

Data Sheet 2021

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[Third-Party Assurance]

For data of indicators related to climate change and environment protection from April 1, 2020 to March 31, 2021, we have received the third-party assurance by KPMG AZSA Sustainability Co., Ltd. to ensure the reliability and transparency of Data Sheet 2021. The indicators subject to assurance are marked with the " \star " symbols.

[Data of Indicators Related to Environment]

For details, please refer to "Calculation Methods for Data of Indicators related to Environment" starting on P38.

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.

Important matters pertaining to the protection of the global environment are decided by the Earth Environment Subcommittee and 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 mid-term management plan also focuses on strengthening initiatives on important matters to further improve our ESG management.

Environmental Management

By providing solutions that contribute to the global environment and a rich life and working to reduce environmental impacts and disclose timely information in fundamental business domains, Kaneka Group engages in various environmental initiatives.

To realize a sustainable society, Kaneka Group continues working to reduce environmental impacts and risks, by complying with environmental regulations and legislation, such as the Air Pollution Control Act and the Water Pollution Control Act, and with criteria in agreements with local governments and by checking compliance with them through various means, including internal audits and ESG safety and quality inspections.

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 Office, Mie Office	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

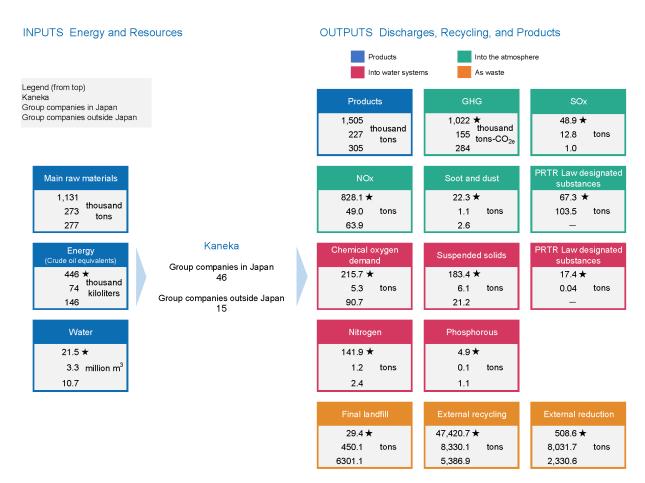
■ Eco-Action 21 Certification

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

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 2020, the main raw material, energy consumption and water inputs decreased by 52 thousand tons (3.0%), 12 thousand kiloliters (1.7%) and 1.5 million m^3 (4.0%), respectively from the previous year. The GHG, SOx, COD and SS outputs decreased by 21.9 thousand tons- CO_2e (1.5%), 24.9 tons (28.4%), 81.6 tons (20.7%) and 37.3 tons (15.0%), respectively. Meanwhile, the product increased by 2.6 thousand tons (3.3%), the amount of externally recycled waste increased by 9,034 tons (17.3%) due to the increase in the amount of waste generated by Kaneka, and the final landfill waste output increased by 725.4 tons (12.0%) due to the differences in the product mix for some Group companies outside Japan.



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 P38.

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, targeting all parent manufacturing sites and 30 Group companies in Japan (manufacturing companies).

■ Environmental Costs (Investments, Expenditures)

(Millions of yen)

		Fiscal 2018		Fiscal 2019		Fiscal 2020	
Cost Classifications	Main Efforts	Invest- ments	Expendi- tures	Invest- ments	Expendi- tures	Invest- ments	Expendi- tures
Business Area		901	5, 4 60	1,314	5,6 4 7	1,049	5,637
Pollution Prevention	Air and water pollution prevention	899	3,476	1,293	3,550	947	3,338
Environmental Conservation	Addressing climate change and energy saving	-	-	-	-	-	-
3. Resource Recycling	Waste processing, recycling, and reduction	2	1,984	20	2,096	102	2,299
Upstream and Downstream	Product recycling, collection, and processing	0	6	0	8	0	25
Management Activities	Environmental education for employees and environmental impact monitoring and measurement	1	444	7	463	0	397
Research and Development	Research and development of products contributing to environmental conservation	-	7,477	-	9,364	-	9,169
Social Activities	Greening, beautification, and disclosure of environmental information	0	78	0	113	1	114
Environmental Damage	Payment of sulfur oxide emission charges	0	10	0	9	0	8
	Total	902	13,475	1,321	15,604	1,050	15,350

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 Kaneka's own unique way of thinking.

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 2018	Fiscal 2019	Fiscal 2020
		SOx emissions	Tons	109.5	86.7	61.7
Pollution	Atmospheric and	NOx emissions	Tons	867.6	871.7	877.1
Prevention (*1)	water discharges of hazardous	Chemical oxygen demand	Tons	248.7	234.7	220.9
	substances	PRTR Law-designated chemical emissions	Tons	183.6	186.3	188.3
Environment	Greenhouse gas emissions	GHG emissions	Thousand tons-CO ₂ e	1,272.3	1,189.6	1,177.7
(*2)	Energy consumption	Crude oil equivalents	Thousand kiloliters	526.5	508.0	520.4
Resource	Final landfill	Landfill	Tons	877.2	760.8	479.5
Recycling (*1)	External recycling	Amounts recycled	Tons	51,000.7	47,263.3	55,750.8

^{*1} Data for prior fiscal years has been adjusted due to refinements.

■ Economic Impacts of Environmental Measures

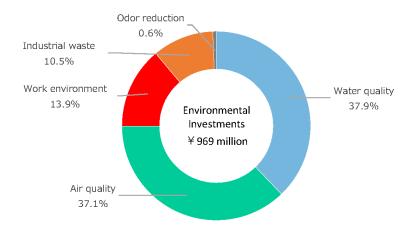
(Millions of yen)

Measures	Fiscal 2018	Fiscal 2019	Fiscal 2020
Revenue from recycling	213	131	189
Cost reductions by better resource efficiency (output per unit of input)	-34	8	1,335
Waste disposal cost reductions by recycling	450	253	481
Cost reductions by energy conservation	247	227	24
Total	876	619	2,028

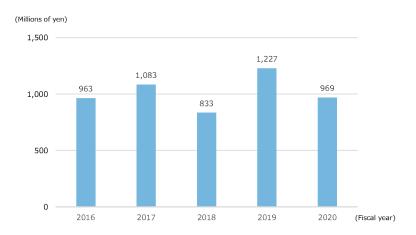
^{*2} Due to a change in the calculation method of GHG emissions, electricity or steam sold by Kaneka to outside parties that was previously deducted from Kaneka's energy consumption under the Energy Saving Law (Act on the Rationalization etc. of Energy Use of Japan) is no longer deducted. Data for prior fiscal years has been recalculated accordingly.

Environmental Investments (Kaneka)

■ Environmental Investments in Fiscal 2020

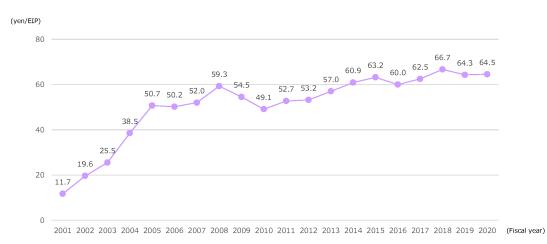


■ Cumulative Environmental Investments

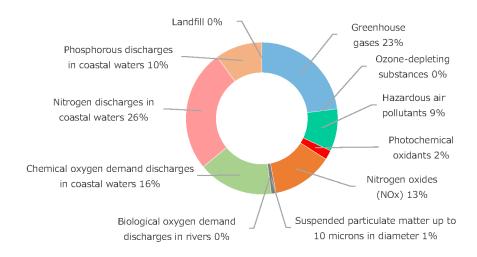


Environmental Efficiency (Kaneka)

■ Environmental Efficiency



■ Details of Total Environmental Impact



Fiscal Year	Net Sales (million yen)	Environmental Impact (100 million EIPs)	Environmental Efficiency (yen/EIP)
2018	304,951	45.7	66.7
2019	292,084	45.4	64.3
2020	279,774	43.3	64.5

CHECK&ACT

Under environmentally friendly management, we continue working to reduce environmental risks by complying with environmental regulations and legislation and criteria in agreements with local governments and by checking compliance with them through various means, including ISO 14001 internal audits and ESG safety and quality inspections.

We will also continue working to further reduce environmental impact and improve environmental efficiency by promoting energy conservation activities.

Initiatives for Climate Change

To address prevention global warming, we at the Kaneka Group are working to promote energy conservation and reduce CO₂ emission intensity through various measures, for example by utilizing our own environmental capital investment program.

We also use carbon-Life Cycle Analysis (cLCA) to calculate CO₂ emission reduction benefits by quantitatively assessing CO₂ emissions throughout product lifecycle, making comparisons with similar products. We also calculate indirect greenhouse gas (GHG) emissions (Scope 3) associated with our business activities through supply chains.

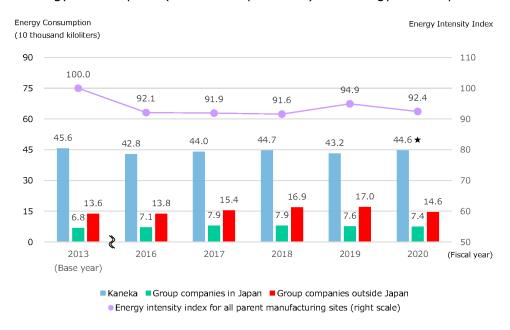
Energy Conservation Efforts

We are engaged in energy conservation activities, using the energy intensity index as an indicator for management.

The energy intensity index for all parent manufacturing sites in fiscal 2020 was 92.4, a decrease of 2.6% from the previous fiscal year, and reached our goal of an annual average decrease of 1%. The average rate of change over the five-year period was an increase of 0.1%, which did not reach our goal (an annual average decrease of 1%). This was due mainly to differences in the purchased fuel mix and other materials in fiscal 2016, the first year of the five-year period, as well as differences in the product mix, including a decrease in production volume.

Kaneka's energy consumption was 446 thousand kiloliters, an increase of 3.3% from the previous fiscal year, mainly due to an increase in production volume.

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



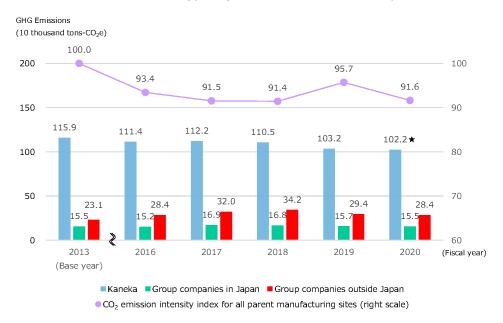
Note: Due to a change in the calculation method of GHG emissions, electricity or steam sold by Kaneka to outside parties that was previously deducted from Kaneka's energy consumption under the Energy Saving Law (Act on the Rationalization etc. of Energy Use of Japan) is no longer deducted. Data for prior fiscal years has been recalculated accordingly.

Initiatives to Cut CO₂ Emission Intensity

At Kaneka, we are working to reduce CO_2 emission intensity, using a CO_2 emission intensity index as an indicator for management, based on CO_2 emissions from energy consumption associated with production activities.

In fiscal 2020, the index for all parent manufacturing sites was 91.6, achieved our fiscal 2020 target of 93.2. Kaneka's GHG emissions decreased by 0.9% from the previous year to 1,022 thousand tons- CO_2e , due to a reduction in the CO_2 emission factor for electricity. We will continue to set medium to long term targets based on the carbon-neutral strategy now under discussion and streamline production processes through innovation to reduce GHG emissions.

■ GHG Emissions and Energy Origin CO₂ Emission Intensity Index



Note: The method for calculating GHG emissions has been changed to comply with the Greenhouse Gas Protocol, "A Corporate Accounting and Reporting Standard REVISED EDITION". Data for prior fiscal years has been recalculated accordingly. GHG emissions originated from electricity and steam sold by Kaneka to outside parties that was previously deducted from Kaneka's GHG emissions under the Act on Promotion of Global Warming Countermeasures is no longer deducted. In addition, emission factors for the purchased electricity of Kaneka and Group companies in Japan have been changed from the basic emission factors based on the Act on Promotion of Global Warming Countermeasures to adjusted emission factors.

GHG Emissions from Business Activities throughout the Supply Chain

We have calculated indirect GHG emissions (Scope 3) associated with our business activities through supply chains. The following tables show Kaneka's GHG emissions by scope and Scope 3 emissions calculated by category.

■ Scope 1 and 2 Emissions (Kaneka)

Category		Fiscal 2020 results (Thousand tons-CO₂e)
Scope 1	Direct emissions (*1)	759.9★
Scope 2 Indirect emissions from energy consumption (*2)		262.5★
	Total of Scope 1 and 2 emissions	1,022.4

■ Scope 3 Emissions (Kaneka)

Category		Fiscal 2020 results (Thousand tons-CO ₂ e)
Scope 3	Other indirect emissions (upstream/downstream) (*1)	2,905.0

^{*1} Non-energy origin CO₂ emissions and CO₂-equivalent of methane and N₂O emissions are included.

■ Scope 3 Emissions Calculated by Category (Kaneka)

	Category	GHG emissions Fiscal 2020 results (Thousand tons-CO₂e)
1	Purchased goods/services	1,742.6★
2	Capital goods	46.2
3	Fuel-and energy-related activities not included in Scope 1 or Scope 2	148.8★
4	Upstream transportation and distribution	20.9★
5	Waste generated in operations	5.4★
6	Business travel	2.3
7	Employee commuting	0.9
8	Upstream leased assets	0.0
9	Downstream transportation and distribution	-(*3)
10	Processing of sold products	-(*3)
11	Use of sold products	-(*4)
12	End-of-life treatment of sold products	528.7

^{*2} As emission factors for electricity, the adjusted emission factor for each power company was used for calculation. GHG emissions calculated using the location-based method were 352.0 (+9.4%).

13	Downstream leased assets	0.0
14	Franchises	-(*5)
15	Investments	409.2
	Total of Scope 3 emissions	2,905.0

^{*3} 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.

Investments in Energy-Efficient Facilities

■ Results of Our Own Environmental Capital Investment Program

Fiscal Year	Investments	Number	Reduced CO ₂ Emission of the Year
2016	¥200 million	23	1,688 tons-CO ₂
2017	¥200 million	15	1,654 tons-CO₂
2018	¥200 million	24	1,748 tons-CO₂
2019	¥200 million	29	1,227 tons-CO ₂
2020	¥200 million	27	1,010 tons-CO ₂

Energy-Efficiency Initiatives in Logistics

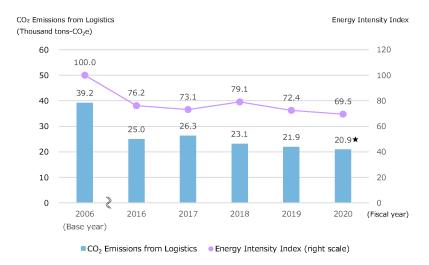
To achieve an annual 1% reduction in energy intensity and a continuation of 1% improvement in five-year average energy intensity as a specified consigner under the amended Act on Rational Use of Energy, we continued working plant by plant towards implementing modal shifts, promoting joint distribution, and improving cargo load ratios.

In fiscal 2020, the transportation volume (ton-kilometer) decreased year-on-year. Meanwhile, our CO_2 emissions decreased by 1.0 thousand tons- CO_2 year-on-year due to the promotion of shipping transportation, resulting in an improvement of 2.9 points in the energy intensity index.

^{*4} 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.

^{*5} GHG emissions for this category were not calculated because we have no franchise stores.

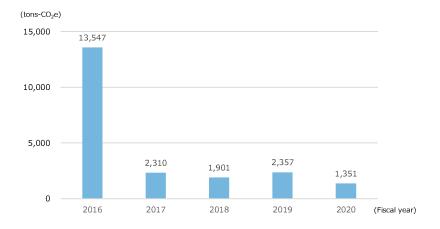
■CO₂ Emissions and Energy Intensity Index from Logistics (Kaneka)



Response to the Fluorocarbons Emission Control Law

Complying with the Act on Rational Use and Appropriate Management of Fluorocarbons in Japan, we are promoting the replacement of aging equipment as well as strengthened management of equipment.

■ Estimated Leakage of Fluorocarbons at Kaneka



Preventing Pollution and Managing Chemical Substances

Kaneka Group works to prevent air and water pollution and to ensure appropriate management of chemical substances toxic to humans and the environment and reduce their emissions.

Preventing Air and Water Pollution

We are engaged in production activities in compliance with the standards specified in the Air Pollution Control Act and the Water Pollution Control Act as well as the criteria in agreements with local governments.

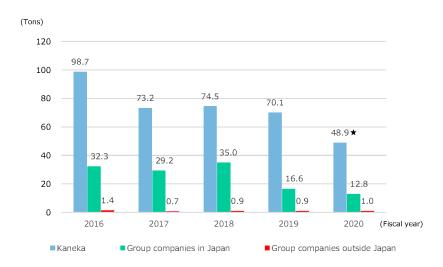
Regarding the atmosphere, SOx and NOx emissions from all parent manufacturing sites decreased, but soot and dust emissions increased in fiscal 2020 from the previous fiscal year. From Group companies in Japan, SOx emissions also decreased, but NOx emissions increased year-on-year.

In terms of water, there was a decrease in chemical oxygen demand, nitrogen, and phosphorous emissions and an increase in suspended solid emissions at all parent manufacturing sites and non-manufacturing facilities.

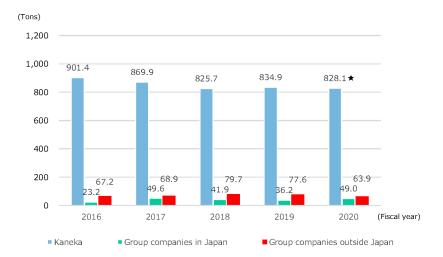
At Group companies outside Japan, chemical oxygen demand and suspended solid emissions decreased due to improved monitoring of wastewater processes and changes in processing conditions, influenced by the product types.

Note: In the past, an estimated value was used for facility operation hours in calculating soot and dust emissions of some manufacturing sites. To improve accuracy, we have adopted actual facility operation hours since fiscal 2020. Emissions calculated by the former method were 23.4 tons. In addition, to reflect the improved accuracy, values for water consumption, wastewater discharges, chemical oxygen demand in wastewater, nitrogen in wastewater, phosphorus in wastewater, and suspended solids in wastewater at Kaneka were revised in fiscal 2019.

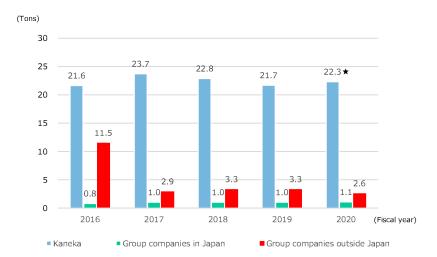
■S0x Emissions



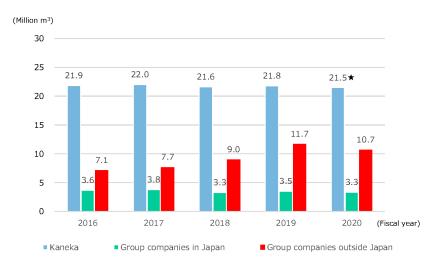
■ NOx Emissions



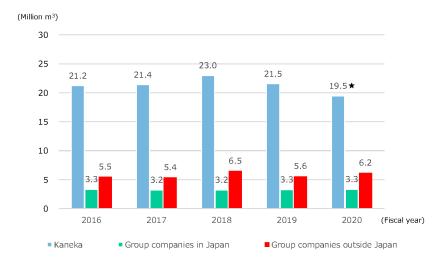
■ Soot and Dust Emissions



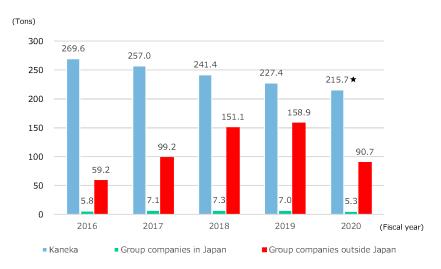
■ Water Consumption (*1)



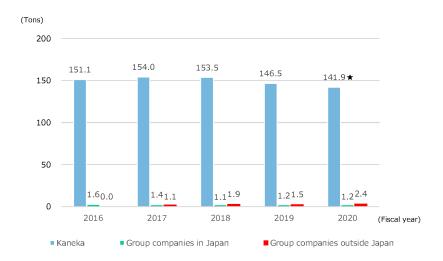
■ Wastewater Discharges (*1)



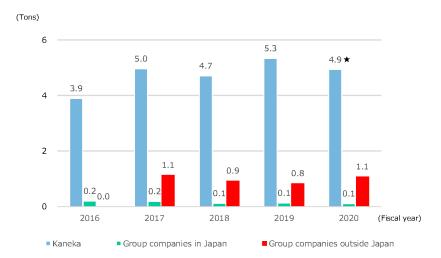
■ Chemical Oxygen Demand in Wastewater (*1)



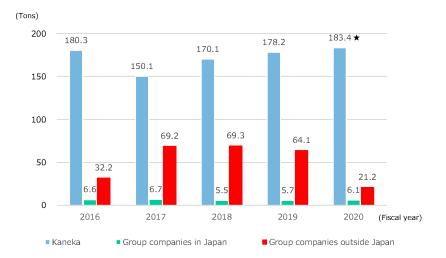
■ Nitrogen in Wastewater (*1)



■ Phosphorous in Wastewater (*1)



■ Suspended Solids in Wastewater (*1)



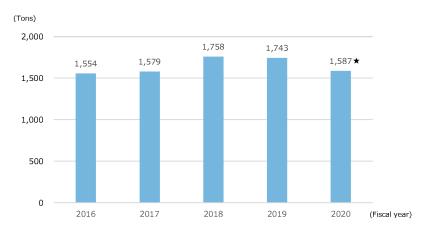
*1 Our water consumption and wastewater volume include those generated from non-manufacturing facilities other than the plant department.

Volatile Organic Compounds Emission Reductions

We are committed to reducing the emission of VOCs (*2), which are known to cause photochemical smog. In fiscal 2015, we at Kaneka set the goal of controlling VOC emissions to below 1,800 tons. In fiscal 2020, total emissions were 1,587 tons, a decrease of 9.0% from the previous fiscal year. We will continue our efforts to manage VOC emissions.

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

■ VOC emissions (Kaneka)

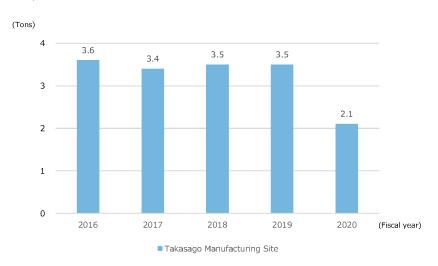


Hazardous Atmospheric Pollutants (Data of six substances for each manufacturing site of Kaneka)

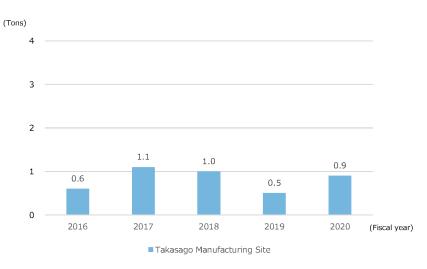
■ Chloroethylene Emissions



■1,2-Dichloroethane Emissions



■ Chloroform Emissions

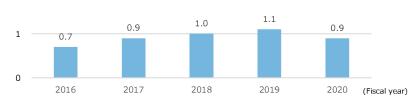


■ Acrylonitrile Emissions



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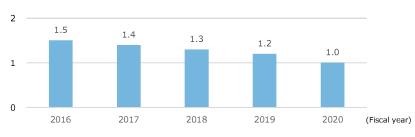
■ Takasago Manufacturing Site

■1,3-Butadiene Emissions

(Tons)

4

3

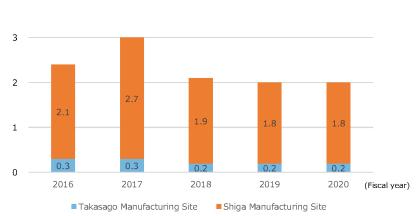


■ Takasago Manufacturing Site

■ Dichloromethane Emissions

(Tons)

4 –



19

Substances Subject to the PRTR Law

Based on the Act on the Assessment of Releases of Specified Chemical Substances in the Environment and the Promotion of Management Improvement (PRTR Law), we calculate the release and transfer amount of chemical substances subject to the law.

In fiscal 2020, Kaneka's total discharge of the relevant substances was 84.7 tons, an increase of 5.5 tons from the previous fiscal year. The total discharge by Group companies in Japan was 103.5 tons, an decrease of 3.6 tons compared to the previous fiscal year.

■ Kaneka Emissions Subject to the PRTR Law

(Kilograms)

			Fiscal 2020						
	Designated			Er		Transferred	Emissions		
	Number under Ordinance	Chemical Substances	Atmospheric Emissions	Discharges into Public Waterways	Discharges into Soil	Internal Landfill	Total	Total	Total
	94	Chloroethylene (vinyl chloride)	17,900	200	0	0	18,100	980	13,300
	392	N-hexane	15,400	0	0	0	15,400	71,752	13,600
	275	Sodium dodecyl sulfate	0	8,400	0	0	8,400	0	8,200
Large	240	Styrene	5,230	38	0	0	5,268	13,770	5,449
Discharges	420	Methyl methacrylate	5,200	2	0	0	5,202	10	5,205
of 10 Substances	134	Vinyl acetate	4,000	260	0	0	4,260	0	4,440
Substances	7	N-butyl acrylate	3,910	0	0	0	3,910	2,630	4,150
	232	N,N- dimethylformamide	2,500	1,000	0	0	3,500	360,000	3,430
	336	Hydroquinone	0	2,200	0	0	2,200	0	2,400
	157	1,2-dichloroethane	2,100	10	0	0	2,110	0	3,480
Total Othe	Total Other than the 10 Substances Above		11,056	5,306	0	0	16,361	328,040	15,521
Gran	d Total for A	II Substances	67,296	17,416	0	0	84,711	777,182	79,175

Note: Of the 462 substances subject to the PRTR Law, Kaneka reports about 65 items.

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

(Kilograms)

				Fiscal 2020						
	Designated Number	Chemical		Er		Transferred	Emissions			
	under Ordinance	Substances	Atmospheric Emissions	Discharges into Public Waterways	Discharges into Soil	Internal Landfill	Total	Total	Total	
	232	N,N- dimethylformamide	45,045	0	0	0	45,045	13,739	62,000	
	300	Toluene	29,226	0	0	0	29,226	703,473	28,320	
	186	Dichloromethane (methylene dichloride)	22,722	0	0	0	22,722	382,378	9,780	
Large Discharges	296	1,2,4- trimethylbenzene	2,268	0	0	0	2,268	0	2,309	
of 10	80	Xylene	2,116	0	0	0	2,116	0	2,152	
Substances	392	N-hexane	1,200	0	0	0	1,200	23,100	1,050	
	355	Bis (2-ethylhexyl) phthalate (DEHP)	536	42	0	0	578	411	632	
	56	Ethylene oxide	329	0	0	0	329	0	0	
	127	Chloroform	50	0	0	0	50	450	255	
	438	Methylnaphthalene	36	0	0	0	36	0	0	
Total Othe	Total Other than the 10 Substances Above		0	1	0	0	2	35,372	601	
Gran	d Total for A	II Substances	103,529	43	0	0	103,572	1,158,923	107,099	

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

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

CHECK&ACT

We are working to reduce environmental impacts on air and water quality and ensure rapid response to any abnormality. The increase in emission by Group companies in Japan is mainly due to an increase in handling volume of dichloromethane. We will continue our efforts to reduce the discharge of chemical substances.

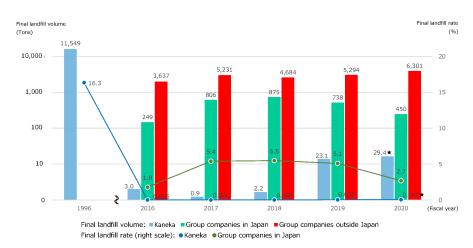
Reducing Waste and Recycling Resources

Through pursuing the 3Rs (*1) aimed at the reduction and recycling of industrial waste from our operations, Kaneka has been able to achieve zero emissions (*2) for 15 consecutive years. We are also working toward all Group companies in Japan being able to achieve zero emissions.

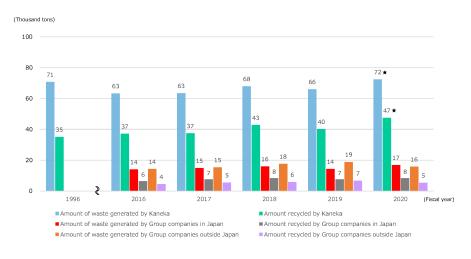
Cutting Industrial Waste Sent to Final Landfill

In fiscal 2020, we effectively achieved zero emissions, with a final landfill volume for all parent manufacturing sites of 29.4 tons, equivalent to a final landfill rate of 0.041%. The final landfill rate of 46 Group companies in Japan was 2.7%, showing an improvement of 2.4% from the previous year, but failed to achieve zero emissions.

■ Volume and Rate of Waste Sent to Final Landfill



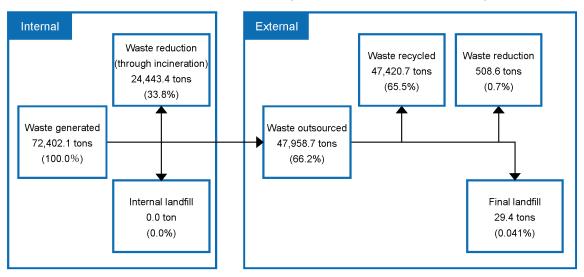
■ Waste Generated and Recycled



^{*1 3}Rs refers to reduce, reuse and recycle.

^{*2} Zero emission definition by Kaneka: The final landfill waste must be less than 0.5% of the generated waste.

■ Waste Flow: From Generation to Landfill (Fiscal 2020 results at Kaneka)



CHECK&ACT

For industrial waste, we will control waste generation to increase the recycling rate of waste from our operations at home and abroad.

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, we have set Quality Management Regulations to ensure product safety at all stages, from product design and development to delivery to customers.

Process Safety and Disaster Prevention

Basic Safety Policies

- ◆ Safety forms our management foundation, and is the basis of all corporate activities.

 We take action with priority given to ensuring safety in all activities in the company.
- Safety is the foundation of local and worldwide communities' confidence in Kaneka.
 We do our best to develop their trust.
- ◆ Safety is based on our belief that "All accidents can be prevented."

 We always move forward without being satisfied with lukewarm results.
- Safety is the responsibility of every employee in accordance with his/her duties.
 We fulfill our responsibilities by mutually clarifying the duties we have assumed.
- Safety must be maintained continuously.
 We ensure safety through steady efforts on a daily basis.

■ Comprehensive Disaster Drills

Manufacturing Site	Date	Participants	Details
Takasago Manufacturing Site	December 17, 2020	2,075	An earthquake resulting in a hazardous material leakage
Osaka Manufacturing Site	November 11, 2020	1,140	An earthquake resulting in a fire caused by hazardous material leakage
Shiga Manufacturing Site	November 11, 2020	395	An earthquake resulting in a fire
Kashima Manufacturing Site	March 18, 2021	70	A hazardous material leakage

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

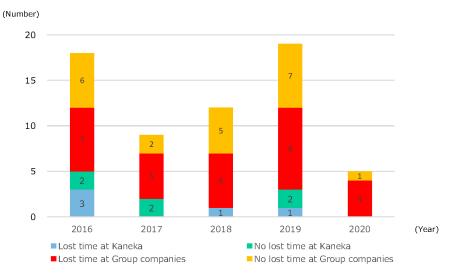
We do not allow even a small chance of negligence.

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 Kanel	ka Group	Kaneka		Group Compani Over	
Year	2019	2020	2019	2020	2019	2020
Accident	0.52	0.18	0.00	0.00	0.78	0,26
Frequency Rate	0.32	0.52	0.00	0.00	0.70	0.20
Accident	0.01	0.00	0.00	0.00	0.02	0.00
Severity Rate	0.01	0.00	0.00	0.00	0.02	0.00

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: 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.

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

President's Safety Award for No Accidents and No Disasters based on the Internal Standards (Fiscal 2020)

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 as a Safety-conscious Company by the Japan Chemical Industry Association

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)

Product Responsibility

Certification Acquisition Status

■ISO9001 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 [™])	
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 [™])	LRQA / ISO9001- 0066620
Green Planet Project	Biodegradable polymer (KANEKA Biodegradable Polymer Green Planet™)	
Foam & Residential Techs SV	Bead technique-based polyolefin resins and molded products (Eperan [™] , Eperan PP [™]), bead technique-based expandable	JCQA / JCQA-0673
Hokkaido Kanelite Co., Ltd. Kyushu Kanelite Co., Ltd.	polystyrene (Kanepearl $^{\text{TM}}$), and extruded polystyrene foam board (Kanelite $^{\text{TM}}$)	30QA / 30QA 00/3
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 / ISO9001- 0077397
	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	Design, development, manufacturing, sales, and services of photovoltaic modules Sales and services of photovoltaic power generation system materials	JQA / JQA- QMA13200

Foods & Agris SV			
Takasago Manufacturing	Margarine, shortening, edible oils and fats, edible refined oils and		
Site Foods Manufacturing	fats, whipped cream, concentrated milk products, modified milk,		
Department	fermented milk products, flour paste, butter cream, chocolate,		
Kaneka Foods	frozen dough, cheese, mayonnaise, cooking fillings, prepared		
Manufacturing Corporation	foods, yeast, antifreeze protein, antifreeze polysaccharide, and	JQA / JQA-	
Tokyo Kaneka Foods	seasoning materials	QMA10274	
Manufacturing Corporation			
	Purchase, design, sales, technological services, and quality		
Kaneka Foods Corporation	assurance for processed foods and raw materials, and sales of		
	food processing machinery		
NJF Co., Ltd.	Production instruction of processing contractors		
OLED Business		IMAOA / IMAOA	
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	JCQA / JCQA-0386	
	adhesives, sealants and special paints	SCQAY SCQA 0300	
Kanto Styrene Co., Ltd.	Manufacturing of polystyrene foam molded products	IIC / JN-1050.0	
Kaneka Foam Plastics Co., Ltd. Moka Plant	Bead technique-based polyolefin molded products	ASR / Q1919	
Kaneka Foam Plastics Co.,	Bead technique-based polyolefin molded products	ASR / Q4509	
Ltd. Kyusyu Plant	beda teeliiiiqae basea poiyoleiii iilolaea products	7.5.(7 Q 1303	
	A series of operations related to order receipt, manufacturing,		
Tamai Kasei Co., Ltd.	inspection, and shipping of Phase Change Material (PCM)	ASR / Q4131	
	(Pattherm™)		
Vienex Corporation	Electronic products	JSA / JSAQ2593	
Shinka Shokuhin Co., Ltd.	Modifiers for bread and confectionery, processed fruit products,	JQA / JQA-	
	outsourced products (margarine, cooking fillings, modified milk)	QMA15323	
	Margarine, shortening, edible refined oils and fats, edible	JQA / JQA-	
	vegetable oils and fats, refined lard, other edible oils and fats,	QMA14671	
Taiyo Yushi Corporation	processed fats, dairy products, and food additives		
	Cosmetics for hair and skin care, dental care items, body soaps,	BVJ / 4171923	
	and soaps for clothes , dish washing and house cleaning		

	T	т
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 / 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 [™] , 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	SIRIM QAS / QMS 00900
Kaneka Eperan Sdn. Bhd.	Bead technique-based polyolefins (Eperan™, Eperan PP™)	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.	Bead technique-based polyolefin resins and molded products (Eperan [™] , Eperan PP [™])	BSI / FM714676
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
	•	•

■ ISO13485 Certification (*1)

Division or Group Company (SV: Solutions Vehicle)	Main Products	Registry Organization and Number
Medical SV	Lixelle™, liposorber™, catheters, silascon™, and ED coil	
Kaneka Medix Corporation	Lixelle , liposorber , catrleters, shascorr , and ED con	TÜV SÜD / Q5 024736 0069
Kaneka Medical Vietnam	Catheters (parts)	
Co., Ltd.	Catheters (parts)	
Kaneka Medical Tech	Endoscopic instruments	
Corporation	Lindoscopic instruments	
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.

■ISO22000 Certification (*2)

Production Unit or Group Company	Main Products	Registry Organization and Number	
Takasago Manufacturing		CCC / 1D10 /	
Site	Coenzyme Q10 (Kaneka Q10™, Kaneka QH™)	SGS / JP10 / 030379	
Pharmaceutical Department			
Kaneka Sun Spice	Spices and secondary processed products incorporating spices	104 / 104 EC0122	
Corporation	Spices and secondary processed products incorporating spices	JQA / JQA-FS0123	
KSS Vietnam Co., Ltd.	S Vietnam Co., Ltd. Processing of spices, herbs, dried vegetables, and mixed spices		
Shinka Shokuhin Co., Ltd.	Modifiers for bread and confectionery, processed fruit products,	10A-ES0386	
Jillika Jilokullili Co., Ltu.	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	
	Margarine, shortening, flour paste, butter cream, edible oils and		
	fats, edible refined oils and fats, concentrated milk products,		
Foods & Agris SV	modified milk, cheese, whipped cream, yeast, fermented milk	JQA / JQA-FC0047	
	products, antifreeze protein, antifreeze polysaccharide, and		
	seasoning materials		
Takasago Manufacturing	Margarine, shortening, edible oils and fats, edible refined oils and	104 / 104 5004	
Site Foods Manufacturing	fats, whipped cream, concentrated milk products, modified milk,	JQA / JQA-FC0047- 1	
Department	and yeast		
Kaneka Foods	Margarine, flour paste, buttercream, cheese, fermented milk	104 / 104 50047	
Manufacturing Corporation	products, antifreeze protein, antifreeze polysaccharide, and	JQA / JQA-FC0047- 2	
	seasoning materials		
Tokyo Kaneka Foods	Margarine, shortening, flour paste, buttercream, and whipped	JQA / JQA-FC0047-	
Manufacturing Corporation	cream	3	
	Margarine, shortening, edible refined oils and fats, edible		
Taiyo Yushi Corporation	vegetable oils and fats, refined lard, other edible oils and fats,	JQA / JQA-FC0044	
	processed fats, and dairy products (butter)		
Nagashima Shokuhin Co., Ltd.	Frozen dough (pies and confectionery)	JQA / JQA-FC0109	

^{*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.

■ISO22716 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.

■ISO17025 Certification (*5)

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

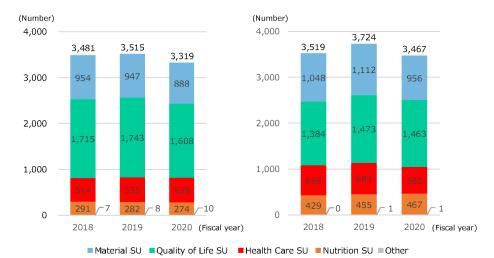
^{*5} ISO17025: General requirements for the competence of testing and calibration laboratories; Criteria based on which an accreditation body assesses whether the relevant testing and calibration laboratory can produce accurate measurement and calibration results.

Intellectual Property

■ Number of Patents Held

Number of Patents Held in Japan

Number of Patents Held outside Japan



Human Resources

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

Kaneka 1-on-1

■ Programs for Improving Quality of Communication

Program Name	Content	~Fiscal 2019 No. of participants	Fiscal 2020 No. of participants	Total from the start of the program No. of participants
	Lectures and exercises for improving the			
Kaneka 1-	coaching ability (listening, recognizing and			
on-1	questioning) of bosses conducted by a	205	155	360
Workshop	lecturer specialized in communication for			
	executives			

■ Development of Leaders

Program Name	Content	Fiscal 2018 No. of participants	Fiscal 2019 No. of participants	Fiscal 2020 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	12	12	12	73
Kaneka Creative Corner	Lectures and exercises by the top management and first-class instructing staff targeted at future leaders of national staff	12	- (*1)	- (*1)	34名
The Leadership Challenge Workshop	Acquiring and practicing leadership skills and follow-up	(outside Japan) 21 (in Japan)288	(outside Japan) 36 (in Japan)187	(outside Japan) - (*1) (in Japan)157	(outside Japan) 464 (in Japan)1,295

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

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

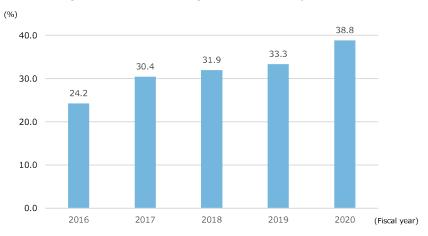
Welcoming Workplace

■ Human Rights Education

Program Name	Content	Fiscal 2018 No. of participants	Fiscal 2019 No. of participants	Fiscal 2020 No. of participants
Introductory Training for New Employees	Providing explanation about issues such as sexual harassment, power harassment and national origin discrimination	131	121	129
Training for Newly Appointed Executives	Human rights education provided by external specialist	48	59	59

Active Participation of Diverse Workforce

■ Percentage of Female Among New Recruits (from Universities and Technical Colleges)

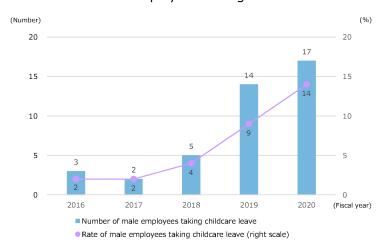


Note: The figures for fiscal 2019 includes those hired in spring and autumn.

■ Number of Female Executives and Assistant Managers



■ Number of Male Employees Taking Childcare Leave



■ Implementation of Career Development and Life Design Support Activities

Program Name	Fiscal 2018 No. of participants	Fiscal 2019 No. of participants	Fiscal 2020 No. of participants
Career-design Training	272	139	115
Life-design Training	75	- (*1)	157

^{*1} A life planning booklet was distributed to employees.

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

Year Hired	Technical Staff	Clerical Staff	Total
2016	5	2	7
2017	3	1	4
2018	0	1	1
2019	2	3	5 (*2)
2020	2	4	6 (*2)

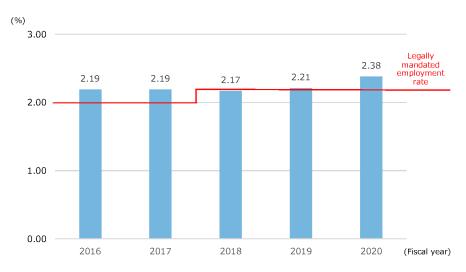
^{*2} The figures for fiscal 2019 includes those hired in spring and autumn.

■ Global Human Resource Development

Program Name	Content	Fiscal 2018 No. of participants	Fiscal 2019 No. of participants	Fiscal 2020 No. of participants
Global Employee	Practical acquisition of foreign language	(Registrants)	(*2)	(*2)
Development Program	for communication	2,394	- (*3)	- (*3)
English and Chinese	Acquisition of languages required for	46	76	70
Language Trainings	overseas business	10	, 0	, , ,
Overseas Trainee	One-year work experience at a group	7	10	2
Dispatch Program	company outside Japan	/	10	3

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

■ Employment Rate of Persons with Disabilities



^{*3} The Global Employee Development Program was not implemented because a full review was conducted for the program.

■ Number of Users

Name of program	Term and period	Fiscal 2018	Fiscal 2019	Fiscal 2020
Childcare Leave	By the day before the child becomes 2 years	(male)5	(male)14	(male)19
(on an Acquisition Basis)	and 6 months old	(female)44	(female)42	(female)43
	By the beginning of a semester for a child in the	(male)72	(male)81	(male)80
Child Nursing Care Leave	4th grade (5 days per year per person, maximum of 10 days per year for an employee with two or more children)	(female)59	(female)64	(female)47
Shorter Work-	By the beginning of a semester for child in 7th	(male)1	(male)2	(male)1
Hours Program	grade (maximum of 2 hours per day per person)	(female)63	(female)66	(female)60
Babysitting Expenses Aid System	Company covers part of babysitting expenses for a child ages 0 to 2	23	27	29

Nursing Care Leave	1 year or less for one eligible family member	0	1	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)	34	-(*4)	-(*4)
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	2	2	1

^{*4} From fiscal 2019: Eligibility expanded to all employees

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 (Crude Oil Equivalents)	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 and include all manufacturing sites and other facilities.
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 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 ₂ O 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. 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. 2018 emission factors are used for calculations of fiscal 2020 GHG emissions). The boundaries are the same as those for energy consumption. *Prior calculations were based on the Act on Promotion of Global Warming Countermeasures. For the Data Sheet 2021, however, a method was adopted under which electricity or steam sold by Kaneka to outside parties that was previously deducted from Kaneka's energy consumption is not deducted. Data for prior fiscal years has been recalculated accordingly. In addition, emission factors for the purchased electricity of Kaneka	Greenwase as (Gree)	
of energy origin CO ₂ emissions, non-energy origin CO ₂ emissions, and the CO ₂ equivalent of methane and N ₂ O 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. 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. 2018 emission factors are used for calculations of fiscal 2020 GHG emissions). The boundaries are the same as those for energy consumption. *Prior calculations were based on the Act on Promotion of Global Warming Countermeasures. For the Data Sheet 2021, however, a method was adopted under which electricity or steam sold by Kaneka to outside parties that was previously deducted from Kaneka's energy consumption is not deducted. Data for prior fiscal years has been recalculated accordingly. In addition, emission factors for the purchased electricity of Kaneka		GHG emissions are calculated referring the Greenhouse Gas Protocol, "A Corporate
methane and N ₂ O 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. 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. 2018 emission factors are used for calculations of fiscal 2020 GHG emissions). The boundaries are the same as those for energy consumption. *Prior calculations were based on the Act on Promotion of Global Warming Countermeasures. For the Data Sheet 2021, however, a method was adopted under which electricity or steam sold by Kaneka to outside parties that was previously deducted from Kaneka's energy consumption is not deducted. Data for prior fiscal years has been recalculated accordingly. In addition, emission factors for the purchased electricity of Kaneka		Accounting and Reporting Standard REVISED EDITION". Figures represent the total amount
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. 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. 2018 emission factors are used for calculations of fiscal 2020 GHG emissions). The boundaries are the same as those for energy consumption. *Prior calculations were based on the Act on Promotion of Global Warming Countermeasures. For the Data Sheet 2021, however, a method was adopted under which electricity or steam sold by Kaneka to outside parties that was previously deducted from Kaneka's energy consumption is not deducted. Data for prior fiscal years has been recalculated accordingly. In addition, emission factors for the purchased electricity of Kaneka		of energy origin CO_2 emissions, non-energy origin CO_2 emissions, and the CO_2 equivalent of
by the Act on Promotion of Global Warming Countermeasures. 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. 2018 emission factors are used for calculations of fiscal 2020 GHG emissions). The boundaries are the same as those for energy consumption. *Prior calculations were based on the Act on Promotion of Global Warming Countermeasures. For the Data Sheet 2021, however, a method was adopted under which electricity or steam sold by Kaneka to outside parties that was previously deducted from Kaneka's energy consumption is not deducted. Data for prior fiscal years has been recalculated accordingly. In addition, emission factors for the purchased electricity of Kaneka		methane and N_2O emissions. CO_2 emission factors for steam, units of heat for each fuel,
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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. 2018 emission factors are used for calculations of fiscal 2020 GHG emissions). The boundaries are the same as those for energy consumption. *Prior calculations were based on the Act on Promotion of Global Warming Countermeasures. For the Data Sheet 2021, however, a method was adopted under which electricity or steam sold by Kaneka to outside parties that was previously deducted from Kaneka's energy consumption is not deducted. Data for prior fiscal years has been recalculated accordingly. In addition, emission factors for the purchased electricity of Kaneka		value is specified in the country concerned, that value is used. As CO ₂ emission factors for
calculations outside Japan. IEA country emission factors are calculated using data from two years prior to the year calculated (e.g. 2018 emission factors are used for calculations of fiscal 2020 GHG emissions). The boundaries are the same as those for energy consumption. *Prior calculations were based on the Act on Promotion of Global Warming Countermeasures. For the Data Sheet 2021, however, a method was adopted under which electricity or steam sold by Kaneka to outside parties that was previously deducted from Kaneka's energy consumption is not deducted. Data for prior fiscal years has been recalculated accordingly. In addition, emission factors for the purchased electricity of Kaneka		electricity, the adjusted value for each power company was used for calculations in Japan
calculations outside Japan. IEA country emission factors are calculated using data from two years prior to the year calculated (e.g. 2018 emission factors are used for calculations of fiscal 2020 GHG emissions). The boundaries are the same as those for energy consumption. *Prior calculations were based on the Act on Promotion of Global Warming Countermeasures. For the Data Sheet 2021, however, a method was adopted under which electricity or steam sold by Kaneka to outside parties that was previously deducted from Kaneka's energy consumption is not deducted. Data for prior fiscal years has been recalculated accordingly. In addition, emission factors for the purchased electricity of Kaneka	CHC	and the value for each power company and IEA country emission factors were used for
years prior to the year calculated (e.g. 2018 emission factors are used for calculations of fiscal 2020 GHG emissions). The boundaries are the same as those for energy consumption. *Prior calculations were based on the Act on Promotion of Global Warming Countermeasures. For the Data Sheet 2021, however, a method was adopted under which electricity or steam sold by Kaneka to outside parties that was previously deducted from Kaneka's energy consumption is not deducted. Data for prior fiscal years has been recalculated accordingly. In addition, emission factors for the purchased electricity of Kaneka		calculations outside Japan. IEA country emission factors are calculated using data from two
*Prior calculations were based on the Act on Promotion of Global Warming Countermeasures. For the Data Sheet 2021, however, a method was adopted under which electricity or steam sold by Kaneka to outside parties that was previously deducted from Kaneka's energy consumption is not deducted. Data for prior fiscal years has been recalculated accordingly. In addition, emission factors for the purchased electricity of Kaneka	EMISSIONS	years prior to the year calculated (e.g. 2018 emission factors are used for calculations of
Countermeasures. For the Data Sheet 2021, however, a method was adopted under which electricity or steam sold by Kaneka to outside parties that was previously deducted from Kaneka's energy consumption is not deducted. Data for prior fiscal years has been recalculated accordingly. In addition, emission factors for the purchased electricity of Kaneka		fiscal 2020 GHG emissions). The boundaries are the same as those for energy consumption.
electricity or steam sold by Kaneka to outside parties that was previously deducted from Kaneka's energy consumption is not deducted. Data for prior fiscal years has been recalculated accordingly. In addition, emission factors for the purchased electricity of Kaneka		*Prior calculations were based on the Act on Promotion of Global Warming
Kaneka's energy consumption is not deducted. Data for prior fiscal years has been recalculated accordingly. In addition, emission factors for the purchased electricity of Kaneka		Countermeasures. For the Data Sheet 2021, however, a method was adopted under which
recalculated accordingly. In addition, emission factors for the purchased electricity of Kaneka		electricity or steam sold by Kaneka to outside parties that was previously deducted from
		Kaneka's energy consumption is not deducted. Data for prior fiscal years has been
		recalculated accordingly. In addition, emission factors for the purchased electricity of Kaneka
and Group companies in Japan have been changed from the basic emission factors based		and Group companies in Japan have been changed from the basic emission factors based
on the Act on Promotion of Global Warming Countermeasures to adjusted emission factors.		on the Act on Promotion of Global Warming Countermeasures to adjusted emission factors.
Energy Origin CO ₂ emission intensity is a numerical value calculated by dividing energy origin CO ₂	Energy Origin	CO ₂ emission intensity is a numerical value calculated by dividing energy origin CO ₂

CO ₂ Emission	emissions associated with production activities, which are calculated using a fixed emission
Intensity	factor unique to Kaneka, by the volume of activity, with fiscal 2013 indexed to 100. Using a
Index	fixed emission factor makes it easier to see the impact of our activities. Using this index, we
	set 93.2 as our target for fiscal 2020.

[Water]

Water	Total industrial water, water supply, seawater, river water, groundwater, and other water
Consumption	consumed at each site.
	Total wastewater discharged to public waterways (sea, lakes, rivers, etc.) and wastewater
Wastewater Discharges	discharged to sewers.
	For calculation, if water supply is used at an office or other manufacturing site and there is
	no data on wastewater discharged to sewers, wastewater discharged to sewers is taken to
	be equivalent to water supply.

[Water Quality in Water Areas]

Chemical	Total chemical oxygen demand emissions into public waterways (sea, lakes, rivers, etc.).
Oxygen	Calculated as chemical oxygen demand concentration at the discharge outlet multiplied by
Demand	amount of drainage from each drain to public waterways.
Cuenondod	Total suspended solid emissions to public waterways (sea, lakes, rivers, etc.).
Suspended Solids	Calculated as suspended solid concentration at the discharge outlet multiplied by amount of
Solids	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.
	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}
	Total nitrogen oxides emitted from facilities as defined by the Air Pollution Control Act.
	Calculated as annual amount of dry exhaust gas at each facility multiplied by NOx
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.
	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 $(g/Nm^3) \times dry$ exhaust gas
	(Nm3/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	Figures do not include investment and expense amounts related to environmental
Conservation	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	Total sales amount of off-grade materials and collected items obtained by recycling
Recycling	that resulted in paid transactions (valuable resources).
Cost Reductions by	
Better Resource	Total amount of reduction in purchase costs of raw materials, etc. through resource
Efficiency (Output	conservation activities and unit cost improvements.
per Unit of Input)	
Waste Disposal	Total amount of reduction in processing costs due to reduction of waste through
Cost Reductions by	·
Recycling	recycling activities.
Cost Reductions by	
Energy	Total amount of reduction in energy costs through energy conservation activities.
Conservation	

[Environment Efficiency]

	Kaneka assesses the environmental impacts of our production activities using
	Environmental Impact Points (EIP), which are compiled using the JEPIX methodology
Total Environmental	(*1).
Impact	*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.

[Scope3 GHG Emissions]

Category 1 Purchased Goods/Services	The calculation was made using emission factors listed in the LCI database "IDEA ver. 2.3" (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 100% on a main 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. 3.1) 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. 3.1) published by the Ministry of the Environment of Japan and in the IDEA database ver. 2.3 (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 basis.
Category 4 Upstream	The calculation was made using a calculation method stipulated in the Measures Pertaining to Consigners of the Energy Saving Law. Emission results have been
Transportation and Distribution	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 industrial waste by type from manufacturing sites by emission factors listed in the Emissions Unit Database for Calculation of Greenhouse Gas Emissions, etc. by Organizations throughout the Supply Chain (ver. 3.1) published by the Ministry of the Environment of Japan. 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. 3.1) 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. 3.1) 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.
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. 3.1) 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. 2.3) 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. 2.3) 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, CO₂ Emissions]

Energy	
Consumption	Calculated based on the Energy Conservation Law Guidebook for Consigners issued
(Crude Oil	by the Agency for Natural Resources and Energy of Japan.
Equivalents)	
	Energy intensity is calculated by using a calculation method stipulated in the Measures
Energy Intensity	Pertaining to Consigners of the Energy Saving Law. The energy intensity index is
Index	calculated by 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. 4.7) 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 (the revised Enforcement Order of PRTR Law) (Enforced on April 1,
	2010).
Volatile Organic Compounds	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.
	Of the 23 revised "substances requiring priority action" in the report of the Central
Hazardous	Environment Council (9th report) in October 2010, emissions to the atmosphere of
Atmospheric	acrylonitrile, vinyl chloride monomers, chloroform, 1,2-dichloroethane,
Pollutants	dichloromethane, and 1,3-butadiene are calculated based on the atmospheric
	emissions of substances subject to the PRTR Law.

[Industrial Waste]

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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 the manufacturing site (difference between incinerated amount and the residue).
Internal Landfill	Amount of landfill at the manufacturing site as the final landfill site.
Waste Outsourced	Amount of waste outsourced to entities outside the manufacturing site.
External Recycling	Of waste outsourced to entities outside the manufacturing site, the total amount of industrial waste recycled through reuse, recycling, and heat recovery.
External Reductions	Of waste outsourced to entities outside the manufacturing site, 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 sent directly to landfill and sent to final landfill after outsourced incineration.
Rate of Waste Sent to Final Landfill	Percentage of the total amount of waste sent directly to landfill and sent to final landfill after outsourced incineration divided by the total amount of industrial waste generated (%).



Independent Assurance Report

To the President of KANEKA CORPORATION

We were engaged by KANEKA CORPORATION (the "Company") to undertake a limited assurance engagement of the environmental performance indicators marked with ★ (the "Indicators") for the period from April 1, 2020 to March 31, 2021 included in its Data Sheet 2021 (the "Date Sheet") for the fiscal year ended March 31, 2021.

The Company's Responsibility

The Company is responsible for the preparation of the Indicators in accordance with its own reporting criteria (the "Company's reporting criteria"), as described in the Data Sheet.

Our Responsibility

Our responsibility is to express a limited assurance conclusion on the Indicators based on the procedures we have performed. We conducted our engagement in accordance with the 'International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements other than Audits or Reviews of Historical Financial Information' and the 'ISAE 3410, Assurance Engagements on Greenhouse Gas Statements' issued by the International Auditing and Assurance Standards Board. The limited assurance engagement consisted of making inquiries, primarily of persons responsible for the preparation of information presented in the Data Sheet, and applying analytical and other procedures, and the procedures performed vary in nature from, and are less in extent than for, a reasonable assurance engagement. The level of assurance provided is thus not as high as that provided by a reasonable assurance engagement. Our assurance procedures included:

- Interviewing the Company's responsible personnel to obtain an understanding of its policy for preparing the Data Sheet and reviewing the Company's reporting criteria.
- Inquiring about the design of the systems and methods used to collect and process the Indicators.
- Performing analytical procedures on the Indicators.
- Examining, on a test basis, evidence supporting the generation, aggregation and reporting of the Indicators in conformity with the Company's reporting criteria, and recalculating the Indicators.
- Making inquiries and reviewing materials including documented evidence of one of the Company's factories selected on the basis of a risk analysis, as alternative procedures to a site visit.
- Evaluating the overall presentation of the Indicators.

Conclusion

Based on the procedures performed, as described above, nothing has come to our attention that causes us to believe that the Indicators in the Data Sheet are not prepared, in all material respects, in accordance with the Company's reporting criteria as described in the Data Sheet.

Our Independence and Quality Control

We have complied with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. In accordance with International Standard on Quality Control 1, we maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Yukinobu Matsuo, Partner, Board Director KPMG AZSA Sustainability Co., Ltd.

Osaka, Japan May 25, 2022