Fiscal 2021

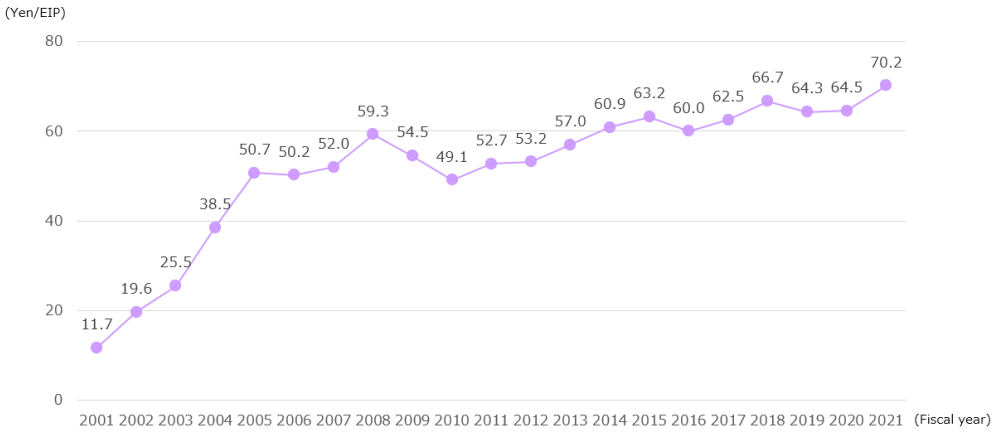


■Cumulative Environmental Investments

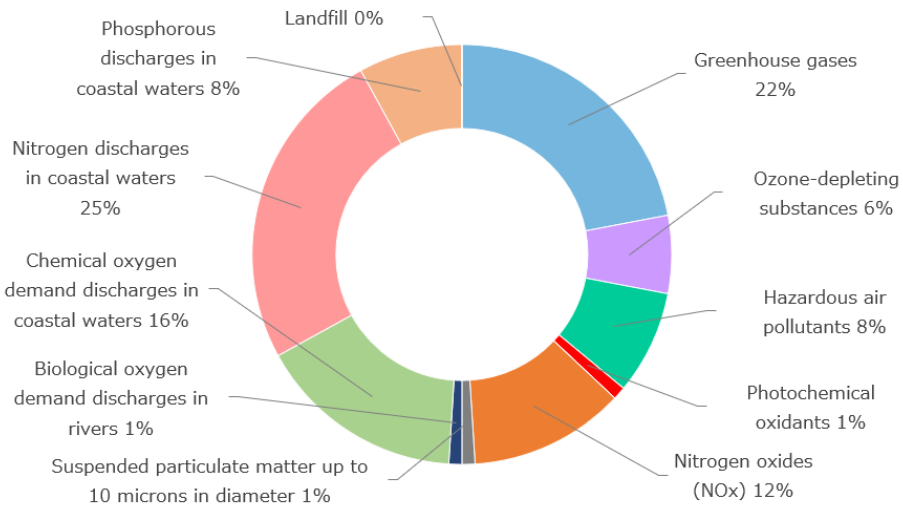


Environment Efficiency (Kaneka)

■Environment Efficiency



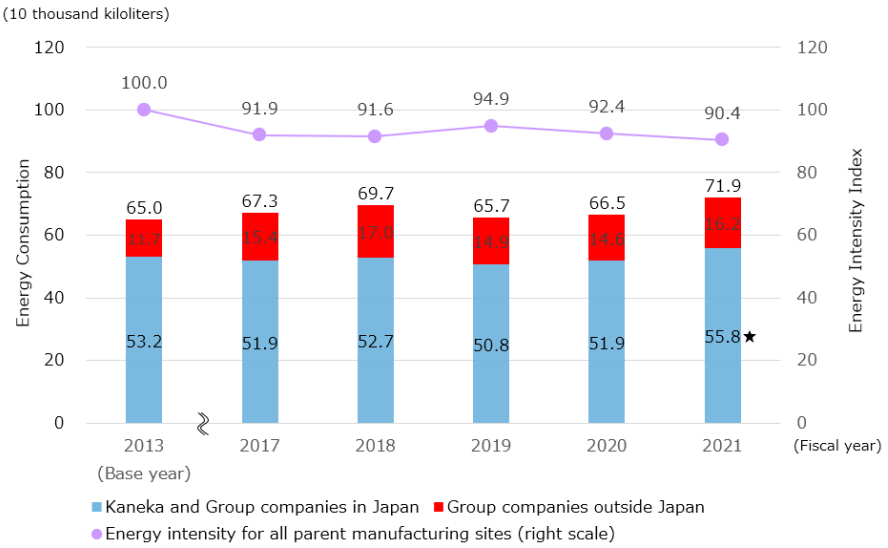
■Details of Total Environmental Impact



Fiscal Year	Net Sales (million yen)	Environmental Impact (100 million EIPs)	Environmental Efficiency (yen/EIP)
2019	292,084	45.4	64.3
2020	279,774	43.3	64.5
2021	334,675	47.7	70.2

Energy Conservation Efforts

■Energy Consumption (Crude Oil Equivalents) and Energy Intensity Index

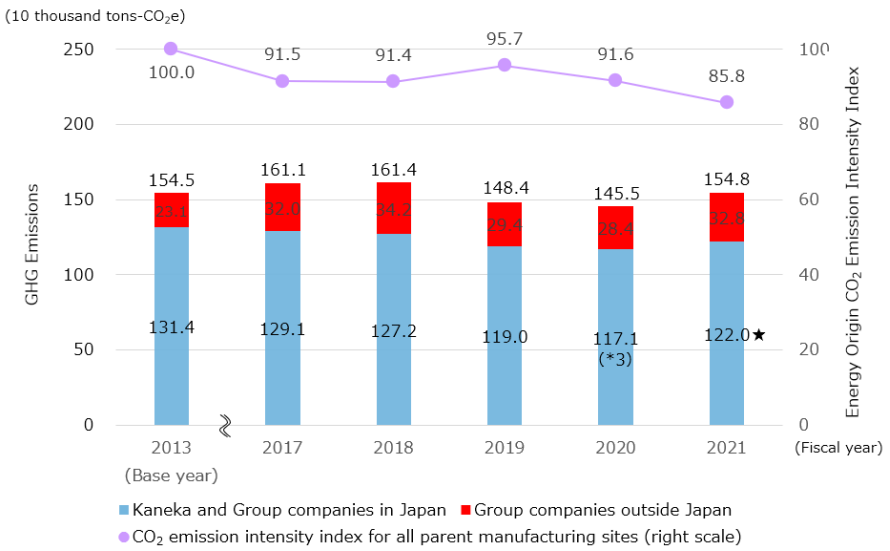


■Kaneka Group Energy Consumption（Fiscal 2021）

	Kaneka and Group companies in Japan	Group companies outside Japan	Total
Energy Consumption (Crude Oil Equivalents) (10 thousand kiloliters/year)	55.8 ★ (Of which Kaneka 48.4)	16.2	71.9
Energy Consumption (GWh Conversions) (GWh/year)	4,247.1 (Of which Kaneka 3,731.2)	1,226.8	5,473.9

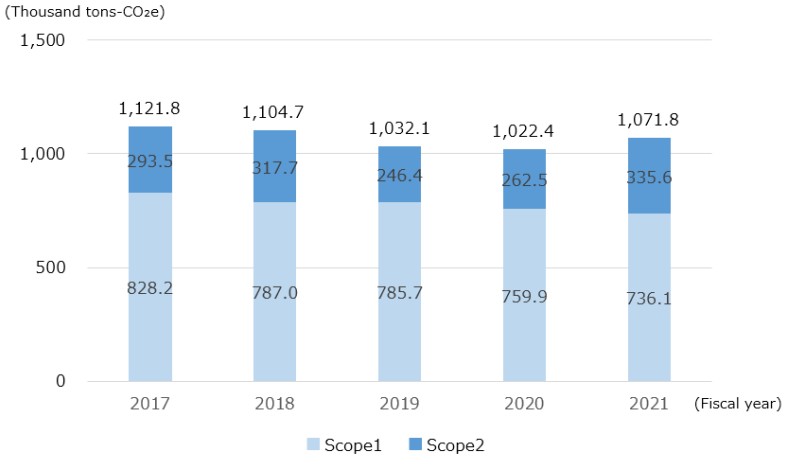
Initiatives to Reduce CO_2 Emission Intensity

■GHG Emissions and Energy Origin CO_2 Emission Intensity Index



*3 In making group companies in Japan subject to third-party assurance starting with fiscal 2021 results, we reviewed fiscal 2020 data to confirm year-on-year changes. As a result, we discovered input and other errors, and have corrected fiscal 2020 figures.

■Scope 1 and 2 Emissions (Kaneka)



■Scope 1 and 2 Emissions (Fiscal 2021)

(Thousand tons-CO_2e/year)

	Kaneka and Group companies in Japan	Group companies outside Japan	Total
Scope 1 direct emissions（*4）	811.4 ★ （Of which Kaneka 736.1）	100.6	912.0
Scope 2 indirect emissions from energy consumption（*5）	408.2 ★ （Of which Kaneka 335.6）	227.7	635.9
Total	1,219.6 ★ （Of which Kaneka 1,071.8）	328.3	1,547.9

*4 Non-energy CO_2 emissions and CO_2-equivalent of methane and N_2O emissions are included.

*5 Scope 2 emissions calculated using the location-based method for Kaneka and group companies in Japan were 546.8 thousand tons CO_2e (including 407.2 thousand tons CO_2e for Kaneka). For Group companies outside Japan, Scope 2 emissions were the same calculated using location-based and market-based methods.

GHG Emissions from Business Activities throughout the Supply Chain

■Scope 3 Emissions Calculated by Category (Fiscal 2021 results at Kaneka)

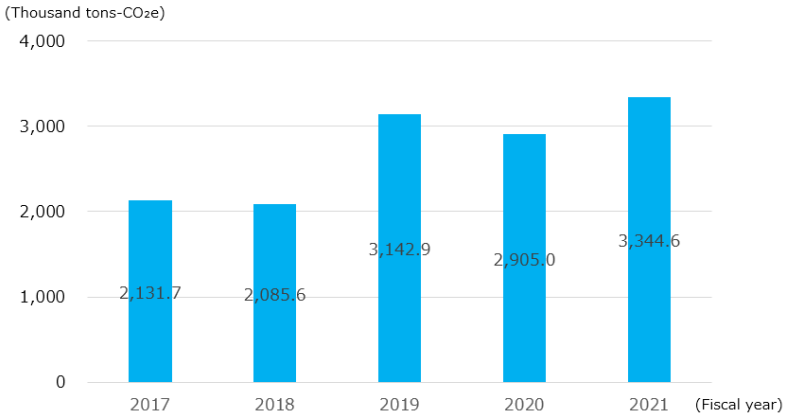
Category		GHG emissions (Thousand tons-CO_2e/year)
1	Purchased goods/services	2,044.4★
2	Capital goods	77.2
3	Fuel-and energy-related activities not included in Scope 1 or Scope 2	169.9★
4	Upstream transportation and distribution	21.7★
5	Waste generated in operations	5.8★
6	Business travel	1.6
7	Employee commuting	1.0
8	Upstream leased assets	0.0
9	Downstream transportation and distribution	– (*6)
10	Processing of sold products	– (*6)
11	Use of sold products	– (*7)
12	End-of-life treatment of sold products	560.6
13	Downstream leased assets	0.0
14	Franchises	– (*8)
15	Investments	462.4
Total of Scope 3 emissions		3,344.6

*6 GHG emissions for this category were not calculated because we were unable to determine a rational calculation method due to the high percentage of intermediate products.

*7 Some products generate emissions when used. However, since it was confirmed that this represented less than 0.1% of total Scope 3 emissions, such emissions were excluded from the calculation range.

*8 GHG emissions for this category were not calculated because we have no franchise stores.

■Scope 3 Emissions (Kaneka)



Note: The reason for the large increase in Scope 3 emissions from fiscal 2018 to fiscal 2019 was the addition of a category to the scope of calculation.

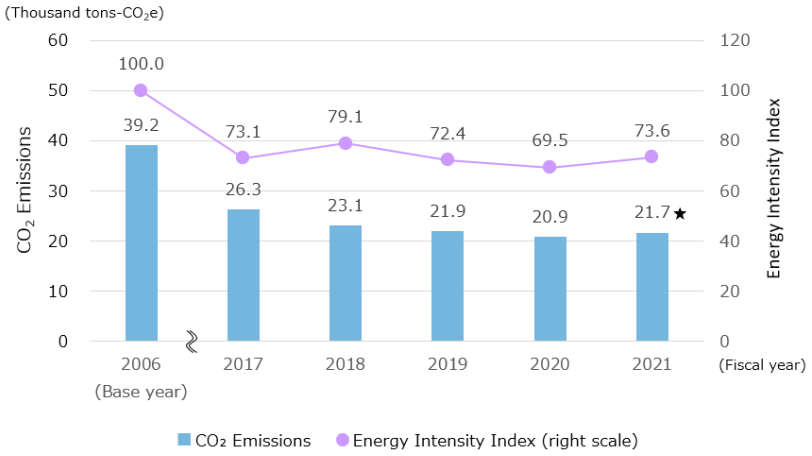
Investments in Energy-Efficient Facilities

■Results of Our Own Environmental Capital Investment Program

Fiscal Year	Investments (million yen)	Number	Reduced CO_2 Emission of the Year
2017	200	15	1,654 tons-CO_2
2018	200	24	1,748 tons-CO_2
2019	200	29	1,227 tons-CO_2
2020	200	27	1,010 tons-CO_2
2021	300	36	1,757 tons-CO_2

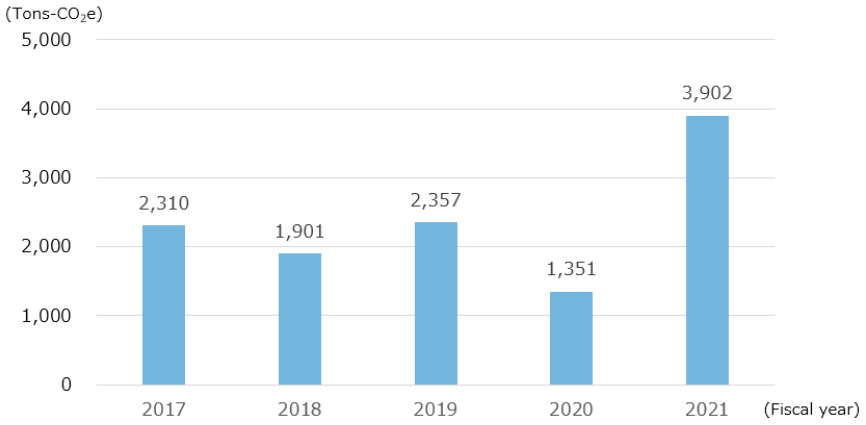
Energy-Efficiency Initiatives in Logistics

■ CO_2 Emissions and Energy Intensity Index from Logistics (Kaneka)



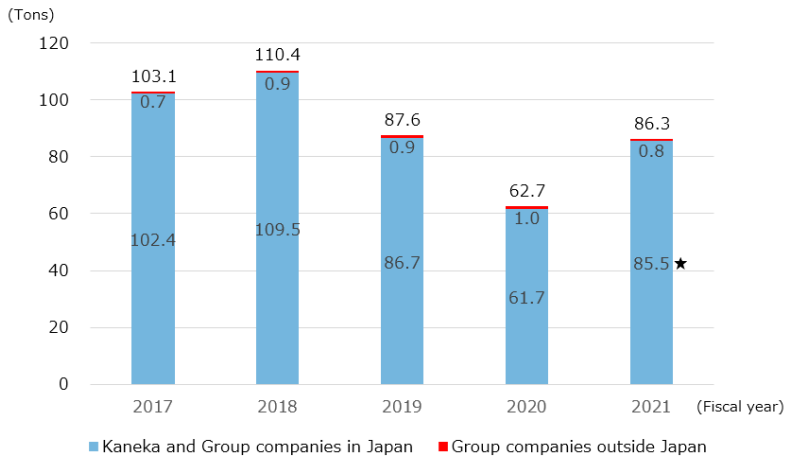
Response to the Act on Rational Use and Proper Management of Fluorocarbons of Japan

■ Estimated Leakage of Fluorocarbons (Kaneka)

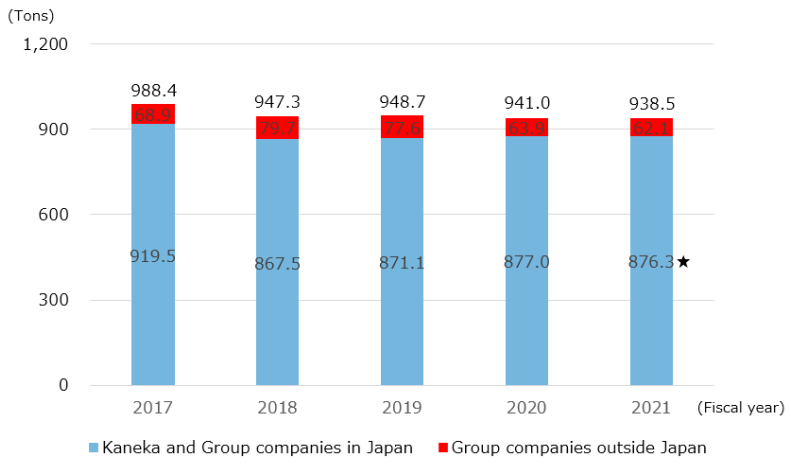


Preventing Air Pollution

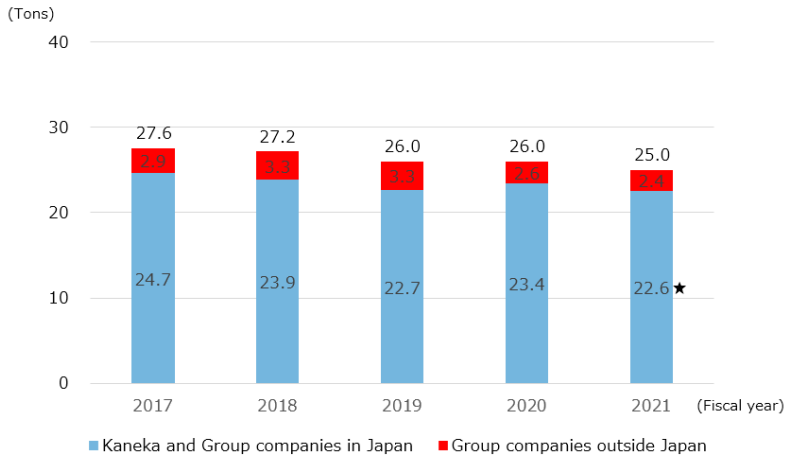
■SOx Emissions



■NOx Emissions



■Soot and Dust Emissions

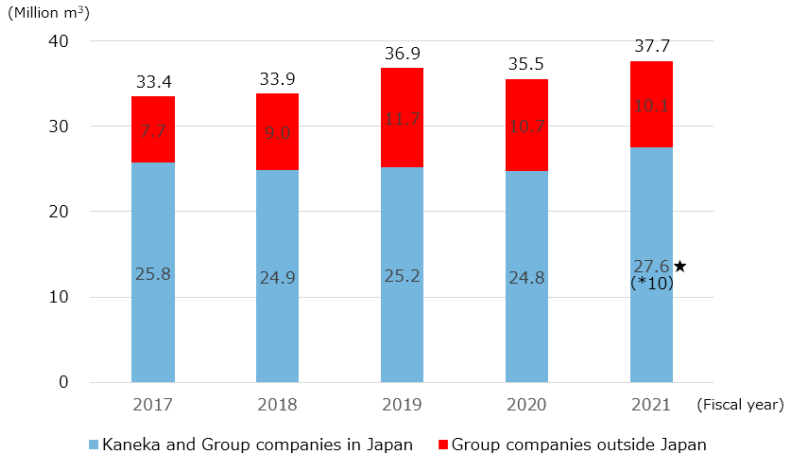


■ Kaneka's Atmospheric Emissions

	Fiscal 2017	Fiscal 2018	Fiscal 2019	Fiscal 2020	Fiscal 2021
SOx Emissions (Tons)	73.2	74.5	70.1	48.9	71.6
NOx Emissions (Tons)	869.9	825.7	834.9	828.1	830.7
Soot and Dust Emissions (Tons)	23.7	22.8	21.7	22.3	21.7

Water Conservation

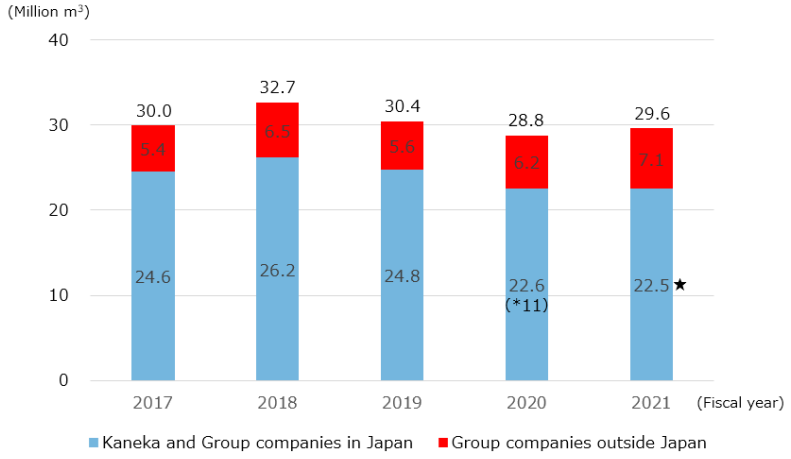
■ Water Consumption (*9)



*9 Our water consumption and wastewater volume include those generated from non-manufacturing facilities other than the plant department.

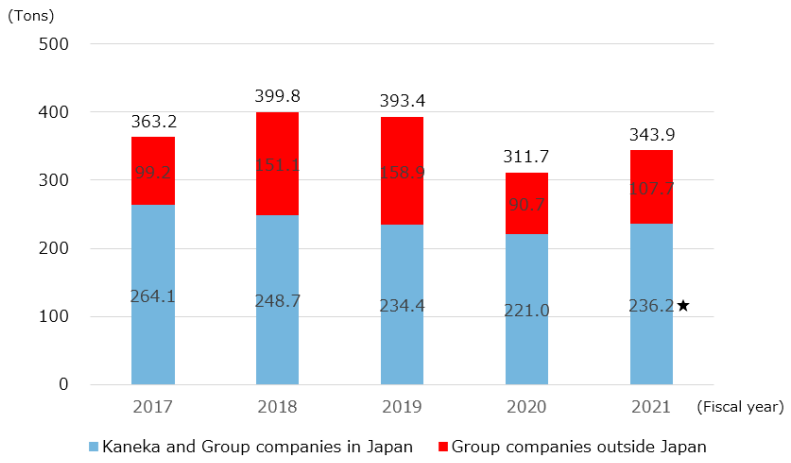
*10 Seawater consumption at some manufacturing sites in Japan was included in totals starting in fiscal 2021. Such consumption was previously not included, as measuring instruments were not set. Note that this seawater had already been included in wastewater discharges since previous years.

■ Wastewater Discharges (*9)

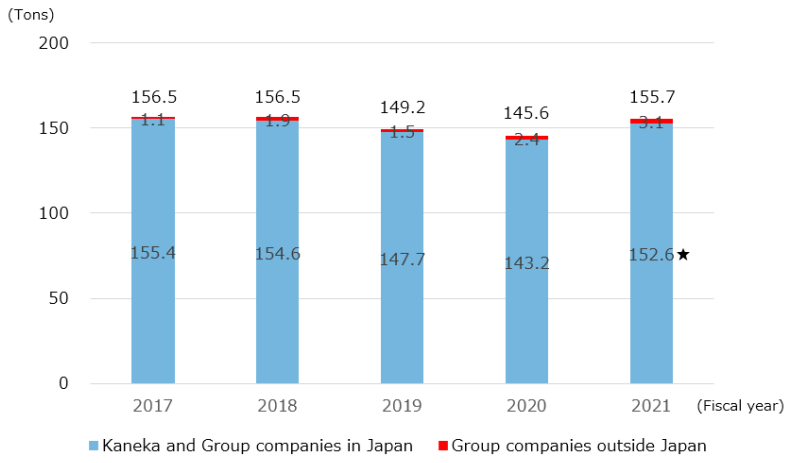


*11 In making group companies in Japan subject to third-party assurance starting with fiscal 2021 results, we reviewed fiscal 2020 data to confirm year-on-year changes. As a result, we discovered input and other errors, and have corrected fiscal 2020 figures.

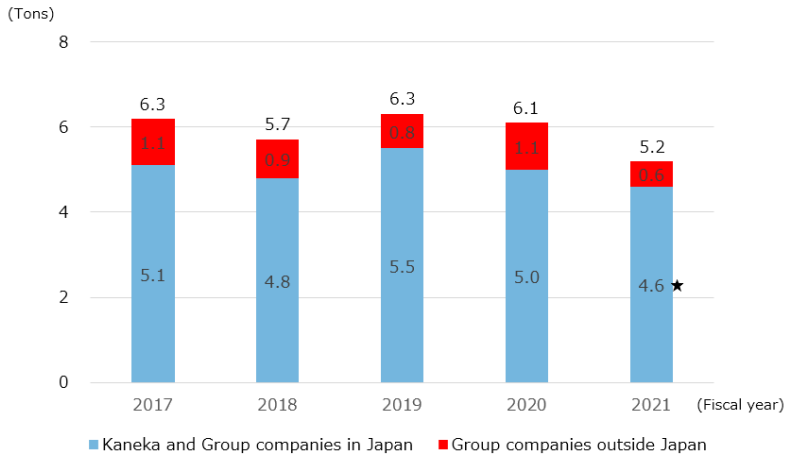
■Chemical Oxygen Demand in Wastewater (*9)



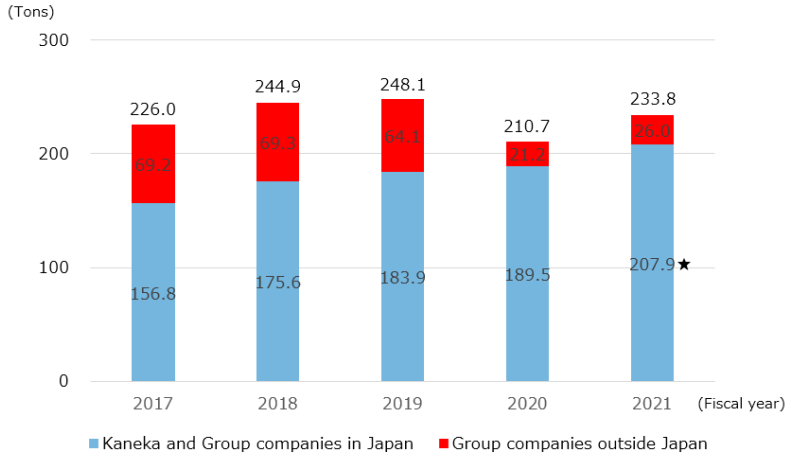
■Nitrogen in Wastewater (*9)



■Phosphorous in Wastewater (*9)



■ Suspended Solids in Wastewater (*9)

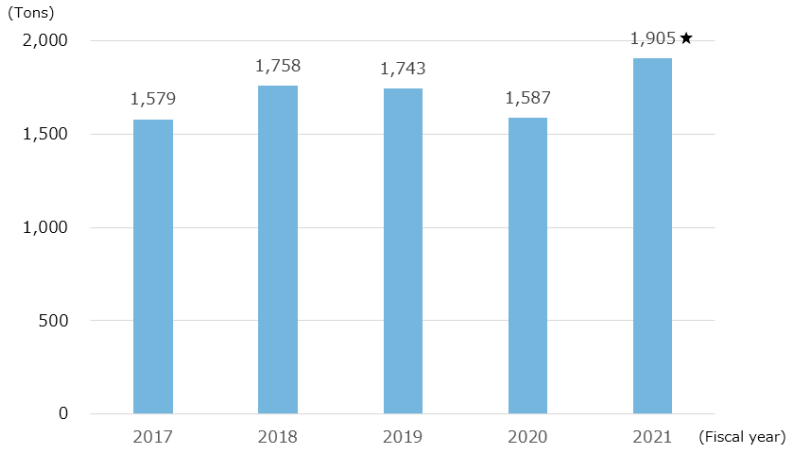


■ Kaneka Emissions into Bodies of Water

	Fiscal 2017	Fiscal 2018	Fiscal 2019	Fiscal 2020	Fiscal 2021
Water Consumption (Million m^3)	22.0	21.6	21.8	21.5	24.3
Wastewater Discharges (Million m^3)	21.4	23.0	21.5	19.5	19.5
Chemical Oxygen Demand in Wastewater (Tons)	257.0	241.4	227.4	215.7	230.2
Nitrogen in Wastewater (Tons)	154.0	153.5	146.5	141.9	150.7
Phosphorous in Wastewater (Tons)	5.0	4.7	5.3	4.9	4.4
Suspended Solids in Wastewater (Tons)	150.1	170.1	178.2	183.4	199.7

Volatile Organic Compounds Emission Reductions

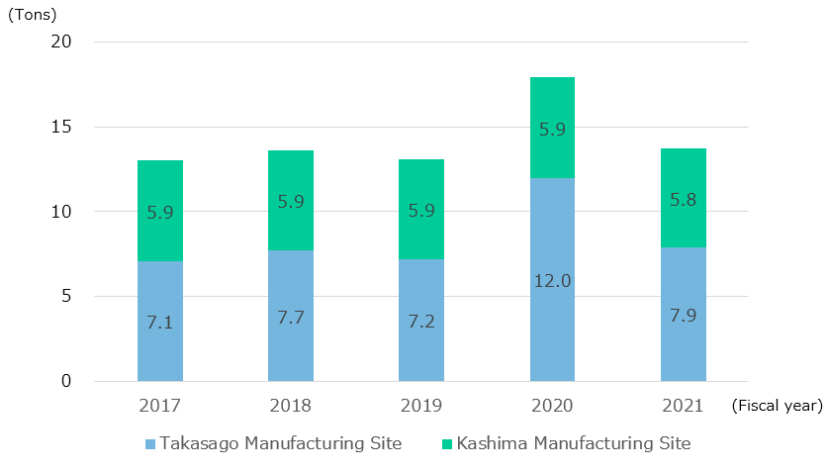
■ VOC(*12) emissions（Kaneka）



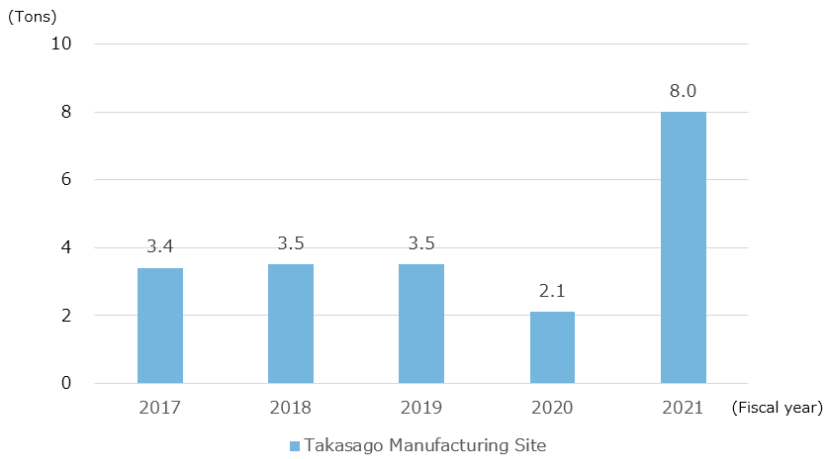
*12 Volatile Organic Compounds (VOCs) are organic chemical substances that cause suspended particulate matter and photochemical oxidants.

Hazardous Atmospheric Pollutants (Data of six substances for each manufacturing site of Kaneka)

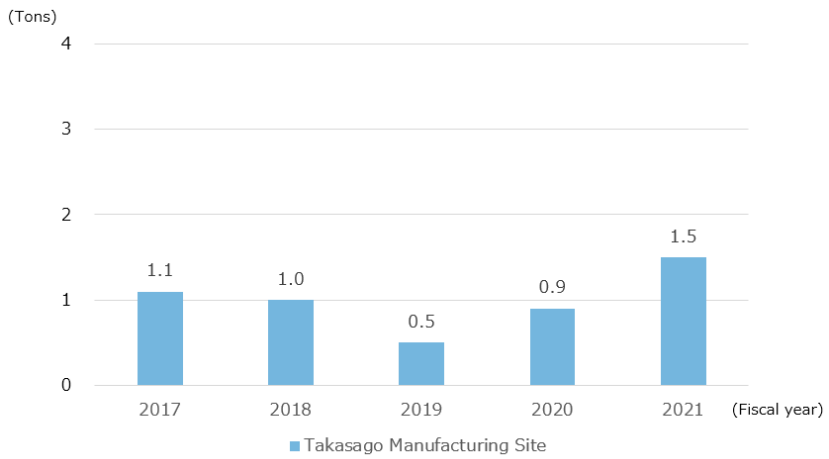
■Chloroethylene Emissions



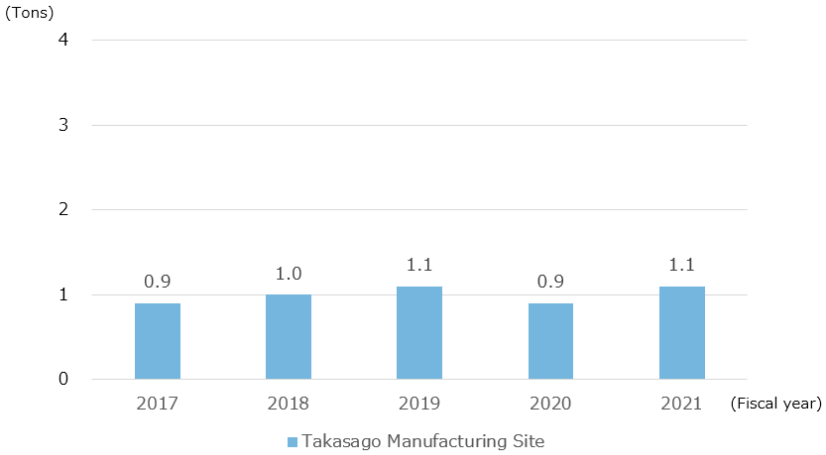
■1,2-Dichloroethane Emissions



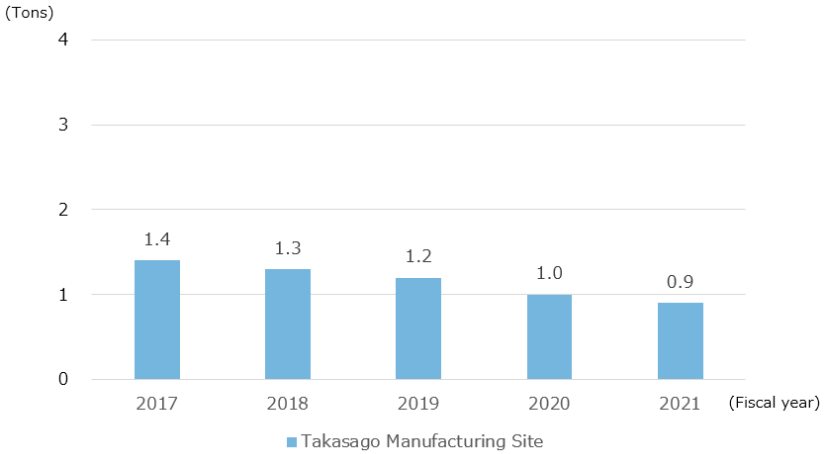
■Chloroform Emissions



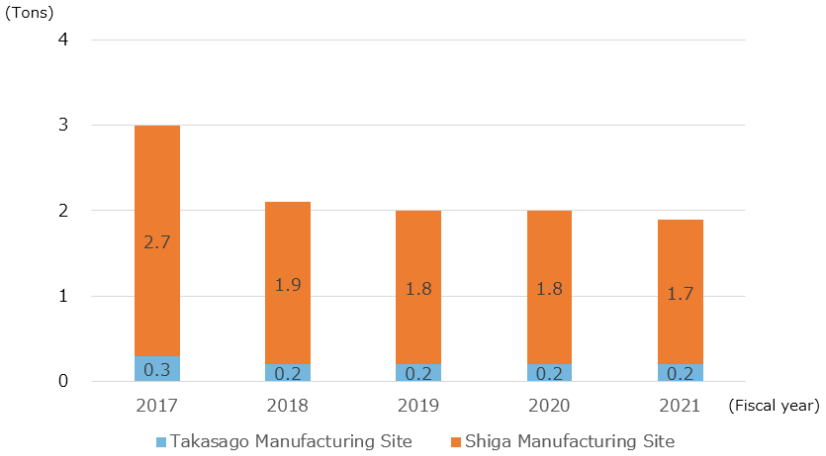
Acrylonitrile Emissions



1,3-Butadiene Emissions



Dichloromethane Emissions



Substances Subject to the PRTR Law

■ Kaneka Emissions Subject to the PRTR Law (Kilograms)

	Designated Number under Ordinance	Chemical Substances	Fiscal 2021						Fiscal 2020
			Emissions					Transferred	Emissions
			Atmospheric Emissions	Discharges into Public Waterways	Discharges into Soil	Internal Landfill	Total	Total	Total
Large Discharges of 10 Substances	392	n-hexane	19,476	0	0	0	19,476	82,550	15,406
	94	Chloroethylene (vinyl chloride)	13,733	312	0	0	14,044	957	18,253
	275	Sodium dodecyl sulfate	0	8,479	0	0	8,479	0	8,430
	157	1,2-dichloroethane	7,978	27	0	0	8,005	0	2,147
	134	Vinyl acetate	5,863	305	0	0	6,168	0	4,258
	232	N,N-dimethylformamide	4,254	1,353	0	0	5,607	215,543	3,541
	420	Methyl methacrylate	5,465	5	0	0	5,470	11	5,177
	240	Styrene	5,383	42	0	0	5,425	12,290	5,256
	7	n-butyl acrylate	3,670	0	0	0	3,670	3,282	3,931
	123	3-chloropropene (allyl chloride)	3,107	0	0	0	3,107	0	1,644
Total Other than the 10 Substances Above			10,477	6,208	0	0	16,685	152,503	16,756
Grand Total for All Substances			79,406	16,730	0	0	96,136	467,136	84,800

Note: Of the 462 substances subject to the PRTR Law, Kaneka reports about 64 items.

Amounts reported here may not fully match, due to rounding.

■ Group Companies in Japan Emissions Subject to the PRTR Law (Kilograms)

	Designated Number under Ordinance	Chemical Substances	Fiscal 2021						Fiscal 2020
			Emissions					Transferred	Emissions
			Atmospheric Emissions	Discharges into Public Waterways	Discharges into Soil	Internal Landfill	Total	Total	Total
Large Discharges of 10 Substances	232	N,N-dimethylformamide	26,035	0	0	0	26,035	28,734	34,645 (*13)
	300	Toluene	21,009	0	0	0	21,009	545,174	24,963 (*13)
	186	Dichloromethane (methylene dichloride)	14,273	0	0	0	14,273	247,967	22,722
	296	1,2,4-trimethylbenzene	2,662	0	0	0	2,662	0	2,268
	80	Xylene	2,486	0	0	0	2,486	0	2,116
	242	N,N-dimethylacetoamide	1,690	0	0	0	1,690	81,170	0
	355	Bis (2-ethylhexyl) phthalate (DEHP)	717	42	0	0	759	247,255	855
	392	n-hexane	470	0	0	0	470	9,050	1,200
	56	Ethylene oxide	351	0	0	0	351	0	329
	127	Chloroform	100	0	0	0	100	3,150	50
Total Other than the 10 Substances Above			42	2	0	0	44	16,053	38
Grand Total for All Substances			69,835	44	0	0	69,879	1,178,553	89,186

Note: Of the 462 substances subject to the PRTR Law, Group companies in Japan reports about 27 items.

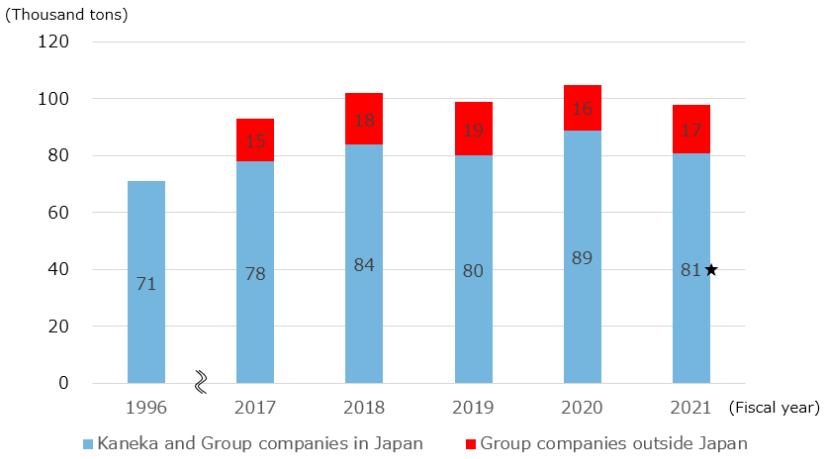
Amounts reported here may not fully match, due to rounding.

*13 Because N,N-dimethylformamide and toluene emissions at some manufacturing sites in fiscal 2020 were calculated without deducting transferred amounts, we made corrections.

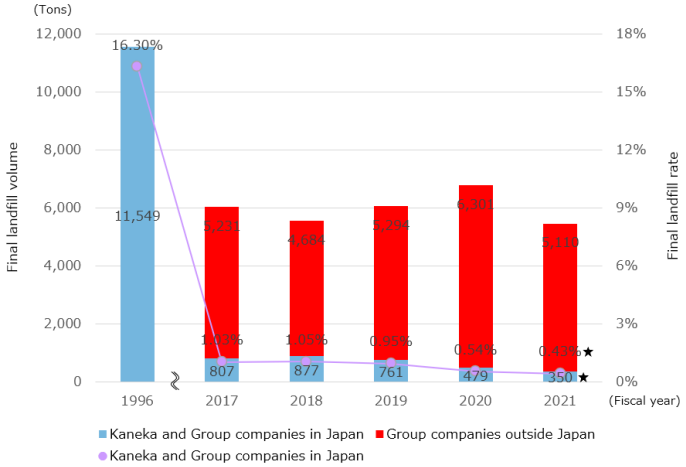
Reducing Waste and Recycling Resources

Reducing Industrial Waste Sent to Final Landfill

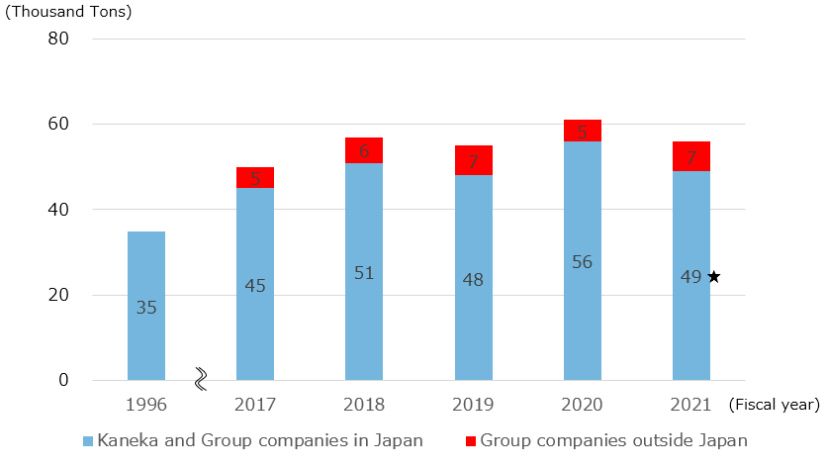
■ Waste Generated



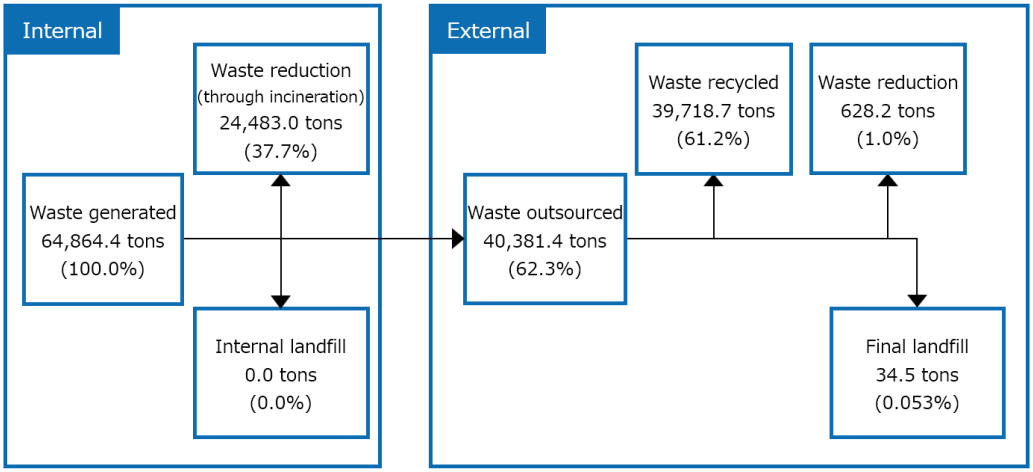
■ Volume and Rate of Waste Sent to Final Landfill



■ Waste Recycled



■ Waste Flow: From Generation to Landfill (Fiscal 2021 results at Kaneka)



■ Waste at Kaneka

	Fiscal 2017	Fiscal 2018	Fiscal 2019	Fiscal 2020	Fiscal 2021
Final landfilled (Tons)	0.9	2.2	23.1	29.4	34.5
Final landfilled (%)	0.001	0.003	0.035	0.041	0.053
Waste generated (Tons)	63,326	67,902	65,917	72,402	64,864
Waste Recycled (Tons)	37,410	42,711	40,060	47,421	39,719

Safety / Quality

Basic Policy

Placing the top priority for management on safety, we have established the Basic Policy on Safety, under which all employees as well as all persons working at the Kaneka Group and our partner companies work to create safe and healthy workplaces and share the importance of safety with the goal of no accidents and no disasters.

As for product quality, aiming to benefit society and satisfy customers through a stable supply of safe and reliable products, the Kaneka Group has set Quality Management Regulations to ensure thorough day-to-day quality control and product safety at all stages, from product design and development to delivery to customers.

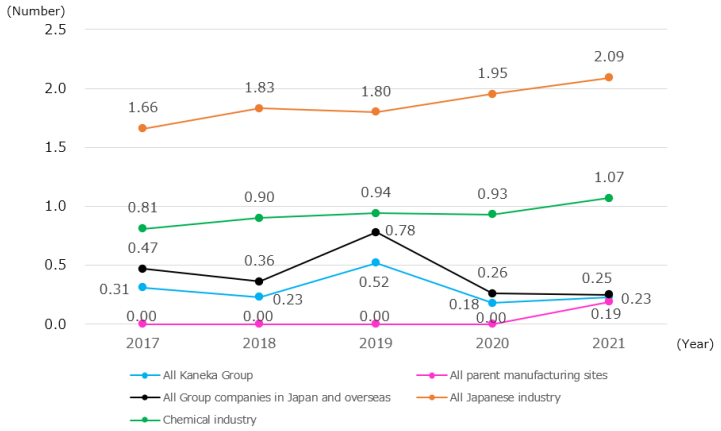
■Comprehensive Disaster Drills

Manufacturing Site	Date	Participants	Details
Takasago Manufacturing Site	December 13, 2021	2,078	An earthquake resulting in a hazardous material leakage
Osaka Manufacturing Site	November 10, 2021	1,024	An earthquake resulting in a fire
Shiga Manufacturing Site	December 20, 2021	446	An earthquake resulting in a fire
Kashima Manufacturing Site	March 7 and 14, 2022	120	A fire caused by flammable gas leakage

■OSHMS Certifications

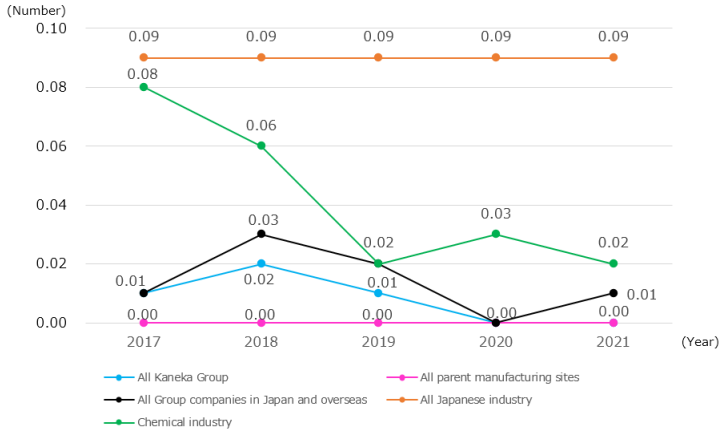
Manufacturing Site	Location	Certification Date	Certification No.
Takasago Manufacturing Site	Hyogo	March 10, 2008	08-28-13
Osaka Manufacturing Site	Osaka	August 21, 2007	07-27-10
Shiga Manufacturing Site	Shiga	January 15, 2008	08-25-6
Kashima Manufacturing Site	Ibaraki	December 13, 2010	10-8-26

■Accident Frequency Rate



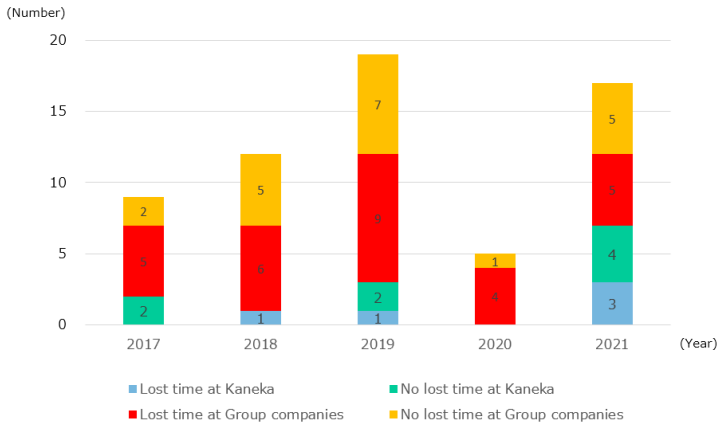
Note: Accident Frequency Rate: An indicator that shows the frequency of occupational accidents that caused death and/or injury by indicating the number of casualties per total 1 million actual working hours.

■Accident Severity Rate



Note: Accident Severity Rate: An indicator that shows the level of severity of occupational accidents by indicating the number of lost work days per total 1,000 working hours.

■Accidents Resulting / Not Resulting in Lost Time



Note: The number of occupational accidents includes those among employees at Kaneka and partner companies working in the Kaneka Group.

■Certification as a Safety-conscious Company by the Japan Chemical Industry Association (Certified in June 2021)

Group Company	Certification for Zero Accident and Disaster Period
Kaneka Shiga Manufacturing Site	December 14, 2015 ― (7 years)
Kaneka Hokkaido Styrol Co., Ltd. Shibetsu Plant	August 28, 2009 ― (11 years)
Tochigi Kaneka Co., Ltd.	May 26, 2012 ― (8 years)
Showa Kaseikogyo Co., Ltd.	January 17, 2015 ― (5 years)

■President's Safety Award for No Accidents and No Disasters based on the Internal Standards (Fiscal 2021)

Group Company	Award for Zero Accident and Disaster Period
Kaneka Shiga Manufacturing Site	December 14, 2015 ―
Vienex Corporation	June 8, 2013 ―
Kaneka Medical Tech Corporation	September 7, 2013 ―
PT. Kaneka Foods Indonesia	January 17, 2014 ―

Certification Acquisition Status

■ISO 9001 Certification

Division or Group Company (SV : Solutions Vehicle)	Major Products	Registry Organization and Number
Vinyls and Chlor-Alkali SV	Caustic soda, hydrochloric acid, sodium hypochlorite, liquid chlorine, vinyl chloride monomers, polyvinyl chloride, polyvinyl chloride paste, heat-resistant polyvinyl chloride, and OXY chlorination catalyst	JCQA / JCQA-1263
Performance Polymers (MOD)SV	Impact modifiers (Kane Ace™ B etc.), processing aids and specialty additives (Kane Ace™ PA etc.), toughener for thermosetting resins (Kane Ace™ MX), engineering resin for injection molding (Kaneka Hyperite™), zero birefringence PMMA material (Kaneka Hyperite™), and Acrylic film (Sunduren™)	LRQA / ISO 9001-0066620
Performance Polymers (MS)SV	Silyl-terminated polyether (Kaneka MS Polymer™ etc.), acrylic silicon polymer (Kaneka Gemlac™), terminally reactive liquid acrylic polymer (KANEKA XMAP™ etc.), and isobutylene-based thermoplastic elastomer (SIBSTAR™)	
Green Planet Project	Biodegradable polymer (KANEKA Biodegradable Polymer Green Planet™)	
Foam & Residential Techs SV Hokkaido Kanelite Co., Ltd. Kyushu Kanelite Co., Ltd.	Bead technique-based polyolefin resins and molded products (Eperan™, Eperan PP™), bead technique-based expandable polystyrene (Kanepearl™), and extruded polystyrene foam board (Kanelite™)	JCQA / JCQA-0673
E & I Technology SV	Ultra-heat-resistant polyimide films (Apical™, Pixeo™), optical film (Elmech™), optical acrylic resin, polyimide varnish for flexible displays, bonded magnets (Kaneka Flux™), multi-layered insulation materials, PVC pipes for underground electric cables, high thermal-conductive graphite sheet (Graphinity™), thermal conductive elastomer, and flexible cover coat ink	LRQA / ISO 9001-10414748
	Thermo-resistant, light-resistant transparent resin and molded products	DNV / 01635-2006-AQ-KOB-RvA/JAB

PV & Energy Management SV	Design, development, manufacturing, sales, and services of photovoltaic modules Sales and services of photovoltaic power generation system materials	JQA / JQA-QMA13200
Kaneka Solartech Corporation		
Kaneka Solar Marketing Corporation		
Foods & Agris SV	Margarine, shortening, edible oils and fats, edible refined oils and fats, whipped cream, concentrated milk products, modified milk, fermented milk products, flour paste, butter cream, chocolate, frozen dough, cheese, mayonnaise, cooking fillings, prepared foods, yeast, radish sprout extract, enoki mushroom extract formulations, and seasoning materials	JQA / JQA-QMA10274
Takasago Manufacturing Site Foods Manufacturing Department		
Kaneka Foods Manufacturing Corporation		
Tokyo Kaneka Foods Manufacturing Corporation		
Kaneka Foods Corporation	Purchase, design, sales, technological services, and quality assurance for processed foods and raw materials, and sales of food processing machinery	
NJF Co., Ltd.	Production instruction of processing contractors	
OLED Business Development Project	Organic electroluminescent lighting	JMAQA / JMAQA-2532
OLED Aomori Co., Ltd.		
Showa Kaseikogyo Co., Ltd.	Plastic compounds	ASR / Q0556
Tatsuta Chemical Co., Ltd.	Plastic film, plastic sheet	BVJ / 4503769
Sanvic Inc.	Synthetic resin sheets and films	JMAQA / JMAQA-1824
Tobu Chemical Co., Ltd.	Plastic wallpaper, vinyl chloride resin wallpaper	LRQA / YKA0958154
Cemedine Co., Ltd.	Development and manufacture of general and industrial adhesives, sealants and special paints	JCQA / JCQA-0386
Kanto Styrene Co., Ltd.	Manufacturing of polystyrene foam molded products	IIC / JN-1050.0
Kaneka Foam Plastics Co., Ltd. Moka Plant, Kyusyu Plant	Bead technique-based polyolefin molded products	ASR / Q1919
Tamai Kasei Co., Ltd.	A series of operations related to order receipt, manufacturing, inspection, and shipping of Phase Change Material (PCM) (Patthermo)	ASR / Q4131
Vienex Corporation	Electronic products	JSA / JSAQ2593
Shinka Shokuhin Co., Ltd.	Modifiers for bread and confectionery, processed fruit products, outsourced products (margarine, cooking fillings, modified milk)	JQA / JQA-QMA15323

Taiyo Yushi Corporation	Margarine, shortening, edible refined oils and fats, edible vegetable oils and fats, refined lard, other edible oils and fats, processed fats, dairy products, and food additives	JQA / JQA-QMA14671
	Cosmetics for hair and skin care, dental care items, body soaps, and soaps for clothes, dish washing and house cleaning	BVJ / 4171923
Kaneka Sun Spice Corporation	(1) Product design and development of spices and secondary processed products incorporating spices (2) Purchase and sales of general processed foods and their ingredients	JQA / JQA-QMA11351
Nagashima Shokuhin Co., Ltd.	Frozen puff pastry dough and frozen cookie sheets	JQA / JQA-QMA15844
Tochigi Kaneka Corporation	Bonded magnets (Kaneka Flux™), multilayer insulation materials, and high thermal-conductive graphite sheet (Graphinity™)	LRQA / ISO 9001-0076860
Kaneka Belgium N.V.	Modifier resins (Kane Ace™), bead technique-based polyolefins (Eperan™, Eperan PP™), modified silicone polymer (Kaneka MS Polymer™), and acrylic sol	AIB-VINCOTTE / BE-91 QMS 028j
Kaneka North America LLC	Ultra-heat-resistant polyimide films (Apical™), modifier resins (Kane Ace™, Kaneka Telalloy™), heat-resistant vinyl chloride resins, and modified silicone polymers (Kaneka MS Polymer™)	BSI / FM72722
Kaneka (Malaysia) Sdn. Bhd.	Modifier resins (Kane Ace™)	SIRIM QAS / QMS 00900
Kaneka Paste Polymers Sdn. Bhd.	Vinyl chloride paste resin	SIRIM QAS / QMS 00900
Kaneka Apical Malaysia Sdn. Bhd.	Ultra-heat-resistant polyimide films (Apical™), High thermal-conductive graphite sheet (Graphinity™)	SIRIM QAS / QMS 00900
Kaneka MS Malaysia Sdn. Bhd.	Modified silicone polymer (Kaneka MS Polymer™)	SIRIM QAS / QMS 00900
Kaneka Innovative Fibers Sdn. Bhd.	Synthetic fibers (FPW)	SIRIM QAS / QMS 00900
Kaneka Eperan Sdn. Bhd.	Development, manufacture of polyethylene foam, polypropylene foam beads and planks	SIRIM QAS / QMS00996
Kaneka Eperan (Suzhou) Co., Ltd.	Bead technique-based polyolefins (Eperan™, Eperan PP™)	SGS / CN18/20031
Kaneka (Foshan) High Performance Materials Co., Ltd.	Bead technique-based polyolefins (Eperan™, Eperan PP™)	Beijing East Allreach certification Center Co., Ltd. / USA19Q44009R1S
Kaneka (Thailand) Co., Ltd.	Development, manufacture of mini pellets and polyolefin beads, including product application development	BSI / FM714676

KSS Vietnam Co., Ltd.	Processed spices, herbs, dried vegetables, and mixed spices	Intertek Certification Limited / CPRJ-2015-040996
Kaneka Eurogentec S.A.	Development, production and sales of products and services for research and development in life sciences	BSI / FS 638601
Anaspec Inc.	Peptides, antibodies, synthetic resins, amino acids, and reagents for research	SQA/09.357.1

■ ISO 13485 Certification（*1）

Division or Group Company (SV: Solutions Vehicle)	Main Products	Registry Organization and Number
Medical SV	Adsorbents, Lixelle™, liposorber™, catheters, silascon™, ED coil, and in-vitro diagnostics	TÜV SÜD / Q5 024736 0069
Kaneka Medix Corporation		
Kaneka Medical Vietnam Co., Ltd.	Catheters (parts)	
Kaneka Medical Tech Corporation	Endoscopic instruments, catheter electrodes	
Kaneka Eurogentec S.A.	Contract manufacturing of in vitro diagnostic oligonucleotides	BSI / MD 638600

*1 ISO 13485 is an international standard covering the comprehensive management system requirements for the design and manufacture of medical equipment.

■ISO 22000 Certification（*2）

Production Unit or Group Company	Main Products	Registry Organization and Number
Takasago Manufacturing Site Pharmaceutical Department	Coenzyme Q10 (Kaneka Q10™, Kaneka QH™)	SGS / JP10 / 030379
Kaneka Sun Spice Corporation	Spices and secondary processed products incorporating spices	JQA / JQA-FS0123
KSS Vietnam Co., Ltd.	Processing of spices, herbs, dried vegetables, and mixed spices	Intertek Certification Limited / 38191405003
Shinka Shokuhin Co., Ltd.	Modifiers for bread and confectionery, processed fruit products, outsourced products (margarine, cooking fillings, modified milk)	JQA-FS0286

*2 ISO 22000 is an international standard for food safety management systems.

■Food Safety System Certification 22000 (FSSC 22000) (*3)

Division or Group Company (SV: Solutions Vehicle)	Main Products	Registry Organization and Number
Takasago Manufacturing Site Foods Manufacturing Department	Margarine, shortening, edible oils and fats, edible refined oils and fats, whipped cream, concentrated milk products, modified milk, and yeast	JQA / JQA-FC0047-1
Kaneka Foods Manufacturing Corporation	Margarine, flour paste, buttercream, cheese, fermented milk products, antifreeze protein, antifreeze polysaccharide, and seasoning materials	JQA / JQA-FC0047-2
Tokyo Kaneka Foods Manufacturing Corporation	Margarine, shortening, flour paste, buttercream, and whipped cream	JQA / JQA-FC0047-3
Taiyo Yushi Corporation	Margarine, shortening, edible refined oils and fats, edible vegetable oils and fats, refined lard, other edible oils and fats, processed fats, and dairy products (butter)	JQA / JQA-FC0044
Nagashima Shokuhin Co., Ltd.	Frozen dough (pies and confectionery)	JQA / JQA-FC0109
PT. Kaneka Foods Indonesia	Manufacturing of bread fillings and whipping creams, manufacturing of bread improver, manufacturing of speciality fats and blended margarines	SGS / ID22/00000151

*3 The Food Safety System Certification 22000 (FSSC22000) offers a complete certification Scheme for Food Safety Management Systems based on ISO 22000, ISO/TS 22002-1, and additional FSSC 22000 requirements.

■ISO 22716 Certification (*4)

Group Company	Main Products	Registry Organization and Number
Taiyo Yushi Corporation	Shampoos, conditioners, body soaps, and hand creams	BVJ / 4521945

*4 ISO 22716 is guidelines on the Good Manufacturing Practices (GMP) of cosmetic products.

■ISO 17025 Certification（*5）

Group Company	Main Products	Registry Organization and Number
Tokyo Kaneka Foods Manufacturing Corporation	Microbial testing (viable bacteria count, coliform count)	JAB / RTL04360
Kaneka Foods Manufacturing Corporation	Microbial testing (viable bacteria count)	JAB / 113749

*5 ISO 17025: General requirements for the competence of testing and calibration laboratories; Criteria based on which an accreditation body assesses whether the relevant testing and calibration laboratory can produce accurate measurement and calibration results.

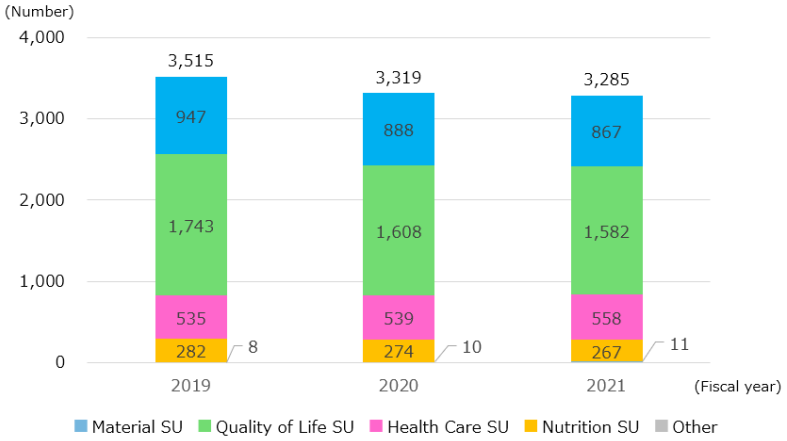
■IATF 16949 Certification（*6）

Group Company	Main Products	Registry Organization and Number
Kaneka Eperan Sdn. Bhd.	Development, manufacture of polypropylene foam beads	SIRIM QAS / 0388920

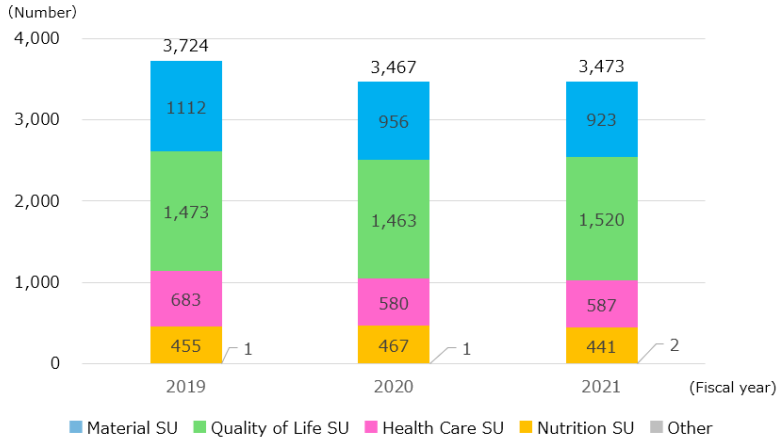
*6 IATF 16949 is a sector standard for quality management systems based on ISO 9001 with the addition of automobile industry-specific requirements.

Intellectual Property

Number of Patents Held in Japan



Number of Patents Held outside Japan



Human Resources

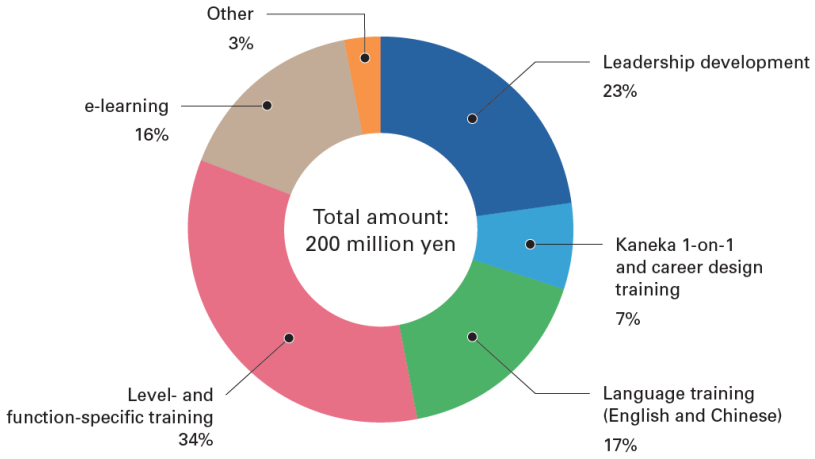
Basic Information

		Fiscal 2019	Fiscal 2020	Fiscal 2021
Number of employees	(Consolidated)	11,013	11,272	11,335
	(Kaneka)	3,552 male: 3,119 female: 433	3,551 male: 3,097 female: 454	3,472 male: 3,008 female: 464
Average age	(Kaneka)	40.9	41.0	41.4
Years of service	(Kaneka)	17.3	17.5	17.7
Average annual salary (yen)	(Kaneka)	7,652,239	7,342,708	7,551,838
Labor union members	(Kaneka)	3,131	3,094	3,004

Note: As of March 31 each year

Human Resource Development

■ Results of Company-wide Training (Kaneka : Fiscal 2021)



■ Development of Leaders

Program	Content	Fiscal 2019 (participants)	Fiscal 2020 (participants)	Fiscal 2021 (participants)	Total from start of program (participants)
Hitotsubu-no Tane Momi Juku	Lectures and exercises by the top management and first-class instructing staff targeted at future leaders and management personnel	12 (of which, female 0)	12 (of which, female 0)	12 (of which, female 3)	85 (of which, female 4)
The Leadership Challenge Workshop	Acquiring and practicing leadership skills and follow-up	outside Japan: 36	outside Japan: –(*1)	outside Japan: –(*1)	outside Japan: 464
		in Japan: 187	in Japan: 157	in Japan: 114	in Japan: 1,409

Note: Aggregated data for Kaneka and Group companies in and outside Japan.

*1 Cancelled due to the COVID-19 pandemic, etc.

■ Kaneka 1-on-1

Program	Content	~Fiscal 2019 (participants)	Fiscal 2020 (participants)	Fiscal 2021 (participants)	Total from start of program (participants)
Kaneka 1-on-1 Workshop	Lectures and exercises for improving coaching ability (listening, recognizing and questioning) of bosses conducted by lecturers specialized in communication for executives	205	155	145	505
Team-meeting Workshop	Lectures and exercises by specialist instructors for executives to learn how to run meetings to encourage co-creation in the workplace	–	–	21	21

Note: Team-Meeting Workshops began in fiscal 2021.

■Global Human Resource Development

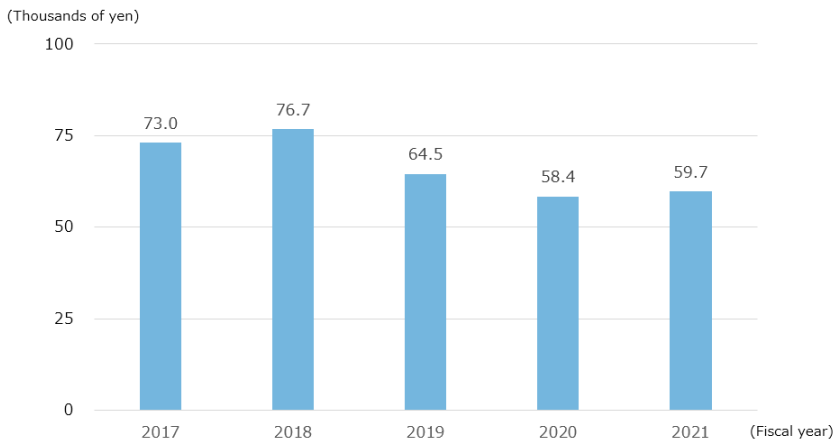
Purpose of training	Program	Fiscal 2019 (participants)	Fiscal 2020 (participants)	Fiscal 2021 (participants)
Acquisition of languages required for overseas businesses and assignments	English and Chinese language training (by selection)	76	70	68
	English and Chinese language training (by application)	202	348	286
	Language training before overseas transfer	20	7	10
Acquisition of advanced language proficiency and cross-cultural understanding	Work experience at group companies outside Japan (overseas training)	10	3	3
	Overseas language study program	1	(*2)	(*2)

*2 Cancelled due to the COVID-19 pandemic, etc.

■Human Rights/Compliance Education

Purpose of training	Program	Fiscal 2019 (participants)	Fiscal 2020 (participants)	Fiscal 2021 (participants)
Human Rights/Compliance Education	Introductory training for new employees	121	129	83
	Training for newly appointed executives	59	59	57
Acquisition of workforce management knowledge required for executive positions	Compliance training for executives	679	784	840

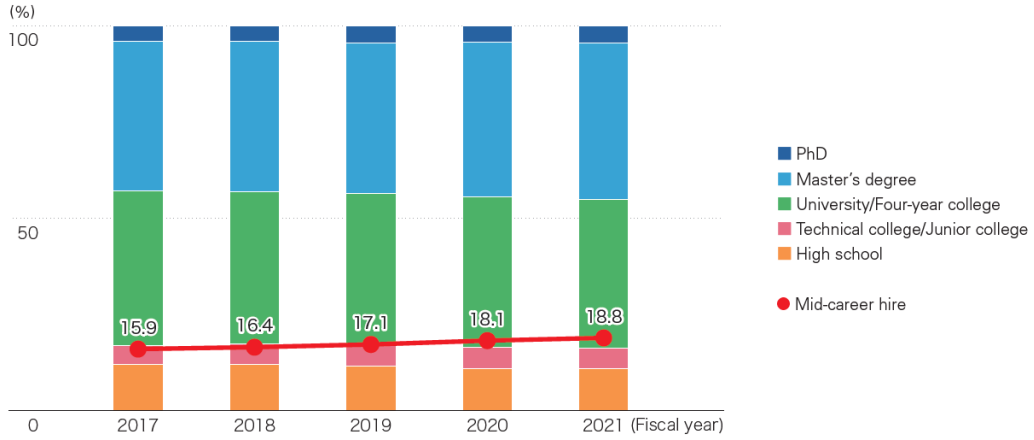
■Training Costs (per Person)



Note: The main factor behind the decrease in training costs from fiscal 2018 to fiscal 2019 was the promotion of education-related digital transformation and the shift to online and e-learning training in line with revisions to the training system.

Promotion of Diversity

■Composition of Executive Team

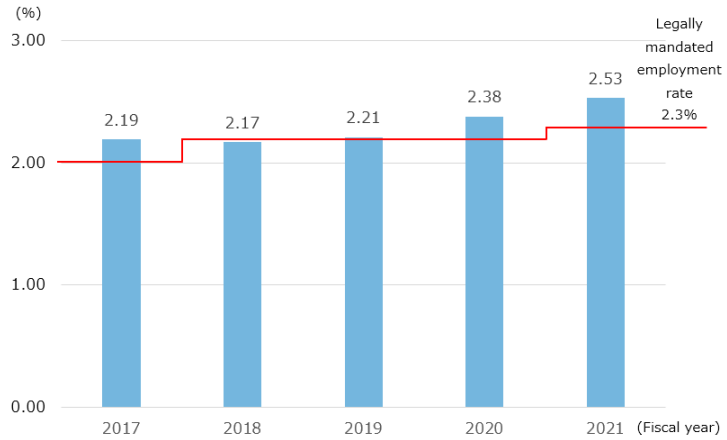


Note: As of April 1 each year

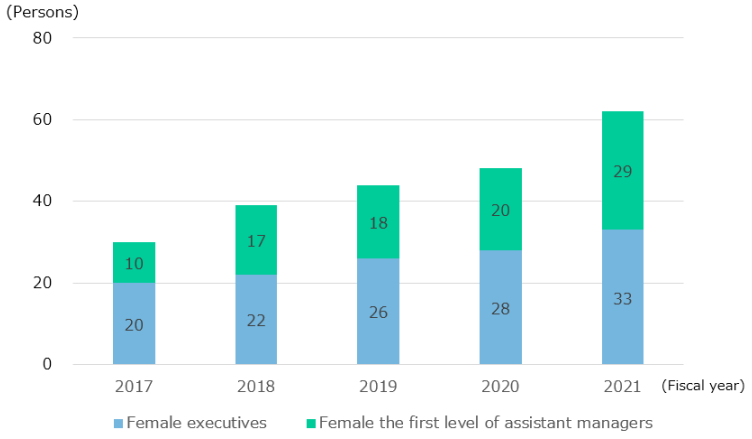
■Implementation of Career Development and Life Design Support Activities

Program	Fiscal 2019 (participants)	Fiscal 2020 (participants)	Fiscal 2021 (participants)
Career–design Training	139	115	487

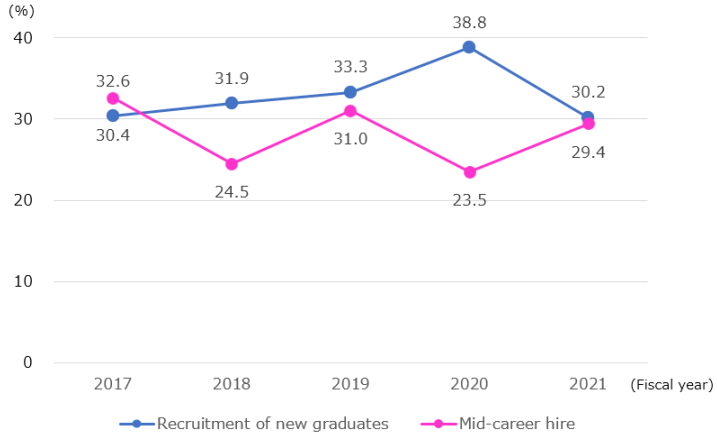
■Employment Rate of Persons with Disabilities



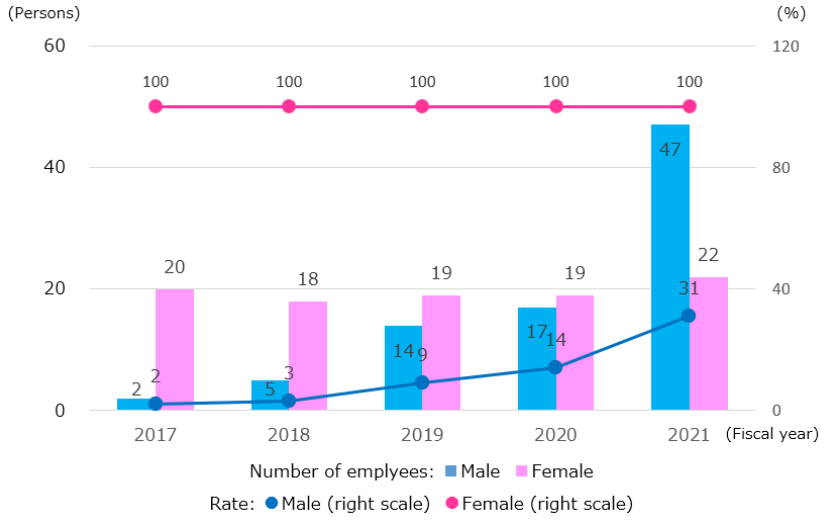
■Female Executives and Candidates



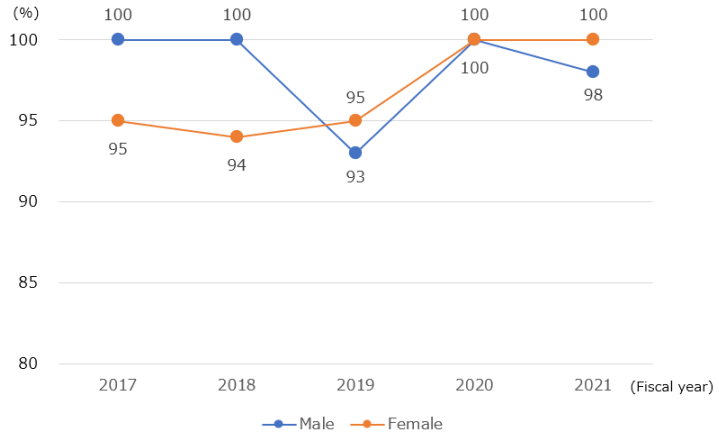
■Percentage of Female Among New Recruits



■ Number and Rate of Employees Taking Childcare Leave



■ Return Rate of Employees Taking Childcare Leave (Kaneka)



■ Number of Users

Program	Term and period	Fiscal 2019	Fiscal 2020	Fiscal 2021
Child nursing care leave	By the beginning of a semester for a child in the 4th grade (5 days per year per person, maximum of 10 days per year for an employee with two or more children)	male: 81	male: 80	male: 94
		female: 64	female: 47	female: 52
Shorter work–hours program	By the beginning of a semester for child in 7th grade (maximum of 2 hours per day per person)	male: 2	male: 1	male: 1
		female: 66	female: 60	female: 58
Childcare subsidies	Company covers part of babysitting expenses for a child ages 0 to 2	27	29	29

Promotion of Wellness

■Rate of Taking Medical Checkup and Interview/Stress Check

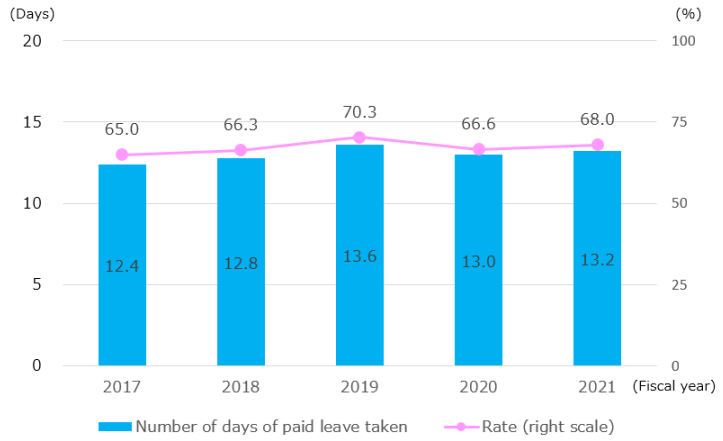
	Fiscal 2020	Fiscal 2021
Rate of taking medical checkup and interview	100.0%	100.0%
Rate of taking stress check	96.8%	97.2%
Rate of receiving specific health guidance	13.8%	29.2%

■Absenteeism

	Fiscal 2020	Fiscal 2021
Absenteeism（*3）	1.9%	1.8%

*3 Percentage of people absent from work for 30 days or more due to illness, injury, mental illness, etc.

■Number of Days and Rate of Paid Leave Taken



Calculation Methods for Data of Indicators Related to Environment

Calculation methods for data of indicators related to environment are as follows.

【Main Raw Materials, Energy, Products】

Main Raw Materials	Raw materials calculated in or converted to tons
Energy Consumption	Energy consumption is calculated based on the Energy Saving Law (Act on the Rationalization etc. of Energy Use of Japan). However, the amount of electricity or steam sold by Kaneka to outside parties is not deducted from Kaneka's energy consumption. The boundaries are consistent with the Energy Saving Law and the Act on Promotion of Global Warming Countermeasures of Japan and include all manufacturing sites and other facilities. GWh conversions are also shown as units of energy. Converted at 1GWh = 3,600GJ.
Energy Intensity Index	Energy intensity is a numerical value calculated by dividing the energy used in manufacturing by the volume of activity (production volume at all parent manufacturing sites). The energy intensity index is calculated by indexing the energy intensity, with fiscal 2013 used as the base year of 100.
Products	Products calculated in or converted to tons

【Greenhouse Gas (GHG)】

GHG Emissions	GHG emissions are calculated referring the Greenhouse Gas Protocol, "A Corporate Accounting and Reporting Standard REVISED EDITION". Figures represent the total amount of energy origin CO_2 emissions, non-energy origin CO_2 emissions, and the CO_2 equivalent of methane and N_2O emissions. CO_2 emission factors for steam, units of heat for each fuel, and CO_2 emission factors for each fuel both in Japan and outside Japan use values specified by the Act on Promotion of Global Warming Countermeasures of Japan. Outside Japan, however, if a value is specified in the country concerned, that value is used. As CO_2 emission factors for electricity, the adjusted value for each power company was used for calculations in Japan and the value for each power company and IEA country emission factors were used for calculations outside Japan. IEA country emission factors are calculated using data from two years prior to the year calculated (e.g. 2019 emission factors are used for calculations of fiscal 2021 GHG emissions). The boundaries are the same as those for energy consumption.
Energy Origin CO_2 Emission Intensity Index	CO_2 emission intensity is a numerical value calculated by dividing energy origin CO_2 emissions associated with production activities, which are calculated using a fixed emission factor unique to Kaneka, by the volume of activity, with fiscal 2013 indexed to 100. Using a fixed emission factor makes it easier to see the impact of our activities.

【Water】

Water Consumption	Total industrial water, water supply, seawater, river water, groundwater, and other water consumed at each site.
Wastewater Discharges	Total wastewater discharged to public waterways (sea, lakes, rivers, etc.) and wastewater discharged to sewers. At some sites that do not get accurate quantity of wastewater discharges, wastewater discharge is considered to be the same as water consumption.

【Water Quality in Water Areas】

Chemical Oxygen Demand	Total chemical oxygen demand emissions into public waterways (sea, lakes, rivers, etc.). Calculated as chemical oxygen demand concentration at the discharge outlet multiplied by amount of drainage from each drain to public waterways.
Suspended Solids	Total suspended solid emissions to public waterways (sea, lakes, rivers, etc.). Calculated as suspended solid concentration at the discharge outlet multiplied by amount of drainage from each drain to public waterways.
Nitrogen	Total nitrogen emissions to public waterways (sea, lakes, rivers, etc.). Calculated as nitrogen concentration at the discharge outlet multiplied by amount of drainage from each drain to public waterways.
Phosphorous	Total phosphorous emissions to public waterways (sea, lakes, rivers, etc.). Calculated as phosphorous concentration at the discharge outlet multiplied by amount of drainage from each drain to public waterways.

【Atmospheric Emissions】

SOx	Total sulfur oxides emitted from facilities as defined by the Air Pollution Control Act of Japan. Calculated as annual amount of dry exhaust gas at each facility multiplied by SOx (SO2) concentration. Sulfur oxide (SOx) emissions (tons) = SOx concentration (ppm) x 10^{-6} x dry exhaust gas (Nm^3/h) x annual facility operation hours (h) x 64/22.4 x 10^{-3}
NOx	Total nitrogen oxides emitted from facilities as defined by the Air Pollution Control Act of Japan. Calculated as annual amount of dry exhaust gas at each facility multiplied by NOx concentration. Nitrogen oxides (NOx) emissions (tons) = NOx concentration (ppm) x 10^{-6} x dry exhaust gas (Nm^3/h) x annual facility operation hours (h) x 46/22.4 x 10^{-3}
Soot and Dust	Total soot and dust emitted from facilities as defined by the Air Pollution Control Act of Japan. Calculated as annual amount of dry exhaust gas at each facility multiplied by soot and dust concentration. Soot and dust emissions (tons) = soot and dust concentration (g/Nm^3)x dry exhaust gas (Nm^3/h) x annual facility operation hours (h) x 10^{-6}

【Environmental Accounting (Investments, Expenditures) 】

Pollution Prevention	Pollution prevention costs in order to control environmental impacts that occur in our business areas (air and water pollution prevention)

Environmental Conservation	Figures do not include investment and expense amounts related to environmental conservation.
Resource Recycling	Costs of processing industrial and general waste
Upstream and Downstream	Costs of recycling, collection, and appropriate processing of products, and costs of recycling, collection, and appropriate processing of containers and packaging. Includes supply chain management costs (green purchasing, guidance for vendors on reducing environmental impacts and building environmental management systems, etc.).
Management Activities	Costs required for environmental conservation activities at each manufacturing site (environmental education for employees and environmental impact monitoring and measurement).
Research and Development	Costs for research and development of products contributing to environmental conservation and of ways of reducing environmental impacts at the product manufacturing stage (figures do not include research and development investment amounts)
Social Activities	Costs of greening, beautification, landscape preservation, and disclosure of environmental information
Environmental Damage	Costs for addressing environmental damage (payment of sulfur oxide emission charges, etc.)

【Environmental Accounting (Economic Impacts) 】

Revenue from Recycling	Total sales amount of off-grade materials and collected items obtained by recycling that resulted in paid transactions (valuable resources).
Cost Reductions by Better Resource Efficiency (Output per Unit of Input)	Total amount of reduction in purchase costs of raw materials, etc. through resource conservation activities and unit cost improvements.
Waste Disposal Cost Reductions by Recycling	Total amount of reduction in processing costs due to reduction of waste through recycling activities.
Cost Reductions by Energy Conservation	Total amount of reduction in energy costs through energy conservation activities.

【Environment Efficiency】

Total Environmental Impact	Kaneka assesses the environmental impacts of our production activities using Environmental Impact Points (EIP), which are compiled using the JEPIX methodology (*1). *1 The Japan Environmental Policy Priorities Index (JEPIX) methodology involves the calculation of an "eco-factor" coefficient for each emitted substance that has an environmental impact, using a ratio of the annual target for emissions under national environmental policies versus actual annual emissions ("Distance to Target"). The eco-factors are then multiplied by a quantity for each environmental impact to produce a single integrated indicator known as Environmental Impact Points (EIP).

	Calculations of eco-factors are done by the JEPIX Project (www.jepix.org, in Japanese).
Environmental Efficiency	Environmental efficiency is a yardstick to measure efforts to maximize value while minimizing environmental impacts, with the aim of achieving sustainable growth. Kaneka calculates this by dividing net sales (yen) by the EIP.

【Scope 3 GHG Emissions】

Category 1 Purchased Goods/Services	The calculation was made using emission factors listed in the LCI database "IDEA ver. 3.2" (National Institute of Advanced Industrial Science and Technology / Sustainable Management Promotion Organization) with the purchase results in this fiscal year considered as the volume of activity. The coverage rate was 99.4% on a main and auxiliary raw material weight basis.
Category 2 Capital Goods	The calculation was made by multiplying investments in each capital formation area by emission factors listed in the Emissions Unit Database for Calculation of Greenhouse Gas Emissions, etc. by Organizations throughout the Supply Chain, (ver. 3.2) published by the Ministry of the Environment of Japan. The coverage rate was 100% on an investment amount basis.
Category 3 Fuel-and Energy-related Activities	The calculation was made by multiplying electric power, steam, and fuel consumption by emission factors listed in the Emissions Unit Database for Calculation of Greenhouse Gas Emissions, etc. by Organizations throughout the Supply Chain (ver. 3.2) published by the Ministry of the Environment of Japan and in the IDEA database ver. 3.2 (for the calculation of supply chain GHG emissions) published by the National Institute of Advanced Industrial Science and Technology and the Sustainable Management Promotion Organization. The coverage rate for organizations subject to the calculation was 100% on an energy consumption.
Category 4 Upstream Transportation and Distribution	The calculation was made using a calculation method stipulated in the Measures Pertaining to Consigners of the Energy Saving Law. Emission results have been calculated every year since fiscal 2006 according to the Energy Saving Law. The coverage rate was 100% on a transportation volume (ton-kilometer) basis.
Category 5 Waste Generated in Operations	The calculation was made by multiplying the volume of waste by type from all Kaneka facilities by emission factors listed in the Emissions Unit Database for Calculation of Greenhouse Gas Emissions, etc. by Organizations throughout the Supply Chain (ver. 3.2) published by the Ministry of the Environment of Japan and listed in IDEA Ver. 3.2 (for calculating GHG emissions in the supply chain) from the National Institute of Advanced Industrial Science and Technology and the Sustainable Management Promotion Organization. The coverage rate was 100% on an amount of industrial waste generated basis.
Category 6 Business Travel	The calculation was made by multiplying travel costs by transportation mode and the number of stays by emission factors listed in the Emissions Unit Database for Calculation of Greenhouse Gas Emissions, etc. by Organizations throughout the Supply Chain (ver. 3.2) published by the Ministry of the Environment of Japan. The coverage rate was 100% on a basis of applied business travel expenses.
Category 7 Employee Commuting	The calculation was made by multiplying travel costs by transportation mode by emission factors listed in the Emissions Unit Database for Calculation of Greenhouse Gas Emissions, etc. by Organizations throughout the Supply Chain (ver. 3.2) published by the Ministry of the Environment of Japan. The coverage rate was 100% on a basis

	of applied commuting method.
Category 8 Upstream Leased Assets	According to company policy, we do not use leased assets for upstream operations, in principle. However, if some assets are leased, out of necessity, the emissions from them are included in Scope 1 or 2. The coverage rate was 100%.
Category 9 Downstream Transportation and Distribution	This category was excluded from the scope of calculation because it is difficult to accurately grasp a wide range of downstream logistics operations due to the high percentage of intermediate products and to calculate the emissions using a rational calculation method.
Category 10 Processing of Sold Products	This category was excluded from the scope of calculation because it is difficult to accurately grasp a wide range of downstream product processing operations due to the high percentage of intermediate products and to calculate the emissions using a rational calculation method.
Category 11 Use of Sold Products	Most products sold by Kaneka are plastics, chemicals, foods, and pharmaceuticals which do not generate emissions when used. Although some medical devices and organic LED lightings generate emissions upon used, it is difficult to accurately grasp the gauging usage, we used assumptions to estimate emission volumes. Our results confirmed that such emissions represented less than 0.1% of Kaneka's total Scope 3 emissions, the category was thus excluded from the calculation range.
Category 12 End-of-Life Treatment of Sold Products	Assuming that all products manufactured by Kaneka are discarded within the reporting year, production quantities are classified according to type of waste outlined in the Emissions Unit Database for Calculation of Greenhouse Gas Emissions, etc. by Organizations throughout the Supply Chain (ver. 3.2) published by the Ministry of the Environment of Japan. Figures are calculated by multiplying by the emission factors listed in the database.
Category 13 Downstream Leased Assets	The calculation was made by multiplying the activity volume of leased assets by emission factors stipulated in the Act on Promotion of Global Warming Countermeasures according to the Basic Guidelines on the Calculation of Greenhouse Gas Emissions throughout the Supply Chain (ver. 2.4) published by the Ministry of the Environment of Japan. Since the emissions associated with assets leased to Group companies are included in the Scope 1 or 2 emissions of each company, they are included in Category 15.
Category 14 Franchises	This category was considered as an exception for calculation because Kaneka Corporation has no franchise stores.
Category 15 Investments	The emissions of Group companies were calculated using a calculation method stipulated in the Act on Promotion of Global Warming Countermeasures according to the Basic Guidelines on the Calculation of Greenhouse Gas Emissions throughout the Supply Chain (ver. 2.4) published by the Ministry of the Environment of Japan and then being multiplied by the relevant equity ratio. Investment in companies other than Group companies was excluded from the scope of calculation because it has not been made to obtain profits.

【Energy Consumptions in Logistics, CO_2 Emissions】

Energy Consumption (Crude Oil Equivalents)	Calculated based on the Energy Conservation Law Guidebook for Consigners issued by the Agency for Natural Resources and Energy of Japan.

Energy Intensity Index	Energy intensity index is calculated by using a calculation method stipulated in the Measures Pertaining to Consigners of the Energy Saving Law, indexing the energy intensity, with fiscal 2006 used as the base year of 100.
CO_2 Emissions	Calculated based on the Greenhouse Gas Emissions Calculation and Reporting Manual (ver. 4.8) published by the Ministry of the Environment of Japan.

【Chemical Substances】

Emissions of Substances Subject to the PRTR Law	Emissions to the atmosphere, water areas, soil at each site and landfills at each site, the amount transferred into sewers and into waste are calculated based on the revised Enforcement Order of the Act on the Assessment of Releases of Specified Chemical Substances in the Environment and the Promotion of Management Improvement of Japan (the revised Enforcement Order of PRTR Law) (Enforced on April 1, 2010).
VOC	Total emissions of VOCs into the atmosphere among substances subject to the PRTR Law and the substances that Japan Chemical Industry Association selected from the PRTR Law substances.
Hazardous Atmospheric Pollutants	Of the 23 revised "substances requiring priority action" in the report of the Central Environment Council (9th report) in October 2010, emissions to the atmosphere of acrylonitrile, vinyl chloride monomers, chloroform, 1,2-dichloroethane, dichloromethane, and 1,3-butadiene are calculated based on the atmospheric emissions of substances subject to the PRTR Law.

【Industrial Waste】

Industrial Waste Generated	Total amount of the amount of reduction by incineration at each site (difference between incinerated amount and the residue), the amount of landfill at each site and the amount of waste outsourced for external treatment.
Internal Reductions	Amount of reduction by incineration at sites (difference between incinerated amount and the residue).
Internal Landfill	Amount of final landfilled at sites.
Waste Outsourced	Amount of waste treated by external contractors.
External Recycling	Of outsourced waste, the total amount of industrial waste recycled through reuse, recycling, and heat recovery.
External Reductions	Of outsourced waste, the amount obtained by subtracting total incineration residue from the total amount of industrial waste incinerated without heat recovery and reduced in weight.
Volume of Waste Sent to Final Landfill	The total amount of waste outsourced to be sent directly to final landfill and sent to final landfill after outsourced incineration.
Rate of Waste Sent to Final Landfill	Percentage of the total amount of waste outsourced to be sent directly to final landfill and sent to final landfill after outsourced incineration divided by the total amount of industrial waste generated (%).