kaneka

Data Sheet 2019

Environment

Basic Policy

In keeping with our ESG Charter, 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.
Important matters pertaining to the protection of the global environment are decided by the ESG Committee. Meanwhile, issues on global environment protection are shared and further discussed at the management meeting, the Plant Management Committee, and other meetings. The medium-term management plan also focuses on strengthening initiatives on important matters to further improve our ESG management.

Environmental Management

Environmental Management Systems

■Kaneka and Group Company Certification under ISO 14001

Manufacturing Sites and Group Companies	Registration No.
Shiga Manufacturing Site	YKA4004950
Osaka Manufacturing Site	JCQA-E-0053
Kashima Manufacturing Site	JCQA-E-0054
Takasago Manufacturing Site	JCQA-E-0105
Tochigi Kaneka Co., Ltd.	0076859
Osaka Synthetic Chemical Laboratories, Inc.	JCQA-E-0343
Tatsuta Chemical Co., Ltd. Koga Plant	3571208
Showa Kaseikogyo Co., Ltd. Hanyu Headquarters Factory	E0062
Cemedine Co., Ltd. Ibaraki Office, Mie Plant	JCQA-E-0366
Cemedine Co., Ltd. Kinuura Plant	497791UM15
Vienex Corporation	JSAE1511
Kaneka Solartech Corporation	JQA-EM6704
Sanvic Inc.	JMAQA-E841

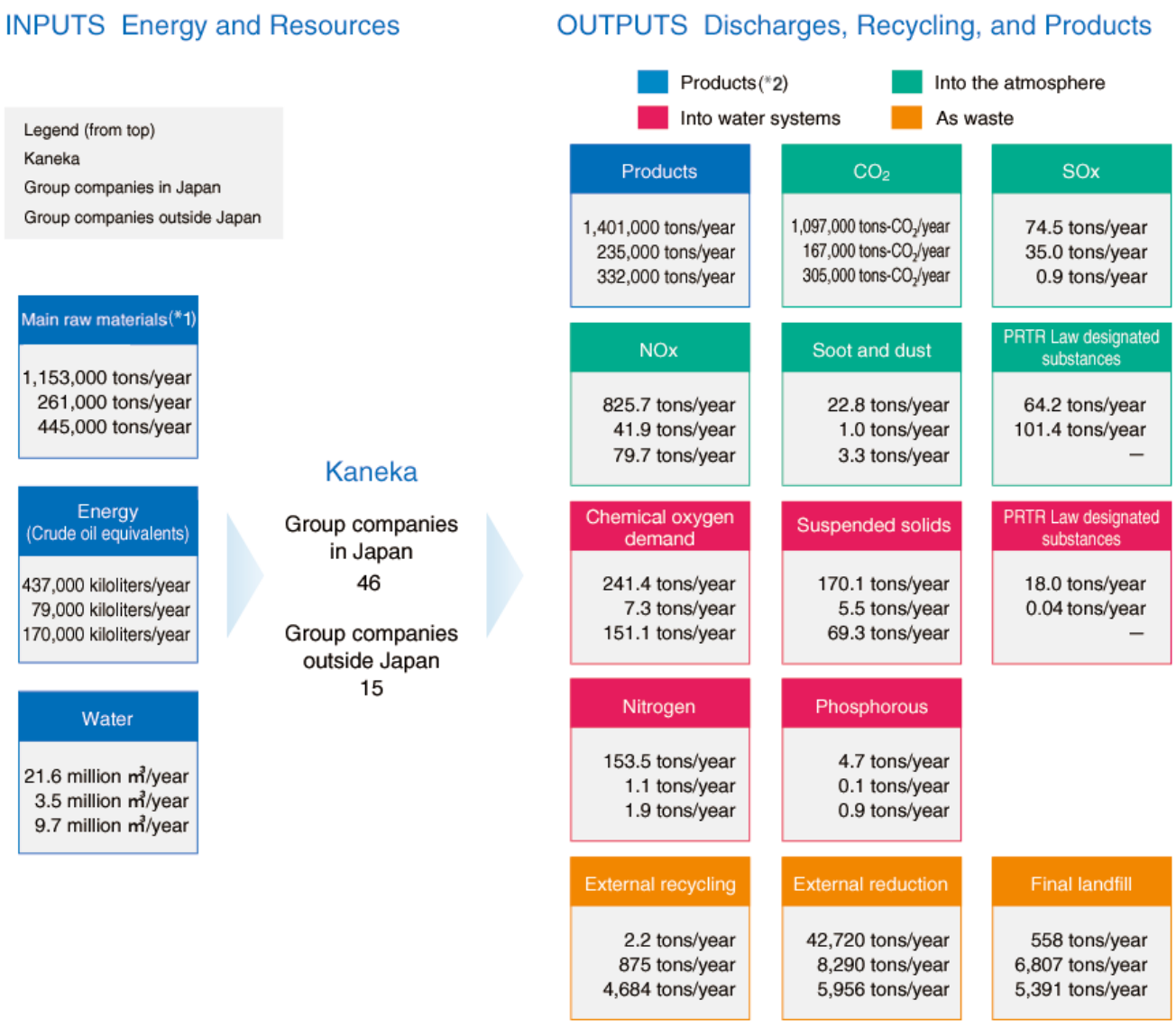
Kaneka Belgium N.V.	97 EMS 002e
Kaneka (Malaysia) Sdn. Bhd.	ER0523
Kaneka Paste Polymers Sdn. Bhd.	ER0523
Kaneka Eperan Sdn. Bhd.	ER0523
Kaneka Innovative Fibers Sdn. Bhd.	ER0523
Kaneka Apical Malaysia Sdn. Bhd.	ER0916

■ Eco-Action 21 Certification

Group Company	Certification and Registration No.
Kyushu Kanelite Co., Ltd.	0001637
Kaneka Hokkaido Styrol Co., Ltd.	0001805
Kaneka Medix Corporation	0001893
Hokkaido Kanelite Co., Ltd.	0001905
Kaneka Tohoku Styrol Co., Ltd.	0010773
Nagashima Shokuhin Co., Ltd.	0003093
Kaneka Foam Plastics Co., Ltd. Moka Plant	0003247
Kaneka Chubu Styrol Co., Ltd.	0006600
Tokyo Kaneka Foods Manufacturing Corporation	0003473
Taiyo Yushi Corporation	0003575
Kaneka Foods Manufacturing Corporation	0003491
Kaneka Sun Spice Corporation	0003556
Kaneka Nishinippon Styrol Co., Ltd. Headquarters, Saga Plant, Kagoshima Plant, and Nagasaki Plant	0003949
Kanto Styrene Co., Ltd.	0004035
Kaneka Kanto Styrol Co., Ltd.	0004259
OLED Aomori Co., Ltd.	0010329
Kochi Styrol Co., Ltd.	0011039

Material Balance in Production Activities

Kaneka Group is working to reduce environmental impacts by aggregating the status of energy and resource inputs and material outputs through emissions and products to grasp production activity volume, targeting Kaneka and Group companies within and outside Japan.
In fiscal 2018, while the inputs remained unchanged from the previous fiscal year, the outputs showed a decrease of NOx by 41.1 tons (4.1%) and of final landfill waste by 476.7 tons (7.8%).



*1 Raw materials calculated in or converted to tons.

*2 Products calculated in or converted to tons.

Environmental Accounting

We calculate the environmental costs (investments and expenditures) and benefits (material quantities), as well as economic impacts (in monetary units) of environmental measures on a consolidated basis for all parent Manufacturing Sites and 30 Group companies in Japan (manufacturing companies).

Results of Environmental Accounting

■ Environmental Costs (Investments, Expenditures) (Millions of yen)

Cost Classifications	Main Efforts	Fiscal 2016		Fiscal 2017		Fiscal 2018	
		Invest-ments	Expendi-tures	Invest-ments	Expendi-tures	Invest-ments	Expendi-tures
Business Area		1,046	4,884	1,177	5,036	901	5,460
1. Pollution Prevention	Air and water pollution prevention	1,011	3,150	1,130	3,236	899	3,476
2. Environmental Conservation	Addressing climate change and energy saving	-	-	-	-	-	-
3. Resource Recycling	Waste processing, recycling, and reduction	35	1,734	47	1,800	2	1,984
Upstream and Downstream	Product recycling, collection, and processing	0	8	0	8	0	6
Management Activities	Environmental education for employees and environmental impact monitoring and measurement	0	457	10	412	1	444
Research and Development	Research and development of products contributing to environmental conservation	0	6,728	0	7,203	0	7,477
Social Activities	Greening, beautification, and disclosure of environmental information	0	72	2	82	0	78
Environmental Damage	Payment of sulfur oxide emission charges	0	8	0	10	0	10
Total		1,046	12,157	1,188	12,752	902	13,475

Note: These calculations are based on the 2005 edition of the Environmental Accounting Guidelines by Japan's Ministry of the Environment and other reference materials, with partial modifications. Figures do not include research and development investment and global environment conservation costs. Amounts reported here may not fully match, due to rounding.

■Quantitative Impact of Environmental Conservation Efforts

Category	Initiatives	Items	Units	Fiscal 2016	Fiscal 2017	Fiscal 2018
Pollution Prevention	Reduce atmospheric and water discharges of hazardous substances	SOx emissions	Tons	131.0	102.4	109.5
		NOx emissions	Tons	924.6	919.5	867.6
		Chemical oxygen demand	Tons	275.4	264.1	248.7
		PRTR Law–designated chemical emissions	Tons	160.3	168.5	183.6
Environment	Lower greenhouse gas emissions	CO_2 emissions	Thousands of tons CO_2	1,228.0	1,255.0	1,264.0
	Use less energy	Crude oil equivalents	Thousands of kiloliters	489.0	509.0	516.0
Resource Recycling	Reduce final landfill	Final landfill	Tons	252.0	806.9	877.2
	Increase external recycling	Amounts recycled	Tons	43,633.0	44,900.0	51,002.0

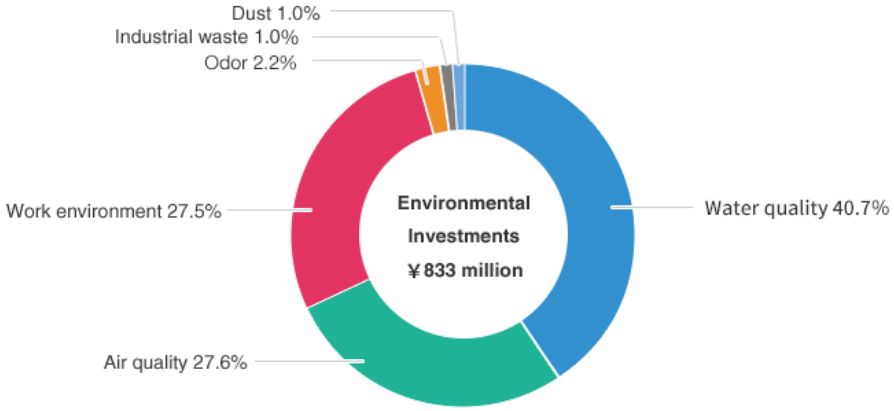
■Economic Impacts of Environmental Measures

(Millions of yen)

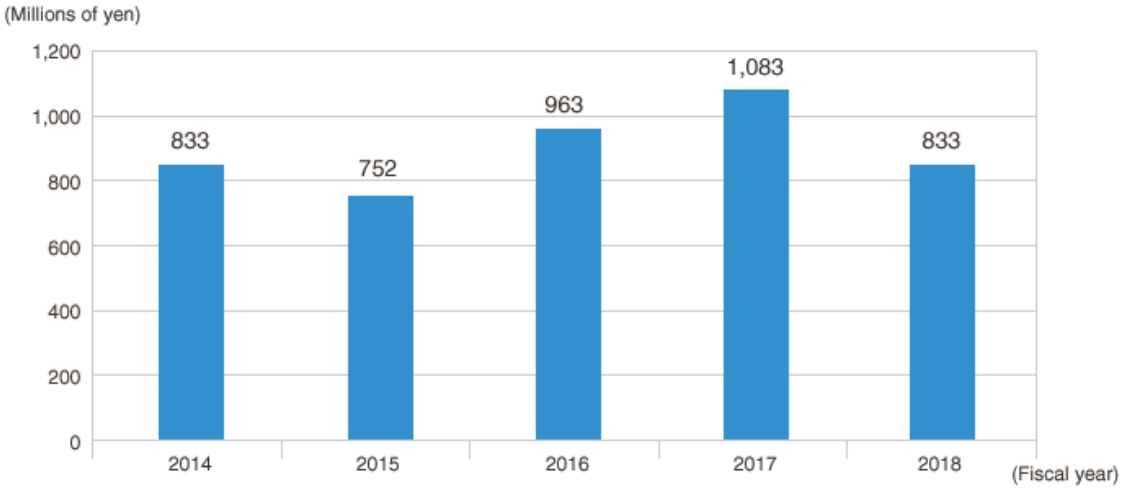
Measures	Fiscal 2016	Fiscal 2017	Fiscal 2018
Revenue from Recycling	130	258	213
Cost Reductions by Better Resource Efficiency (Output per Unit of Input)	-297	4	-34
Waste Disposal Cost Reductions by Recycling	489	327	450
Cost Reductions by Energy Conservation	123	177	247
Total	445	766	876

Environmental Investments (Kaneka)

■ Environmental Investments in Fiscal 2018

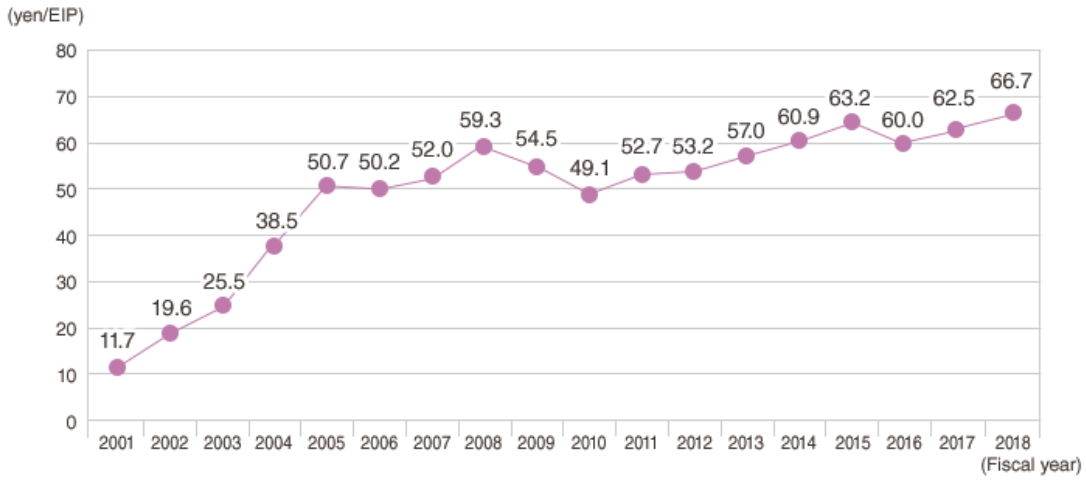


■ Cumulative Environmental Investments



Environment Efficiency (Kaneka)

■ Environment Efficiency

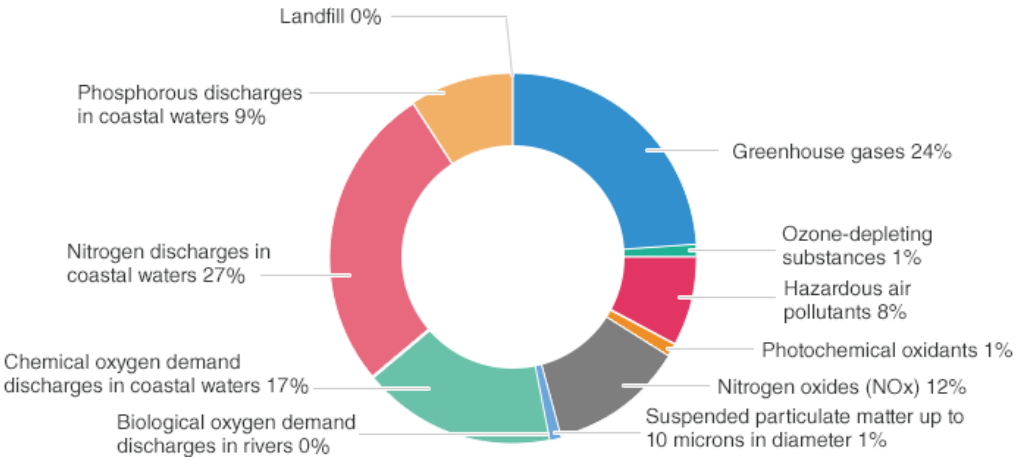


Kaneka assesses the environmental impacts of our production activities using Environmental Impact Points (EIP), which are compiled using the JEPIX methodology (*1), and we use those points to assess our environmental efficiency (*2).

*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 index known as Environmental Impact Points (EIP). Calculations of eco-factors are done by the JEPIX Project (www.jepix.org, in Japanese).

*2 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.

■ Details of Total Environmental Impact



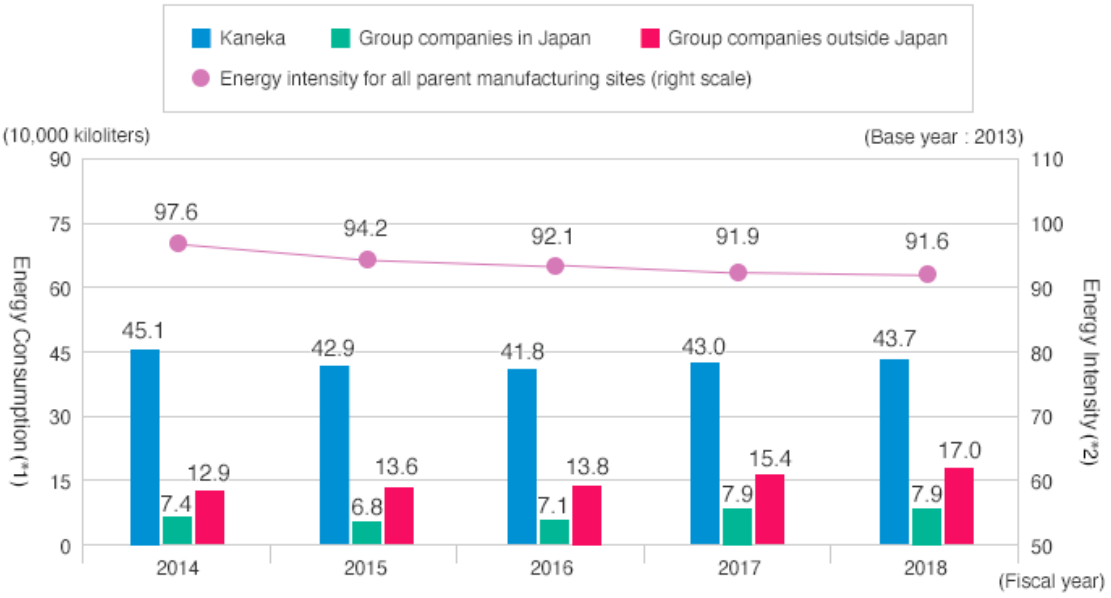
Fiscal	Net Sales (million yen)	Environmental Impact (100 million EIPs)	Environmental Efficiency (yen/EIP)
2016	274,866	45.8	60.0
2017	293,016	46.9	62.5
2018	304,951	45.7	66.7

The environmental impacts of greenhouse gas increased slightly from the previous fiscal year, while the environmental impacts of NOx, COD discharge to coastal waters, and phosphorus decreased, resulting in a reduction of about 2.6% in the total environmental impact.
We will continue working to reduce environmental impact and improve environmental efficiency by promoting energy-saving activities.

Climate Change

Energy Conservation Efforts

■Energy Consumption (Crude Oil Equivalents) and Energy Intensity



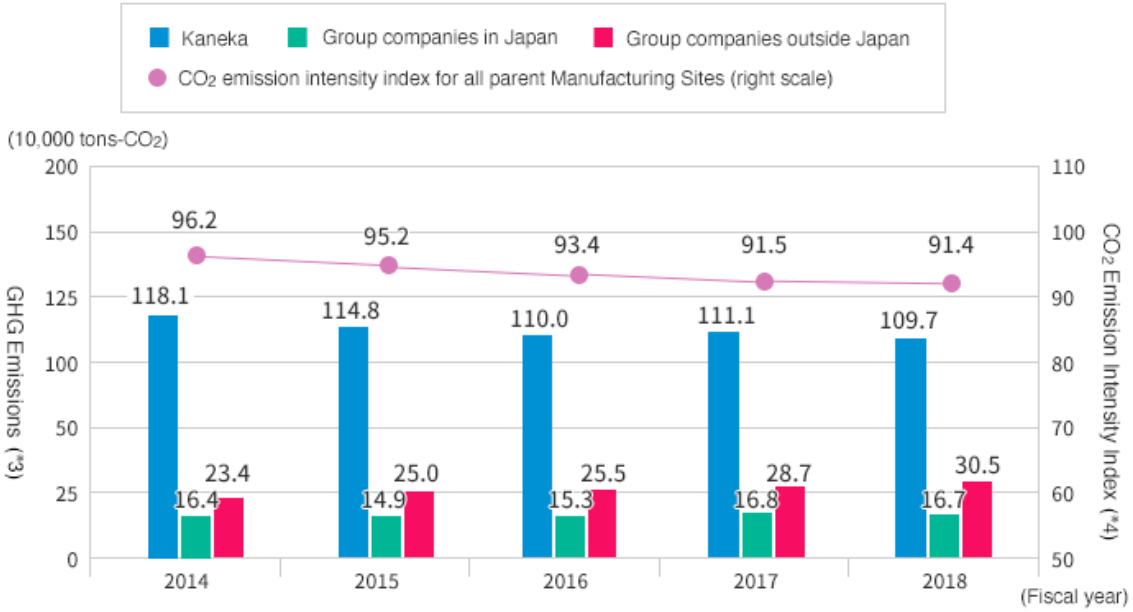
*1 Energy intensity index is a numeral value calculated by dividing the energy used in manufacturing (at all our parent manufacturing sites) by the active mass and indexing it against the baseline year of fiscal 2013 as 100. The amount of activity is an index representing the production volume of all our parent manufacturing sites. Energy consumption is calculated based on the Energy Saving Law (the Act on Rational Use of Energy).

*2 This energy consumption is the total for Kaneka (manufacturing sites and other facilities), with the boundaries being consistent with the Act on the Rational Use of Energy and the Action Plan for a Low Carbon Society prepared by the Japan Chemical Industry Association.

Initiatives to Cut CO_2 Intensity

Our greenhouse gas (GHG) emissions decreased 1.3% from the previous year to 1,097,000 metric tons of CO_2, mainly through reducing the CO_2 emission coefficient of electricity.

■GHG Emissions and Energy-origin CO_2 Emission Intensity Index



*3 A ratio of energy-origin CO_2 emissions per unit of output of a product, which is indexed against the baseline year of fiscal 2013 as 100. It helps in the visualization of the impact of our activities, and was used to establish targets for fiscal 2020.

*4 GHG emissions, calculated in accordance with the Act on Promotion of Global Warming Countermeasures, are 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.

GHG Emissions from Business Activities throughout the Supply Chain

■GHG Emissions by Scope (FY 2018 results at Kaneka)

Scope		GHG emissions [1,000 t CO_2/year] (year-on-year)
Scope 1	Direct emissions（*5）	767.4（-5.2%）
Scope 2	Indirect emissions from energy consumption	329.2（+9.0%）
Scope 3	Other indirect emissions (upstream/downstream)	2,081.5（-2.4%）
Total GHG emissions		3,178.1（-2.0%）

*5 Non-energy CO_2 emissions and equivalent CO_2 emissions of methane and nitrous oxide are included.

■Scope 3 Emissions (FY 2018 results at Kaneka)

Category		GHG emissions [1,000 t CO_2/year]
1	Purchased goods/services	1,490.1
2	Capital goods	34.7
3	Fuel-and energy-related activities not included in Scope 1 or Scope 2	83.0
4	Upstream transportation and distribution	23.1
5	Waste generated in operations	3.5
6	Business travel	4.6
7	Employee commuting	0.8
8	Upstream leased assets	0.0
9	Downstream transportation and distribution	– (*6)
10	Processing of sold products	– (*6)
13	Downstream leased assets	0.0
14	Franchises	– (*7)
15	Investments	441.6
Scope 3 total		2,081.5

Note: Amounts reported here do not fully match, due to rounding in each category.

[Calculation methods] The Scope 3 emissions were calculated in accordance with the Basic Guidelines (Ver. 2.3) on the Calculation of Greenhouse Gas Emissions Throughout the Supply Chain and the Emissions Unit Database (Ver. 2.6) for Calculation of Greenhouse Gas Emissions, etc. by Organizations Throughout the Supply Chain, published by the Ministry of Environment. Methods for calculating GHG emissions for Category 11 “Use of sold products” and Category 12 “End-of-life treatment of sold products” are under consideration.

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

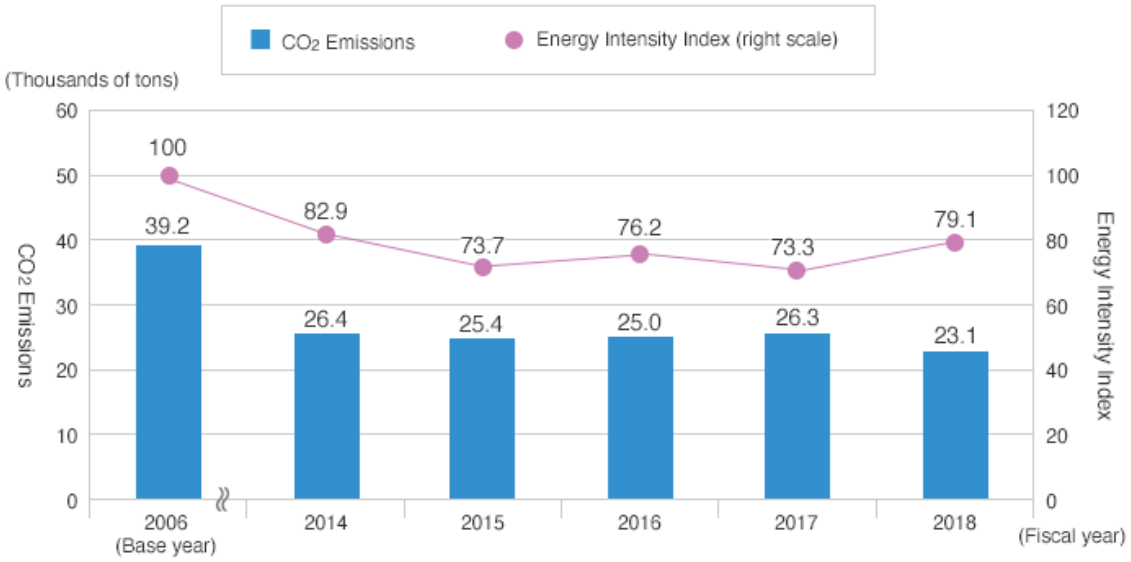
Investments in Energy-Efficient Facilities

■Results of Our Own Environmental Capital Investment Program

Fiscal Year	Investments	Number	Reduced CO_2 Emission
2014	¥200 million	37	1,644 tons-CO_2/year
2015	¥200 million	22	1,435 tons-CO_2/year
2016	¥200 million	23	1,688 tons-CO_2/year
2017	¥200 million	15	1,654 tons-CO_2/year
2018	¥200 million	24	1,748 tons-CO_2/year

Energy-Efficiency Initiatives in Logistics

■CO_2 Emissions and Energy Intensity Index from Logistics (*8)



*8 Fiscal 2006 is the base year for indexing the logistics energy intensity as 100.

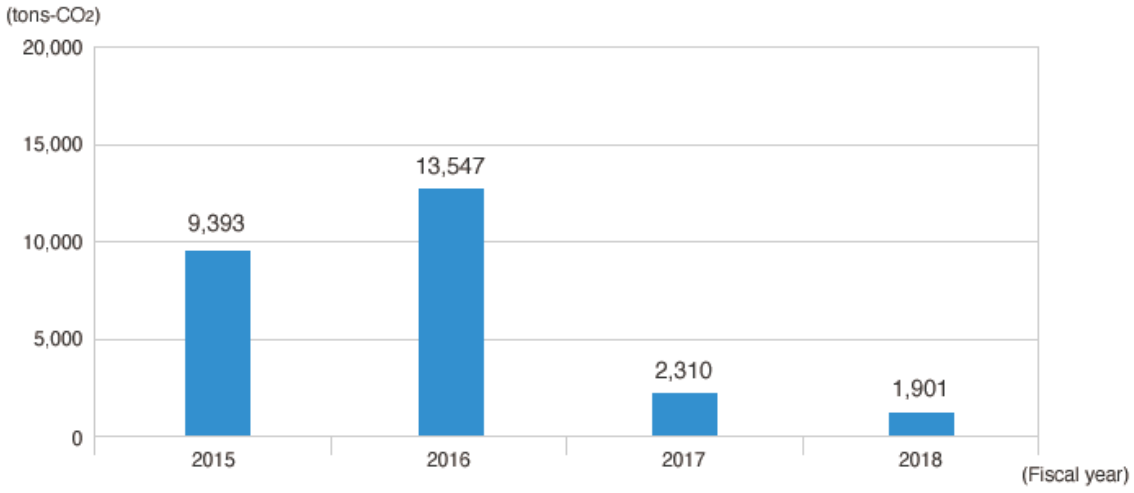
Response to the Fluorocarbons Emission Control Law

The estimated leakage amount of fluorocarbons generated in fiscal 2018 was 1,901 tons-CO_2, a decrease of 409 tons-CO_2 over the previous fiscal year, due to the replacement of aging equipment as well as strengthened equipment management, in particular, at the Takasago Manufacturing Site. No Group companies in Japan exceeded 1,000 tons-CO_2 leakage of fluorocarbons.

To reduce the estimated leakage of fluorocarbons to less than 1,000 tons-CO_2 by the end of fiscal 2020, we will update aging equipment in a planned way, selecting low-GWP (*9) equipment and promoting fluorocarbon-free production. We also inspect equipment to detect and eliminate fluorocarbon leaks at an early stage.

*9 GWP (Global warming potential) is a figure that shows, on the basis of carbon dioxide, how other greenhouse gases are capable of causing global warming.

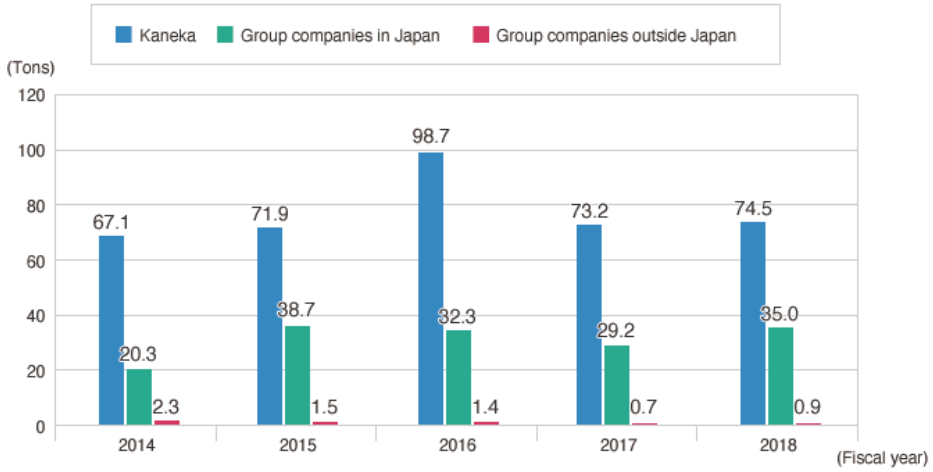
■ Estimated Leakage of Fluorocarbons at Kaneka



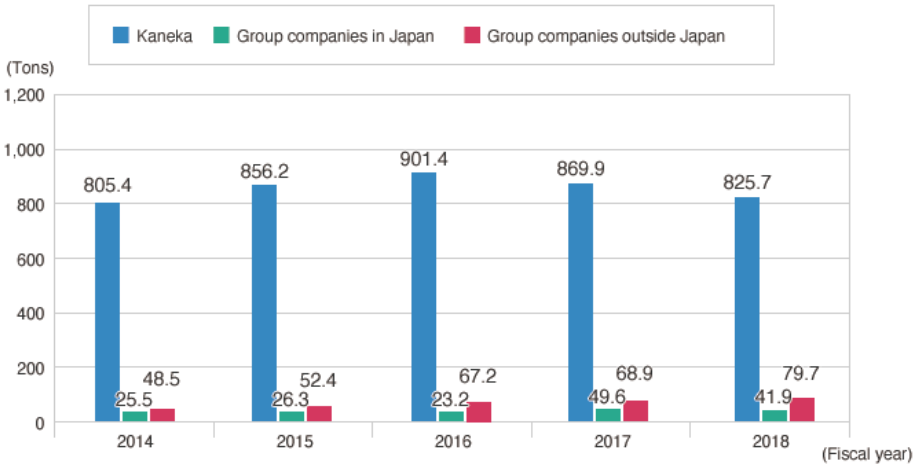
Preventing Pollution and Managing Chemical Substances

Preventing Air and Water Pollution

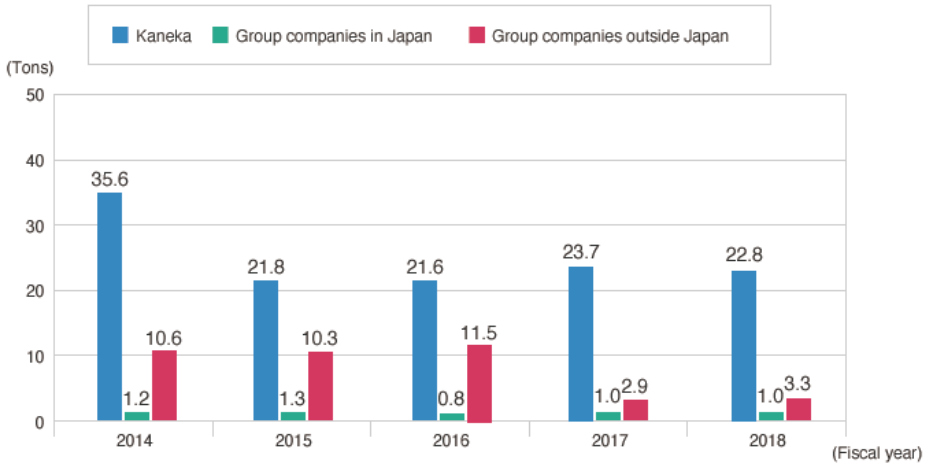
■ SOx Emissions



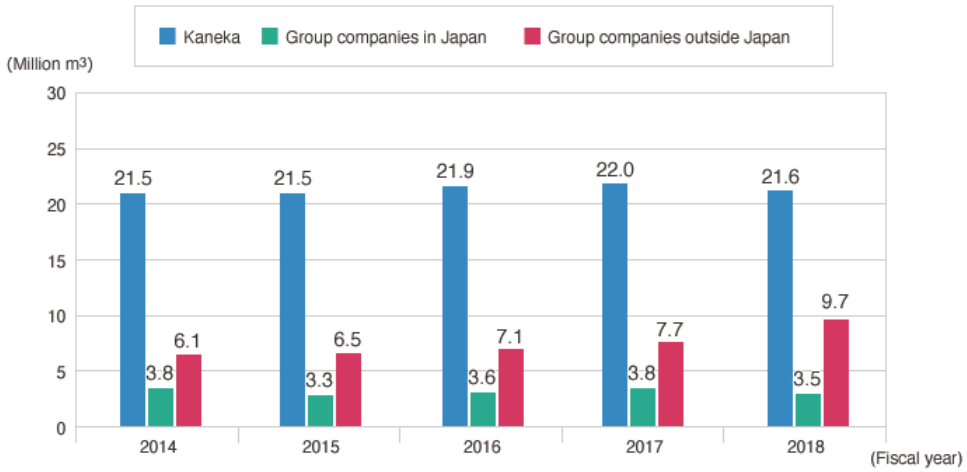
■ NOx Emissions



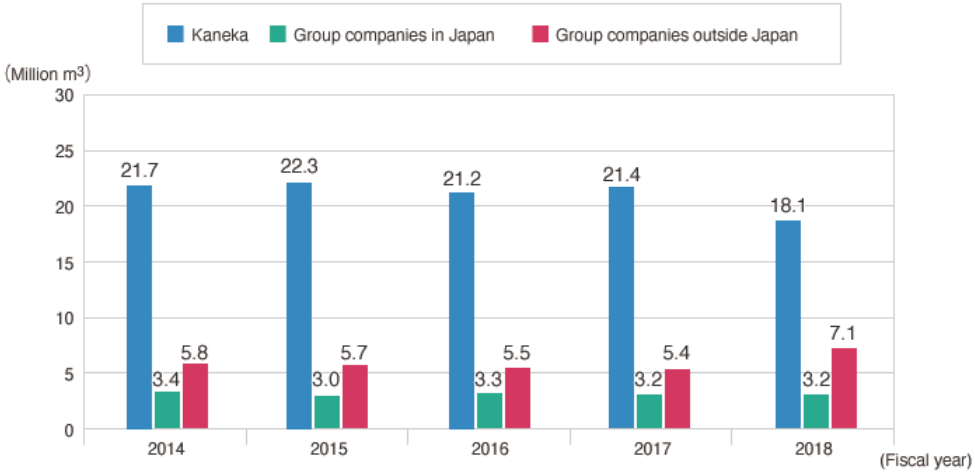
■ Soot and Dust Emissions



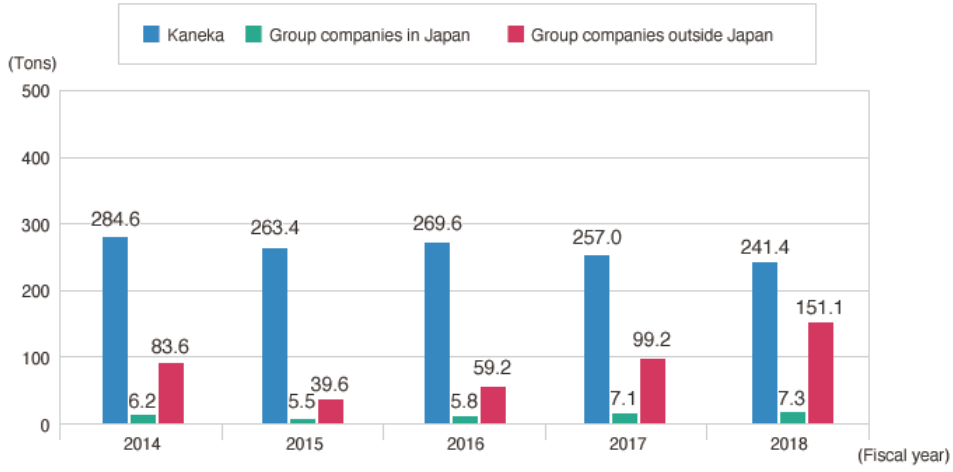
Water Consumption (*1)



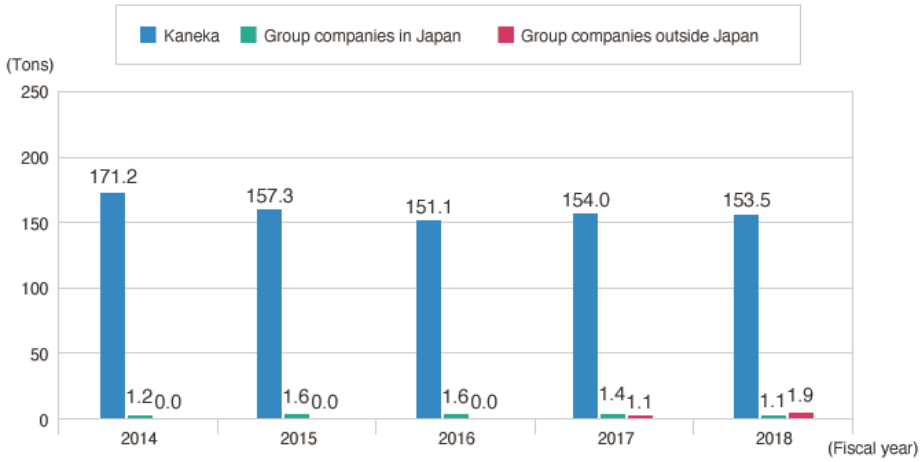
Wastewater Discharges (*1)



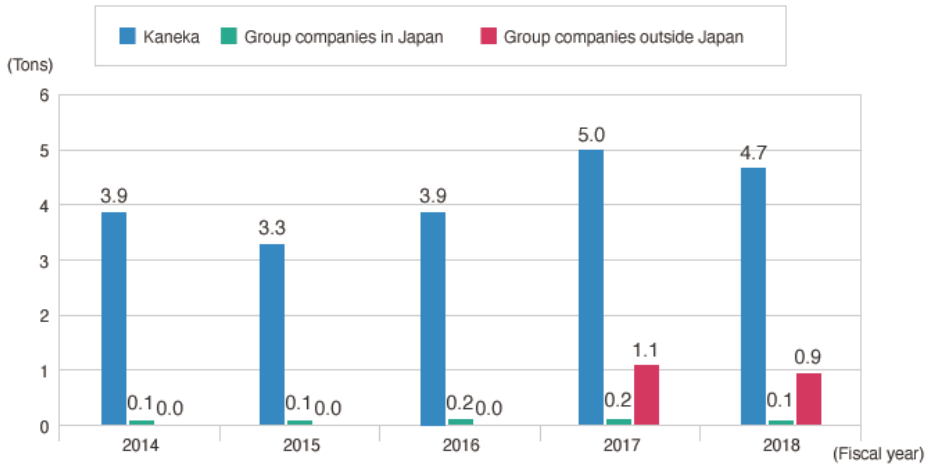
COD in Wastewater (*1)



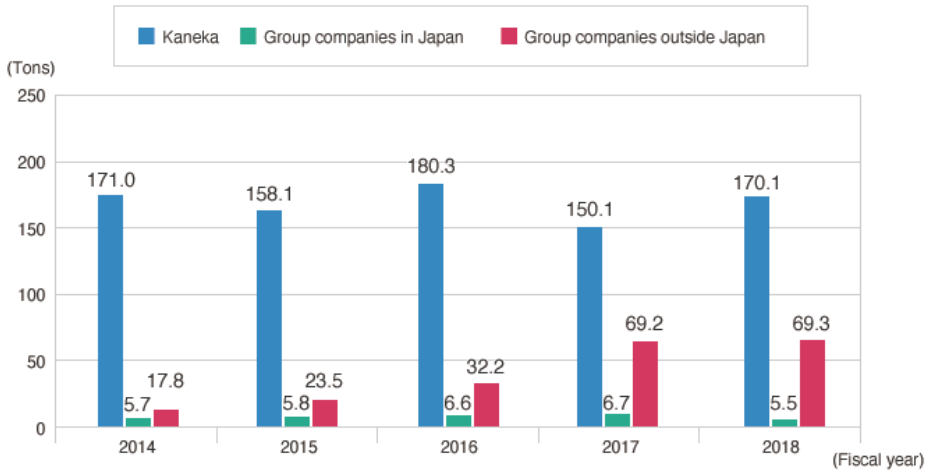
Nitrogen in Wastewater (*1)



Phosphorous in Wastewater (*1)



Suspended solids in Wastewater (*1)

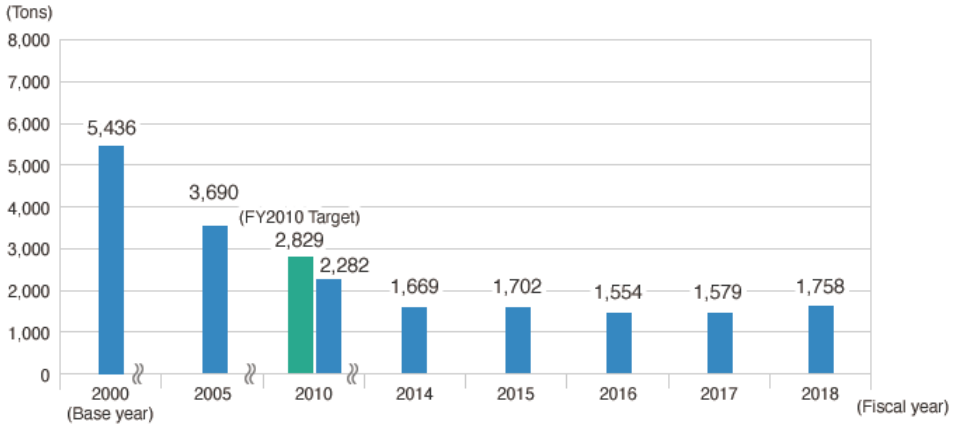


*1 From fiscal 2015, our water consumption and wastewater volume include those generated from non-manufacturing

facilities other than the plant department.

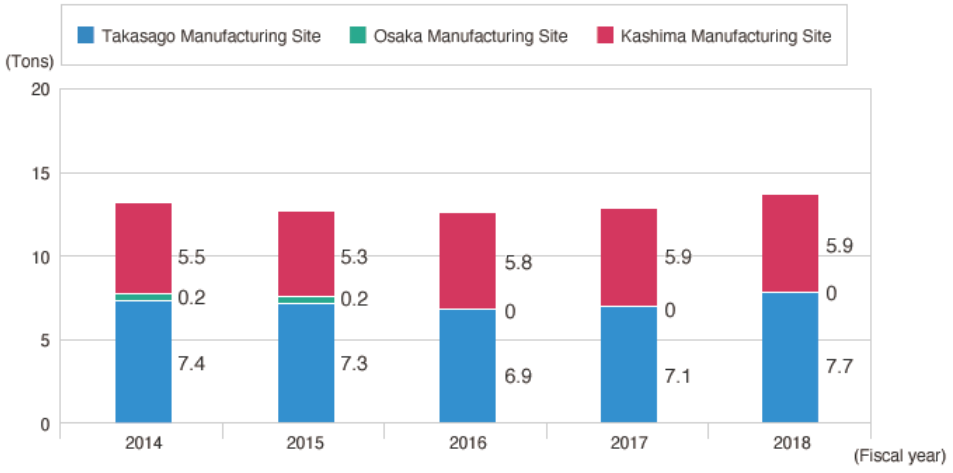
Voluntary Plan to Cut VOC Discharge

■ VOC discharge reduction record (All parent manufacturing sites)

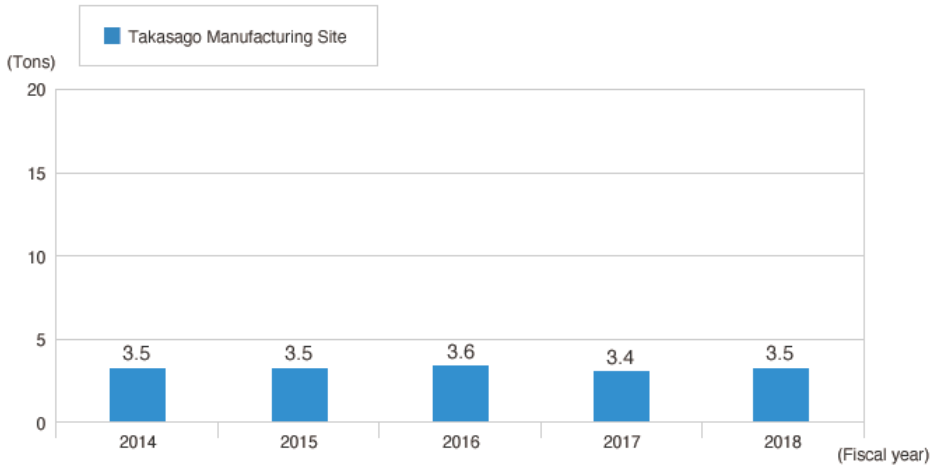


Hazardous Atmospheric Pollutants (Data of six substances for each manufacturing site of Kaneka)

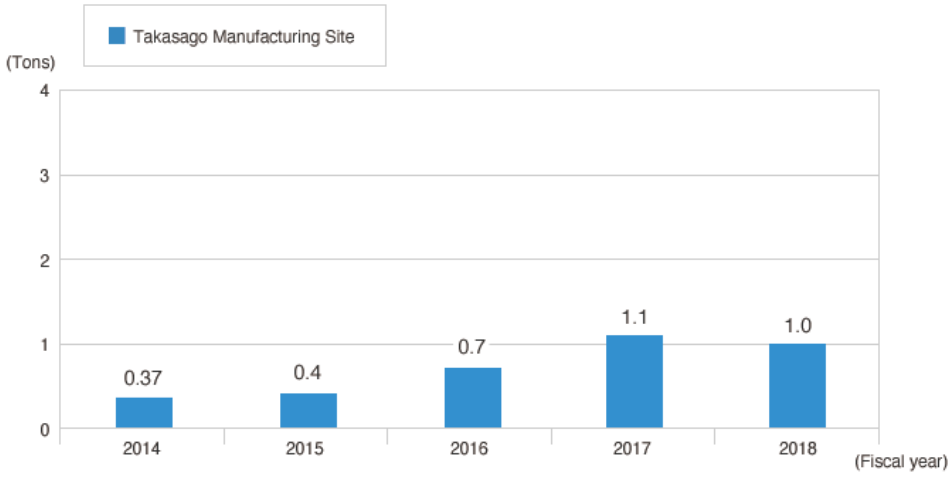
■ Chloroethylene



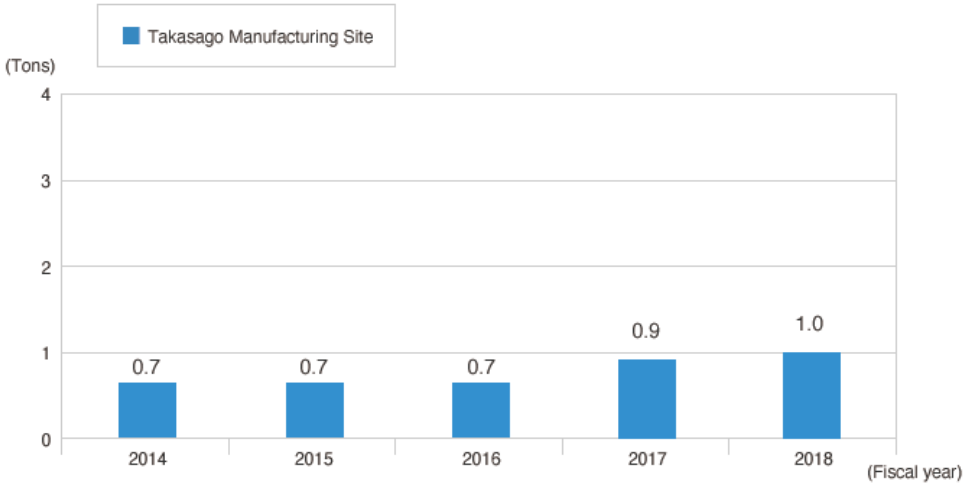
■ 1,2-Dichloroethane



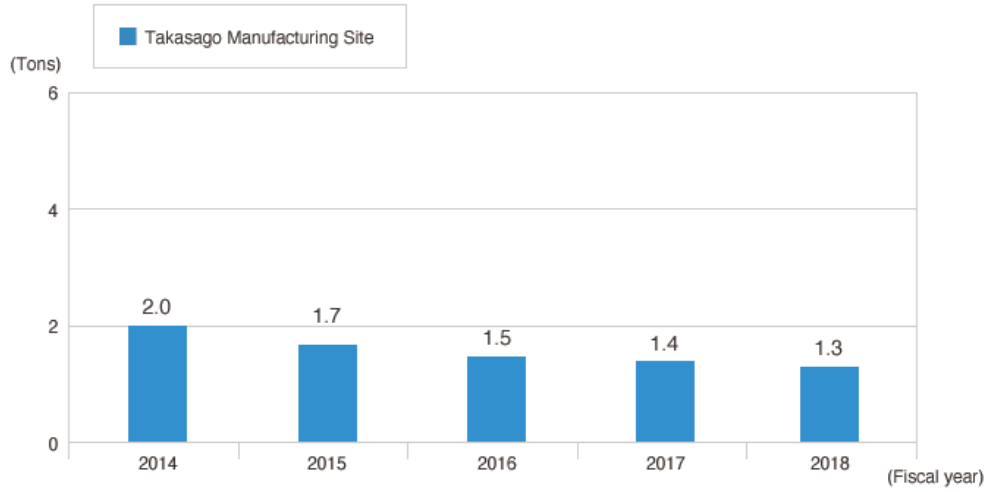
■ Chloroform



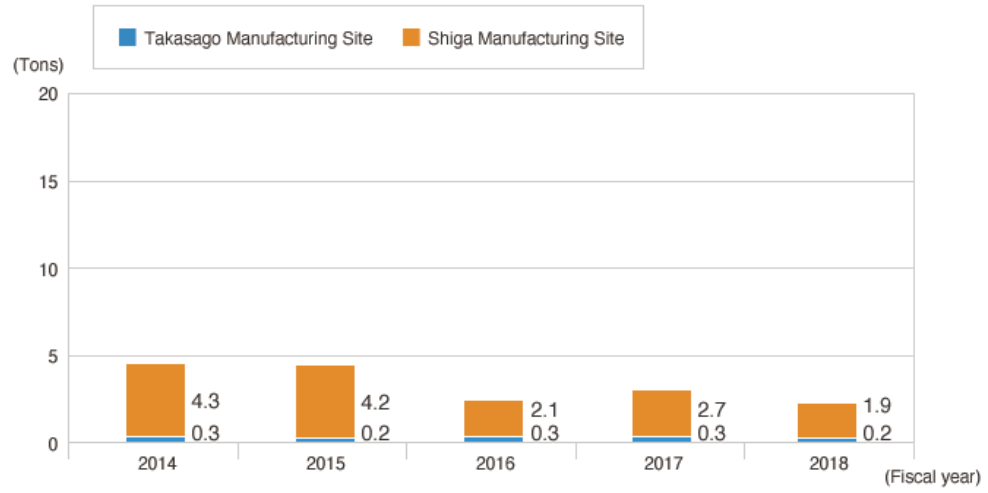
■ Acrylonitrile



■ 1,3-Butadiene



■ Dichloromethane



PRTR Discharge

■ Fiscal 2018 Kaneka Emissions Subject to the Pollutant Release and Transfer Register Law

(Kilograms)

	Designated Number under Ordinance	Chemical Substances	Fiscal 2018						Fiscal 2017
			Emissions					Transferred	Emissions
			Atmospheric Emissions	Discharges into Public Waterways	Discharges into Soil	Internal Landfill	Total	Total	Total
Large Discharges of 10 Substances	94	Chloroethylene (vinyl chloride)	13,500	110	0	0	13,610	960	13,010
	392	N-hexane	13,500	0	0	0	13,500	192,332	13,400
	275	Sodium dodecyl sulfate	0	8,300	0	0	8,300	0	8,400
	240	Styrene	5,800	40	0	0	5,840	7,860	5,532
	420	Methyl methacrylate	5,600	6	0	0	5,606	10	5,403
	232	N,N-dimethylfor-mamide	3,900	1,300	0	0	5,200	310,000	4,300
	7	N-butyl acrylate	4,360	0	0	0	4,360	3,630	3,950
	134	Vinyl acetate	4,100	220	0	0	4,320	0	4,060
	157	1,2-dichloroethane	3,400	50	0	0	3,450	0	3,430
	336	Hydroquinone	0	2,300	0	0	2,300	0	2,600
Total Other than the 10 Substances Above			10,088	5,690	0	0	15,778	110,608	15,941
Grand Total for All Substances			64,248	18,016	0	0	82,264	625,400	80,026

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

■Fiscal 2018 Group Company in Japan Emissions Subject to the Pollutant Release and Transfer Register Law

(Kilograms)

	Designated Number under Ordinance	Chemical Substances	Fiscal 2018						Fiscal 2017
			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-dimethylfor-mamide	54,005	0	0	0	54,005	10,340	47,020
	300	Toluene	28,731	0	0	0	28,731	445,839	21,657
	186	Dichloromethane (methylene dichloride)	11,703	0	0	0	11,703	205,897	9,663
	296	1,2,4-trimethylbenzene	2,359	0	0	0	2,359	0	2,421
	80	Xylene	2,187	0	0	0	2,187	0	4,644
	56	Ethylene oxide	1,165	0	0	0	1,165	0	616
	355	Bis (2-ethylhexyl) phthalate (DEHP)	547	40	0	0	587	74,699	105
	213	N,N-dimethylacetami-de	300	0	0	0	300	15,000	1,700
	392	N-hexane	210	0	0	0	210	4,135	1,700
	127	Chloroform	150	0	0	0	150	1,400	525
Total Other than the 10 Substances Above			1	1	0	0	2	16,439	0
Grand Total for All Substances			101,358	41	0	0	101,399	773,749	90,050

Note: Of the 462 substances subject to the PRTR, group companies in Japan reports about 31 items.

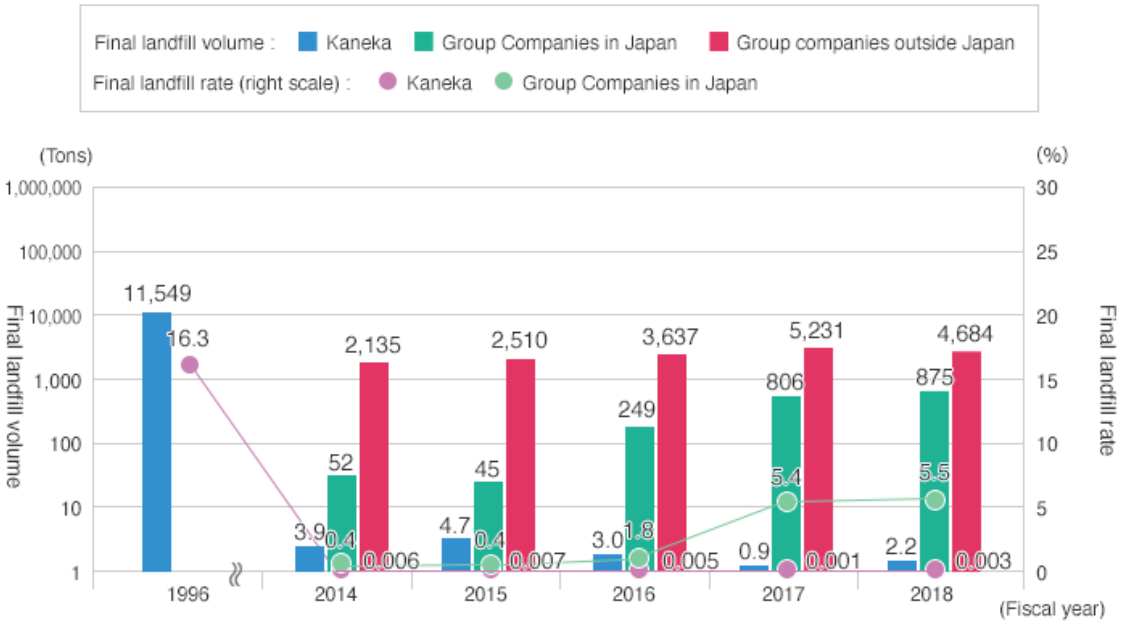
Amounts reported here may not fully match, due to rounding.

Reducing Waste and Recycling Resources

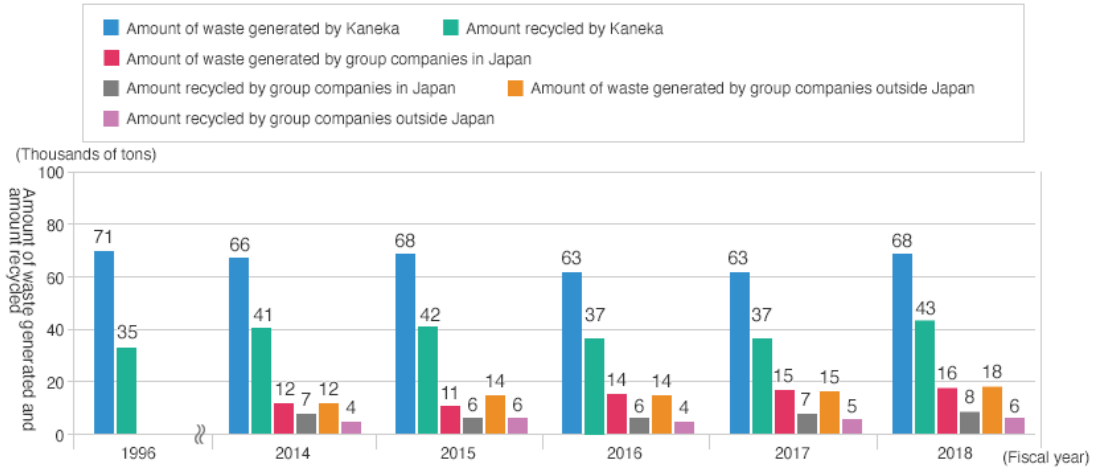
We effectively achieved zero emissions in fiscal 2018, with a final landfill volume for Kaneka of 2.2 tons, equivalent to a final landfill rate of 0.003%.
The final landfill rate of 46 Group companies in Japan in fiscal 2018 failed to achieve zero emissions, with a rate of 5.5%, since emission improvements were not fully realized partly due to China's trade embargo on waste plastics.

Cutting Waste Sent to Landfill

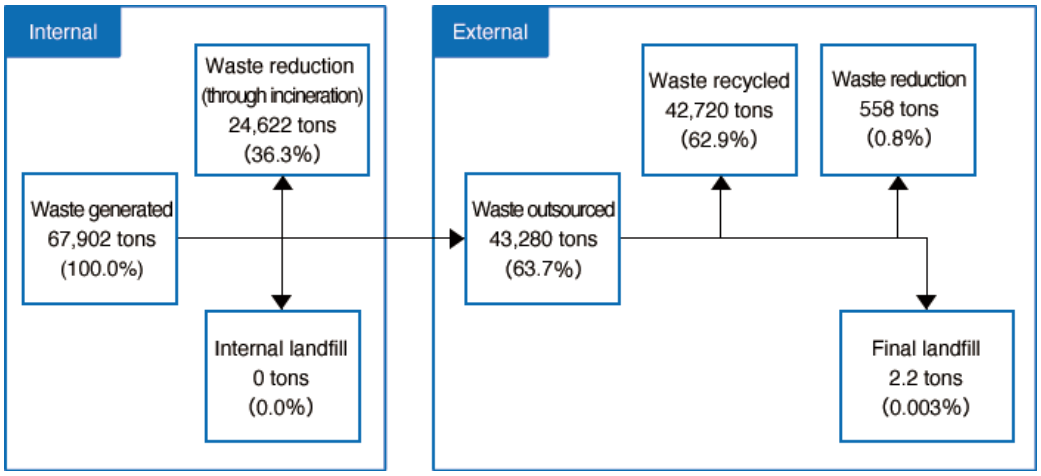
■ Volume and Ratio of Waste sent to Landfill



■ Waste Generated and Recycled



■ Waste Flow: From Generation to Landfill (FY 2018 actual)



Safety / Quality

Occupation Safety and Health

Zero Accident Principles

◆**All people, you and me, are indispensable**

We ensure everyone is working safely. **Pledge of safety**

◆ **Safety is everyone's responsibility**

We do not miss sparing the time to seek safety. **Participation in safety**

◆ **There is no trick to safety**

We always value a fundamental approach to it. **Adherence to safety basics**

◆ **Be aware of potential danger**

We endeavor to eliminate safety risks. **Safety in advance**

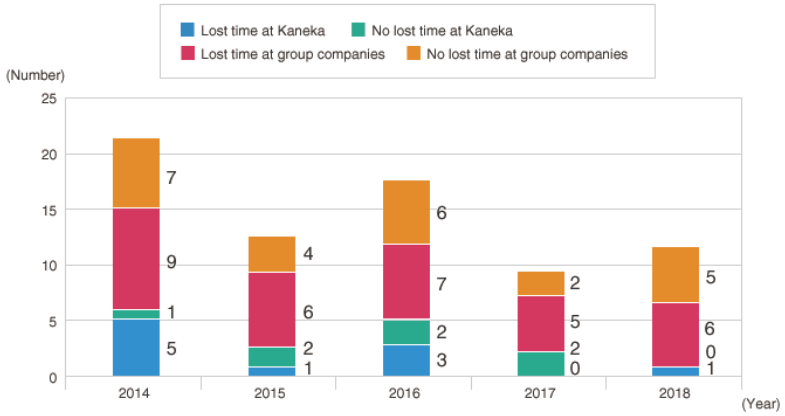
◆ **Where there is carelessness, there is the possibility of an accident**

We do not allow even a small chance of negligence. **99%, yet 0%**

■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

■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.

■Accident Frequency Rate And Accident Severity Rate

Area	All Kaneka Group		Kaneka		Group Companies in Japan and Overseas	
Year	2017	2018	2017	2018	2017	2018
Accident Frequency Rate	0.31	0.23	0	0	0.47	0.36
Accident Severity Rate	0.01	0.02	0	0	0.01	0.03

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

Both rates are calculated targeting employees at Kaneka and Group companies.

■In-house Safety Commendation

Group Company	Zero Accident Period (as of the end of fiscal 2018)
OLED Aomori Co., Ltd.	December 2012 – (6 years and 3 months)
Kaneka Kanto Styrol Co., Ltd.	December 2012 – (6 years and 3 months)
Sanvic Inc.	February 2014 – (5 years and 1 months)
Tamai Kasei Co., Ltd.	March 2011 – (8 years and 0 months)

Process Safety and Disaster Prevention

Basic Safety Policies

- Safety forms our management foundation, and is the basis of all corporate activities.
- Safety is the foundation of local and worldwide communities' confidence in Kaneka.
- Safety is based on our belief that "All accidents can be prevented."
- Safety is the responsibility of every employee in accordance with his/her duties.
- Safety must be maintained continuously.

■Comprehensive Disaster Drills

Manufacturing Site	Date	Participants	Details
Takasago Manufacturing Site	December 14, 2018	2,079	The Manufacturing Site held a joint firefighting drill with the Takasago City Fire Department based on the scenario of an earthquake resulting in a fire caused by combustible gas leakage.
Osaka Manufacturing Site	October 25, 2018	1,101	The Manufacturing Site held a joint firefighting drill with the Settsu City Fire Department based on the scenario of an earthquake resulting in a fire caused by combustible gas leakage.
Shiga Manufacturing Site	November 14, 2018	479	The Manufacturing Site held a firefighting drill based on the scenario of an earthquake resulting in a fire in a production building.
Kashima Manufacturing Site	October 18, 2018	130	The Manufacturing Site held a firefighting drill based on the scenario of an earthquake resulting in a fire caused by high-pressure gas leakage (West area).
	November 27, 2018	230	The Manufacturing Site held a damage expansion prevention drill with the East Industrial Complex Joint Facility Team on the scenario of an earthquake resulting in high-pressure gas leakage (East area).

Product Responsibility

ISO 9001 Certification of Kaneka and Group Companies

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 / 10189365
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)	
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), 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 / YKA0935762
	Highly heat-resistant and light-resistant resins and molded products	DNV / 01635-2006-AQ-KOB-RvA/JAB
PV & Energy management SV Kaneka Solartech Corporation Kaneka Solar Marketing Corporation	Photovoltaic modules	JQA / JQA-QMA13200
Foods & Agris SV Takasago Manufacturing Site Foods Manufacturing Department	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,	JQA / JQA-QMA10274

Kaneka Foods Manufacturing Corporation	prepared foods, yeast, antifreeze protein, antifreeze polysaccharide, and seasoning materials	
Tokyo Kaneka Foods Manufacturing Corporation		
Nagashima Shokuhin Co., Ltd.		
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 / 3882662
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.	Polystyrene foam molded products	JACO / QC03J0233
Kaneka Foam Plastics Co., Ltd. Moka Plant	Bead technique-based polyolefin molded products	ASR / Q1919
Kaneka Foam Plastics Co., Ltd. Kyusyu Plant	Bead technique-based polyolefin molded products	JACO / QC17J0033
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
Kaneka Sun Spice Corporation	(1) Spices and secondary processed products incorporating spices (2) Purchase and sales of general processed foods and their ingredients	JQA / JQA-QMA11351

Tochigi Kaneka Corporation	Bonded magnets (Kaneka Flux), multilayer insulation materials, and high thermal-conductive graphite sheet (Graphinity)	LRQA / YKA0958035
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 028i
Kaneka North America LLC	Ultra-heat-resistant polyimide films (Apical), modifier resins (Kane Ace and 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 Apical Malaysia Sdn. Bhd.	Ultra-heat-resistant polyimide films (Apical)	SIRIM QAS / AR6269
	High thermal-conductive graphite sheet (Graphinity)	SIRIM QAS / AR6270
Kaneka Eperan Sdn. Bhd.	Bead technique-based polyolefins (Eperan, Eperan PP)	SIRIM QAS / AR2598
Kaneka Paste Polymers Sdn. Bhd.	Vinyl chloride paste resin	SIRIM QAS / AR2321
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. / USA16Q27833R0S
Kaneka Innovative Fibers Sdn. Bhd.	Synthetic fibers	SIRIM QAS / AR2321
KSS Vietnam Co., Ltd.	Processed spices, herbs, dried vegetables, and mixed spices	Intertek Certification Limited / CPRJ-2015-040996
Kaneka Eurogentec S.A.	Products and services for research and development in life science	BSI / FS 638601
Anaspec Inc.	Peptides, antibodies, synthetic resins, amino acids, and reagents for research	SQA/09.357.1

ISO 13485 Certification of Kaneka and Group Companies (*1)

Division or Group Company (SV: Solutions Vehicle)	Main Products	Registry Organization and Number
Medical Devices SV	Lixelle, liposorber, catheters, silascon, and ED coil	TÜV SÜD / Q5 024736 0069
Kaneka Medix Corporation		
Kaneka Pharma Vietnam Co., Ltd.	Catheters (parts)	
River Seiko Corporation	Endoscopic instruments	
Kaneka Eurogentec S.A.	*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 of Kaneka and Group Companies (*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

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

Food Safety System Certification 22000 (FSSC 22000) Certification of Kaneka and Group Companies (*3)

Division or Group Company (SV: Solutions Vehicle)	Main Products	Registry Organization and Number
Foods & Agris SV	Margarine, shortening, flour paste, butter cream, edible oils and fats, edible refined oils and fats, concentrated milk products, modified milk, cheese, whipped cream, yeast, fermented milk products, antifreeze protein, antifreeze polysaccharide, and seasoning materials	JQA / JQA-FC0047
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-FC109

*3 FSSC22000 is a sector for food safety management system, which based on the ISO 22000 with the addition of ISO/TS 22002-1 requirements.

ISO 22716 Certification of Group Companies (*4)

Group Company	Main Products	Registry Organization and Number
Taiyo Yushi Corporation	Shampoos, conditioners, body soaps, and hand creams	BVJ / 3889080

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

Job Satisfaction / Diversity

Note: The data is for Kaneka alone. If other data is included, an annotation has been added.

■Human Rights Education

Program Name	Content	Fiscal 2016 No. of participants	Fiscal 2017 No. of participants	Fiscal 2018 No. of participants
Training sessions for new employees	Training concerning sexual harassment, power harassment, and discrimination based on nationality, and other issues	148	137	131
New managers training	Human rights education session with external experts	45	46	48

■Implementation of Career Development and Life Design Support Activities

Program Name	Fiscal 2016 No. of participants (No. of training sessions)	Fiscal 2017 No. of participants (No. of training sessions)	Fiscal 2018 No. of participants (No. of training sessions)
Career–design training	230	382	272
Life–design training	172 (15)	63 (7)	75 (6)

■Global Human Resource Development

Program Name	Content	Fiscal 2016 No. of participants	Fiscal 2017 No. of participants	Fiscal 2017 No. of participants
Global Employee Development Program	Practical acquisition of foreign language for communication	(Registrants) 2,021	(Registrants) 2,215	(Registrants) 2,394
English and Chinese language trainings	Acquisition of languages required for overseas business	89	55	46
Overseas Trainee Dispatch Program	One–year work experience at a group company outside Japan	17	12	7

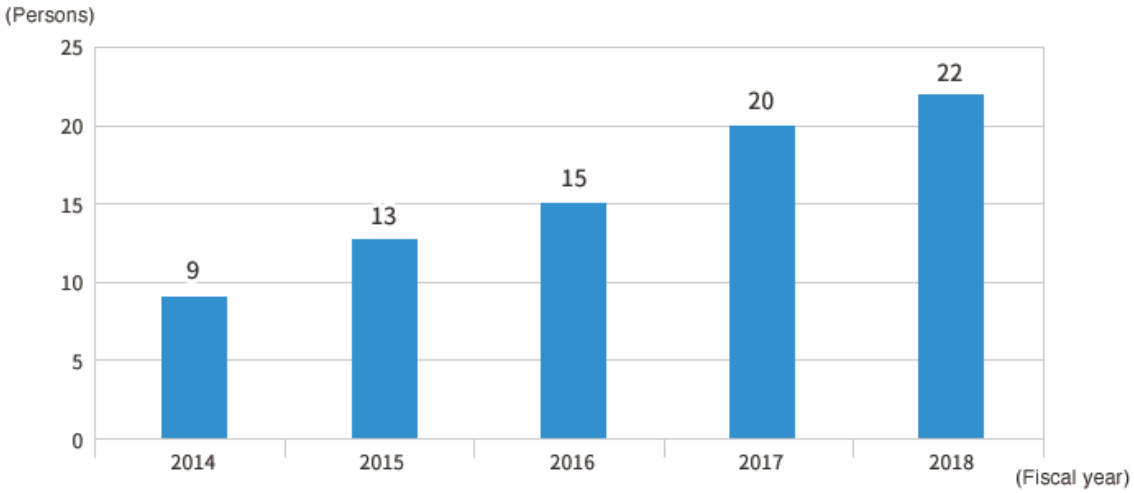
In addition to the above, we provide various other programs/systems, including the overseas language study program and the language training before overseas transfer.

■ Development of Leaders

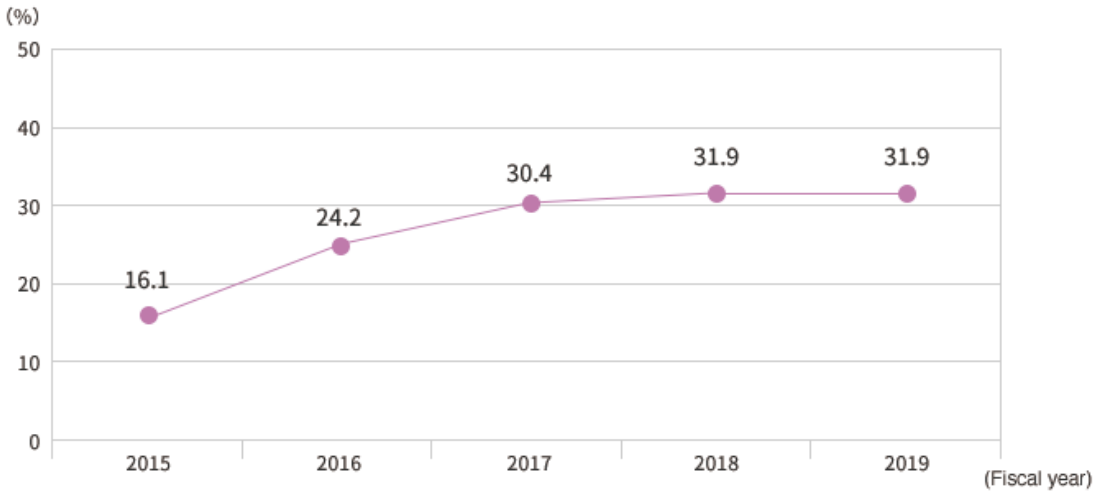
Program Name	Content	Fiscal 2016 No. of participants	Fiscal 2017 No. of participants	Fiscal 2018 No. of participants	Total from the start of the program No. of participants
Hitotsubu-no Tane Momi Juku	Lectures and exercises by the top management and first-class instructing staff targeted at future leaders and management personnel	13	12	12	49
Kaneka Creative Corner	Lectures and exercises by the top management and first-class instructing staff targeted at future leaders of national staff	10	12	12	34
The Leadership Challenge Workshop	Acquiring and practicing leadership skills and follow–up	(outside Japan) 102	(outside Japan) 24	(outside Japan) 21	(outside Japan) 428
		(in Japan) 197	(in Japan) 236	(in Japan) 288	(in Japan) 951

Note: Aggregated data for Kaneka and group companies in and outside Japan

■ Number of Female Executives



Ratio of Women Hired

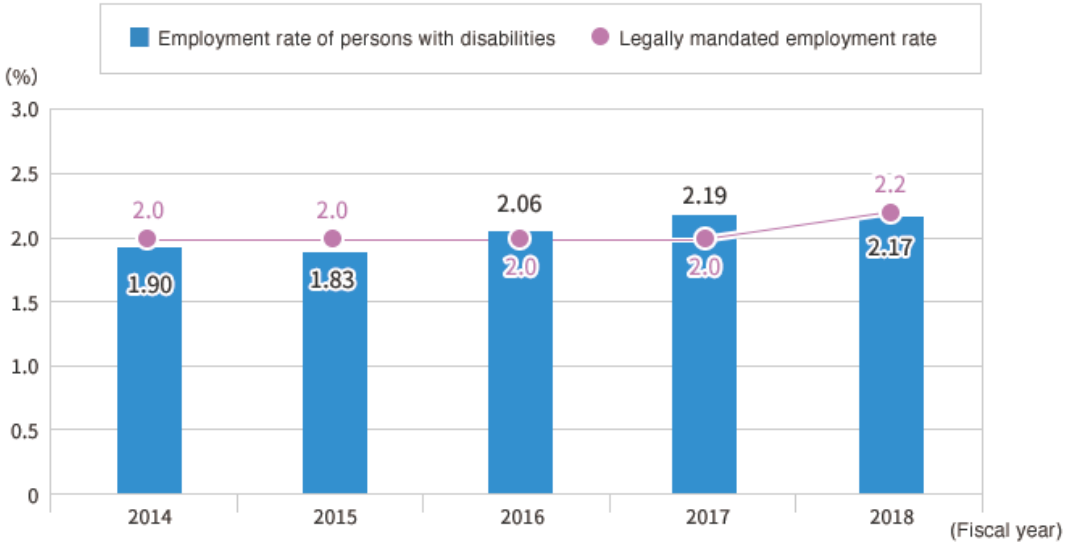


Note: Ratio of new female graduates who graduated from technical colleges, universities, and higher-level schools

Changes in New Hires Who Come from Countries Other than Japan (New Graduates)

Year Hired	Technical Staff	Clerical Staff	Total
2015	2	2	4
2016	5	2	7
2017	3	1	4
2018	0	1	1

Employment Rate of Persons with Disabilities



■ Number of Users

Name of Program	Term and Period	Fiscal 2016	Fiscal 2017	Fiscal 2018
Childcare leave	By the day before the child becomes 2 years and 6 months old	(male) 3 (female)37	(male) 2 (female)44	(male) 4 (female)21
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) 46 (female)60	(male) 60 (female)62	(male) 72 (female)59
Shorter work–hours program	By the beginning of a semester for child in 7th grade (maximum of 2 hours per day per person)	(male) 1 (female)41	(male) 0 (female)48	(male) 1 (female)69
Babysitting Expenses Aid System	Company covers part of babysitting expenses for a child ages 0 to 2	29	26	23
Nursing care leave	1 year or less for one eligible family member	1	2	0
Telecommuting	Employees in pregnancy, child–rearing (by the beginning of a semester for child in 7th grade) or nursing care can work at home (4 days per month)	18	21	34
Leave of Absence for Spouse's Overseas Transfer System	A maximum of 3 years from the day when the employee's spouse is transferred abroad	1	1	2