



Environmental Databook 2021

Shionogi & Co., Ltd.

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Databook Environmental data

INPUT-OUTPUT

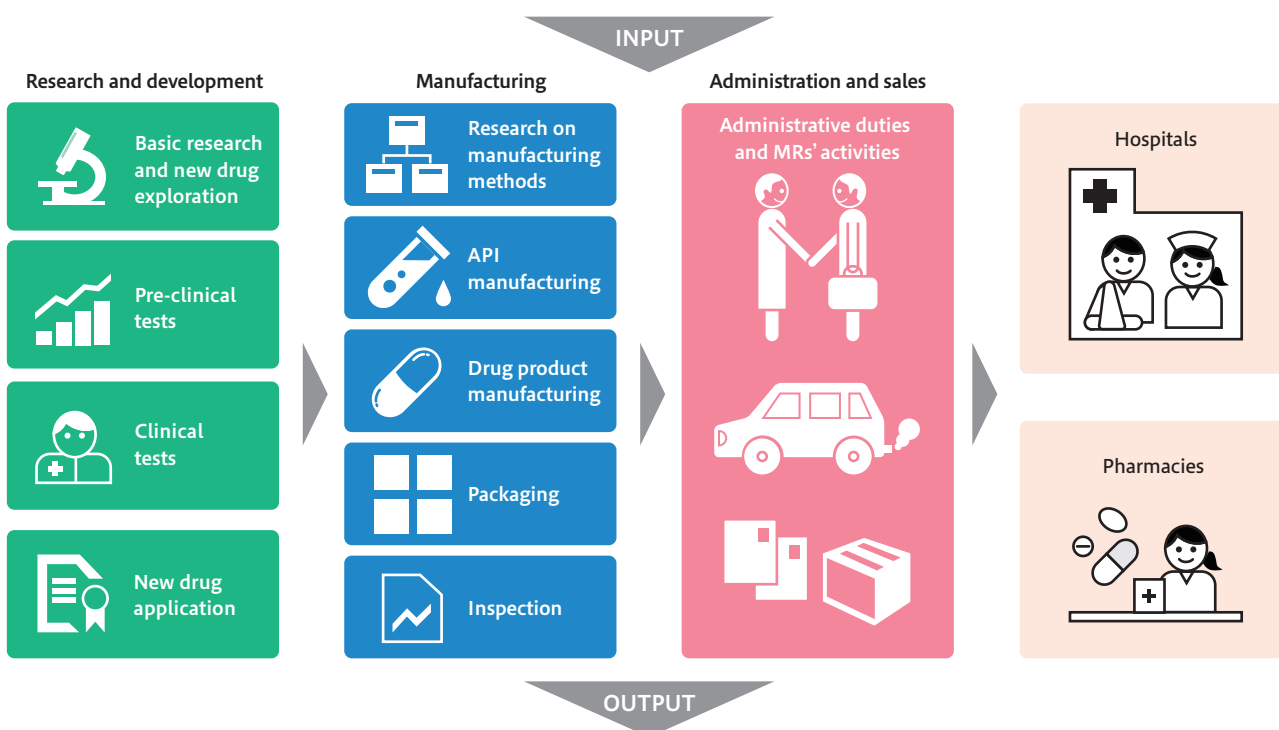
FY 2020 Results

Energy		
Total energy	GJ	1,664,547
steam	GJ	29,372
Electricity	MWh	92,111
Town gas	thousand Nm ³	5,786
Liquefied petroleum gas (LPG)	tons	347
Liquefied natural gas (LNG)	tons	7,876
Heavy oil	kL	57
Kerosene	kL	1
Light oil	kL	6
Gasoline	kL	11
Gasoline (for sales vehicles)	kL	768

Water		
Tap water	thousand m ³	237
Industrial water	thousand m ³	980

Chemicals		
PRTR-designated chemicals (quantity handled)	tons	360

Containers and packaging materials		
Quantity used	tons	1,076



Atmosphere		
CO ₂ (Scope 1 used as fuel)	tons-CO ₂	35,755
CO ₂ (Scope 1 used for sales vehicles)	tons-CO ₂	1,782
CO ₂ (Scope 2)	tons-CO ₂	37,802
NO _x	tons	17
SO _x	tons	0
Particulate matter	tons	2
PRTR-designated substances	tons	73
VOC	tons	52
Fluorocarbons	tons-CO ₂	444

Waste materials		
Waste generated (excluding valuable resources)	tons	4,180
Waste generated (including valuable resources)	tons	4,846
Reused/recycled	tons	4,240
Sent to landfill	tons	28
PRTR-designated substances	tons	216

Containers and packaging materials		
Consigned for reuse/recycling	tons	158

Water		
Sewers	thousand m ³	296
Public waters	thousand m ³	887
BOD	tons	4
COD	tons	3
PRTR-designated substances	tons	0
Nitrogen	tons	6
Phosphorous	tons	3

Scope:
Japan
The scope of energy-related data is Japan and China

■ Environmental efficiency

(FY)

Indicators	2016	2017	2018	2019	2020
Sales/CO2 emissions	35.4	38.2	44.5	43.3	39.4
Sales/water consumed	22.2	24.8	28.0	26.4	24.4
Sales/Waste Generation	88.7	98.9	96.2	108.9	71.1

Scope:

Japan

CO2 Emissions are from Japan and China

■ Climate Change

Greenhouse gas (GHG) emissions

(FY)

Indicators		Unit	Scope	2016	2017	2018	2019	2020
Total of Scope 1, 2 and 3	Location-based	t-CO ₂		355,504	287,356	209,171	226,883	200,519
	Market-based	t-CO ₂		349,397	286,898	204,031	218,614	194,129
Total of Scope 1 and 2	Location-based	t-CO ₂		101,827	90,595	87,850	85,208	81,730
	Market-based	t-CO ₂		95,720	90,136	82,711	76,939	75,339
Scope1		t-CO ₂		46,106	43,456	41,349	37,519	37,537
			Japan	44,450	42,023	39,832	36,836	37,529
			China	1,656	1,433	1,517	682	8
Scope2	Location-based	t-CO ₂		55,721	47,139	46,501	47,690	44,193
			Japan	51,144	42,751	41,713	41,004	37,249
			China	4,577	4,388	4,788	6,685	6,944
Scope2	Market-based	t-CO ₂		49,614	46,681	41,362	39,421	37,802
			Japan	45,037	42,293	36,574	32,735	30,858
			China	4,577	4,388	4,788	6,685	6,944
Total of Scope 3		t-CO ₂	Japan	253,677	196,761	121,321	141,675	118,789
breakdown								
Category 1	Purchased goods and service	t-CO ₂	Japan	145,475	128,468	100,659	98,894	86,432
Category 2	Capital goods	t-CO ₂	Japan	98,022	58,283	10,627	29,343	17,449
Category 3	Fuel- and energy-related activities (not included in scope 1 or scope 2)	t-CO ₂	Japan	3,015	2,876	2,798	5,732	5,710
Category 4	Upstream transportation and distribution	t-CO ₂	Japan	866	918	1,012	1,049	955
Category 5	Waste generated in operations	t-CO ₂	Japan	4,110	3,797	4,092	3,905	5,468
Category 6	Business travel	t-CO ₂	Japan	521	703	684	814	820
Category 7	Employee commuting	t-CO ₂	Japan	819	800	780	1,398	1,449
Category 8	Upstream leased assets	t-CO ₂	Japan	—*1	—*1	—*1	—*1	—*1
Category 9	Downstream transportation and distribution	t-CO ₂	Japan	—*2	—*2	—*2	—*2	—*2
Category 10	Processing of sold products	t-CO ₂	Japan	—*1	—*1	—*1	—*1	—*1
Category 11	Use of sold products	t-CO ₂	Japan	—*1	—*1	—*1	—*1	—*1
Category 12	End-of-life treatment of sold products	t-CO ₂	Japan	850	915	669	540	507
Category 13	Downstream leased assets	t-CO ₂	Japan	—*1	—*1	—*1	—*1	—*1
Category 14	Franchises	t-CO ₂	Japan	—*1	—*1	—*1	—*1	—*1
Category 15	Investments	t-CO ₂	Japan	—*1	—*1	—*1	—*1	—*1

*1 GHG emissions in this category are not relevant because the activities related in this category are not conducted in our businesses.

*2 GHG emissions in this category are not calculated because the distribution channels are complicated, but this impact is extremely small.

Energy consumption

(FY)

Indicators	Unit	Scope	2016	2017	2018	2019	2020
Total energy consumption	GJ		1,818,374	1,733,999	1,677,537	1,651,304	1,664,547
	GJ	China	99,908	93,241	100,973	118,970	113,300
	GJ	Japan	1,718,466	1,640,758	1,576,563	1,532,334	1,551,248
Steam	GJ		0	0	0	15,863	29,372
	GJ	China	0	0	0	15,863	29,372
	GJ	Japan	0	0	0	0	0
Electricity	thousand kWh		94,428	90,497	89,107	93,245	92,111
	thousand kWh	China	7,300	6,998	7,636	9,221	8,405
	thousand kWh	Japan	87,127	83,499	81,471	84,025	83,706
Town gas	thousand Nm ³		6,978	6,860	6,138	5,771	5,783
	thousand Nm ³	China	0	0	0	0	0
	thousand Nm ³	Japan	6,978	6,860	6,138	5,771	5,783
Liquefied petroleum gas (LPG)	tons		875	808	830	580	347
	tons	China	534	462	489	220	3
	tons	Japan	341	346	341	360	345
Liquefied natural gas (LNG)	tons		8,530	8,067	7,932	7,113	7,876
	tons	China	0	0	0	0	0
	tons	Japan	8,530	8,067	7,932	7,113	7,876
Heavy oil A	kl		328	49	82	39	57
	kl	China	0	0	0	0	0
	kl	Japan	328	49	82	39	57
Gasoline	kl		1,812	1,749	1,598	1,382	779
	kl	China	0	0	0	0	0
	kl	Japan	1,812	1,749	1,598	1,382	779
Light oil	kl		2	2	3	8	6
	kl	China	0	0	0	0	0
	kl	Japan	2	2	3	8	6
Kerosene	kl		1	2	1	2	1
	kl	China	0	0	0	0	0
	kl	Japan	1	2	1	2	1

■ Resources conservation and circulation

Waste management

(FY)

Indicators	Unit	Scope	2016	2017	2018	2019	2020
Waste generated (including valuable resources)	tons	Japan	4,966	4,166	4,804	3,646	4,846
	tons	China	153	23	25	70	70
Waste generated (excluding valuable resources)	tons	Japan	3,820	3,486	3,824	3,062	4,180
	tons	China	153	23	25	70	70
Amount of waste reused/ recycled	tons	Japan	3,929	3,263	3,900	3,025	4,240
	tons	China	0	0	0	0	0
Amount of waste disposed of as landfill	tons	Japan	65	43	38	38	28
	tons	China	19	2	3	6	5
Reuse/recycling rate	%	Japan	79	78	81	83	87
Landfill rate	%	Japan	1.3	1.0	0.8	1.0	0.6
Hazardous waste (Special management industrial waste)	tons	Japan	1,495	1,162	1,830	1,227	1,722

Reuse and recycling of product containers and packaging materials

(FY)

Item	Indicators	Unit	Scope	2016	2017	2018	2019	2020
Containers and packaging materials used	Plastic	tons	Japan	929	1,010	735	641	591
	Paper	tons	Japan	638	638	483	418	437
	Glass(transparent)	tons	Japan	38	40	38	37	40
	Glass (brown)	tons	Japan	7	8	8	8	8
Amount consigned for reuse/recycling	Plastic	tons	Japan	197	207	155	147	134
	Paper	tons	Japan	17	15	12	11	12
	Glass (transparent)	tons	Japan	8	10	8	7	9
	Glass (brown)	tons	Japan	2	2	2	2	3
Reuse/recycling consignment fee		thousand yen	Japan	9,094	9,556	8,755	6,909	6,767

■ Water

Water consumption

(FY)

Indicators	Unit	Scope	2016	2017	2018	2019	2020
Public water supply system	thousand m ³	Japan	1,528	1,389	1,315	1,263	1,217
Tap water	thousand m ³	Japan	289	280	254	246	237
	thousand m ³	China	236	122	151	137	137
Industrial water	thousand m ³	Japan	1,239	1,109	1,061	1,017	980
River and lake	thousand m ³	Japan	0	0	0	0	0
	thousand m ³	China	0	0	0	0	0
Sea	thousand m ³	Japan	0	0	0	0	0
	thousand m ³	China	0	0	0	0	0
Groundwater	thousand m ³	Japan	0	0	0	0	0
	thousand m ³	China	0	0	0	0	0

Drainage

(FY)

Indicators	Unit	Scope	2016	2017	2018	2019	2020
Total drainage	thousand m ³	Japan	1,333	1,240	1,175	1,132	1,183
	thousand m ³	China	74	31	42	46	48
Sewer	thousand m ³	Japan	335	340	310	311	296
	thousand m ³	China	74	31	42	46	48
River	thousand m ³	Japan	998	900	864	821	887
	thousand m ³	China	0	0	0	0	0
Sea	thousand m ³	Japan	0	0	0	0	0
	thousand m ³	China	0	0	0	0	0
Groundwater	thousand m ³	Japan	0	0	0	0	0
	thousand m ³	China	0	0	0	0	0

■ Chemical substance, Prevention of air and water pollution

Chemical substance

(FY)

Item	Indicators	Unit	Scope	2016	2017	2018	2019	2020
PRTR substances	Amount used	tons	Japan	289	251	274	203	360
	Amount released (Air)	tons	Japan	63	35	43	34	73
	Amount released (Public waters)	tons	Japan	0	1	0	2	0
	Amount released (Soil)	tons	Japan	0	0	0	0	22
	Amount transferred (Waste)	tons	Japan	148	177	156	131	216
	Amount transfer red (Sewers)	tons	Japan	0	0	0	0	0
VOC	Amount used	tons	Japan	1,196	780	491	511	667
	Amount released (Air)	tons	Japan	77	42	46	52	52

Prevention of air and water pollution

(FY)

Item	Indicators	Unit	Scope	2016	2017	2018	2019	2020
Emissions into the air	SOx	tons	Japan	0	0	0	0	0
	NOx	tons	Japan	26	18	17	17	17
	Particulate matter	tons	Japan	2	1	2	2	2
	Fluorocarbons	tons-CO ₂	Japan	803	199	599	456	444
Emissions into water	BOD	tons	Japan	7	5	5	5	4
	COD	tons	Japan	2	2	2	3	3
	Nitrogen	tons	Japan	8	6	6	7	6
	Phosphorous	tons	Japan	4	1	1	1	3

■ Management / Compliance

Management

(FY)

Item	Unit	Scope	2016	2017	2018	2019	2020
Acquisition status of ISO 14001 certification	site	Japan	*	*	*	1	2
		China	0	0	0	0	0
Green purchasing (Purchase of office supplies)	%	Japan	66.5	72.1	73.1	74.5	73.0

*We obtained collective certification for the manufacturing and research bases of Shionogi & Co., Ltd.

On the occasion of the establishment of a manufacturing subsidiary, the collective certification was deregistered on March 25, 2019, and the three plants of the manufacturing subsidiary have obtained or are expected to obtain a new certification individually thereafter.

Compliance

(FY)

Item	Unit	Scope	2016	2017	2018	2019	2020
Violation of environment-related laws and regulations	case	Japan	0	2	1	0	1
Amount of fines / violations	yen	Japan	0	0	0	0	0
Environment-related complaints	case	Japan	1	2	1	0	0

■ Environmental Accounting

Environmental protection costs

Category		Key activities	FY 2018		FY 2019		FY 2020	
			Investment (in thousand yen)	Cost (in thousand yen)	Investment (in thousand yen)	Cost (in thousand yen)	Investment (in thousand yen)	Cost (in thousand yen)
(1) Business area cost			2,779	510,984	8,900	605,210	0	569,854
Break down	① Pollution prevention cost	Maintenance and management of the below <ul style="list-style-type: none"> · exhaust gas treatment equipment · wastewater treatment facilities · dichloromethane absorption and recovery equipment Measurement and analysis of wastewater, exhaust gas, etc.	0	243,454	0	253,283	0	286,966
	② Global environment protection cost	Renewal of air-conditioning systems, refrigerators, boilers, etc. Operational improvement of manufacturing and air-conditioning facilities	2,779	99,987	8,900	101,199	0	119,040
	③ Resource circulation cost	Recycling and treatment of the below <ul style="list-style-type: none"> · waste solvents · general waste materials · industrial waste 	0	167,543	0	250,728	0	163,847
(2) Upstream/ downstream cost		Consignment of reuse of containers and packaging materials	0	7,804	0	7,804	0	6,768
(3) Administration cost		Maintenance and operation of environmental management systems Development and maintenance of green zones	0	313,768	0	311,166	0	290,156
(4) R&D cost			0	0	0	0	0	0
(5) Social activity cost		Contribution to environmental organizations Communication with local communities	0	651	0	719	0	472
(6) Environmental remediation cost		Penalty imposed for pollutants	0	185	0	179	0	170
Total			2,779	833,392	8,900	925,360	0	867,419

Economic benefits from environmental protection (actual positive effects)

Description		FY 2018	FY 2019	FY 2020
		Amount of money (in thousand yen)	Amount of money (in thousand yen)	Amount of money (in thousand yen)
Benefit	Business income from recycling of waste	9,016	6,033	9,940
Cost reduction	Reduction in energy and water expenses	7,575	20,444	31
Total		16,592	26,477	9,972

Scope: Japan

Databook Sitedata

■ Shionogi Pharmaceutical Research Center

Energy and resource consumption

(FY)

Item	Unit	2016	2017	2018	2019	2020
Electricity	thousand kWh	28,647	28,594	28,450	28,599	27,529
Gasoline	kL	0	0	0	0	0
Kerosene	kL	0	0	0	0	0
Light oil	kL	0	0	0	0	0
Heavy oil A	kL	3	1	2	1	2
Liquefied petroleum gas (LPG)	tons	0	0	0	0	0
Liquefied natural gas (LNG)	tons	0	0	0	0	0
Town gas	thousand Nm ³	2,625	2,551	2,402	2,366	2,167
Water	thousand m ³	157	164	135	131	121

Impact released

(FY)

Item	Unit	2016	2017	2018	2019	2020
CO ₂ emissions	tons-CO ₂	19,969	19,691	17,162	14,975	13,720
Waste generated (excluding valuable resources)	tons	466	488	427	390	374
Waste put to landfill	tons	16	15	13	12	6
Drainage (sewers)	thousand m ³	157	164	135	131	121
Drainage (public waters)	thousand m ³	0	0	0	0	0
NO _x	tons	2	2	2	2	2
SO _x	tons	-	-	-	-	-
BOD	tons	3	2	2	2	1
COD	tons	-	-	-	-	-

Substances subject to the PRTR Act

(kg)

Substance name	Amount used	Amount released			Amount transferred	
		Atmosphere	Public waters	Soil	Outside operating sites	Sewers
<i>N,N</i> -Dimethylformamide	3,353	0	0	0	3,353	0
Acetonitrile	9,259	330	0	0	8,930	0
Chloroform	6,703	258	0	0	6,445	0
Dichloromethane (methylene chloride)	1,181	186	0	0	995	0
<i>n</i> -Hexane	6,552	494	0	0	6,058	0

Shionogi Pharmaceutical Research Center



■ Shionogi CMC Research Innovation Center

Energy and resource consumption

(FY)

Item	Unit	2016	2017	2018	2019	2020
Electricity	thousand kWh	10,359	10,077	10,161	9,694	10,141
Gasoline	kL	0	0	0	0	0
Kerosene	kL	0	0	0	0	0
Light oil	kL	0	0	0	0	0
Heavy oil A	kL	0	0	0	0	0
Liquefied petroleum gas (LPG)	tons	0	0	0	0	0
Liquefied natural gas (LNG)	tons	0	0	0	0	0
Town gas	thousand Nm ³	1,006	1,033	980	925	979
Water	thousand m ³	95	85	82	77	82

Impact released

(FY)

Item	Unit	2016	2017	2018	2019	2020
CO ₂ emissions	tons-CO ₂	7,342	7,232	6,396	5,357	5,466
Waste generated (excluding valuable resources)	tons	192	207	205	159	195
Waste put to landfill	tons	0.0	0.0	0.0	0.0	0.0
Drainage (sewers)	thousand m ³	71	63	60	57	60
Drainage (public waters)	thousand m ³	0	0	0	0	0
NO _x	tons	1	0	1	1	0
SO _x	tons	-	-	-	-	-
BOD	tons	0	0	0	0	0
COD	tons	-	-	-	-	-

Substances subject to the PRTR Act

(kg)

Substance name	Amount used	Amount released			Amount transferred	
		Atmosphere	Public waters	Soil	Outside operating sites	Sewers
Acetonitrile	8,028	34	0	0	7,905	0

Shionogi CMC Research Innovation Center



■ Aburahi Research Center

Energy and resource consumption

(FY)

Item	Unit	2016	2017	2018	2019	2020
Electricity	thousand kWh	2,485	2,580	2,518	2,449	2,459
Gasoline	kL	5	5	5	7	5
Kerosene	kL	1	2	1	2	1
Light oil	kL	0	0	0	0	0
Heavy oil A	kL	0	0	0	1	0
Liquefied petroleum gas (LPG)	tons	327	333	329	349	333
Liquefied natural gas (LNG)	tons	0	0	0	0	0
Town gas	thousand Nm ³	0	0	0	0	0
Water	thousand m ³	15	15	15	15	14

Impact released

(FY)

Item	Unit	2016	2017	2018	2019	2020
CO ₂ emissions	tons-CO ₂	2,228	2,287	2,055	1,886	1,797
Waste generated (excluding valuable resources)	tons	41	48	44	48	44
Waste put to landfill	tons	1	2	1	2	1
Drainage (sewers)	thousand m ³	0	0	0	0	0
Drainage (public waters)	thousand m ³	8	13	12	11	11
NO _x	tons	2	3	–	–	–
SO _x	tons	0	0	–	–	–
BOD	tons	0	0	0	0	0
COD	tons	0	0	0	0	0

Substances to be registered under the PRTR Act: None

Aburahi Research Center



■ Settsu Plant

Energy and resource consumption

(FY)

Item	Unit	2016	2017	2018	2019	2020
Electricity	thousand kWh	19,549	17,274	14,884	15,496	15,767
Gasoline	kL	1	1	1	2	2
Kerosene	kL	0	0	0	0	0
Light oil	kL	1	2	2	8	6
Heavy oil A	kL	0	0	0	0	0
Liquefied petroleum gas (LPG)	tons	0	0	0	0	0
Liquefied natural gas (LNG)	tons	0	0	0	0	0
Town gas	thousand Nm ³	2,899	2,781	2,278	2,039	1,816
Water	thousand m ³	152	140	140	127	116

Impact released

(FY)

Item	Unit	2016	2017	2018	2019	2020
CO ₂ emissions	tons-CO ₂	16,054	14,618	11,222	9,869	9,191
Waste generated (excluding valuable resources)	tons	390	276	266	300	282
Waste put to landfill	tons	1.0	0.8	0.8	0.8	0.6
Drainage (sewers)	thousand m ³	108	98	102	110	101
Drainage (public waters)	thousand m ³	0	0	0	0	0
NO _x	tons	3	3	2	2	2
SO _x	tons	-	-	-	-	-
BOD	tons	1	1	1	1	1
COD	tons	1	1	2	2	2

Substances subject to the PRTR Act

(kg)

Substance name	Amount used	Amount released			Amount transferred	
		Atmosphere	Public waters	Soil	Outside operating sites	Sewers
Acetonitrile	2,106	0	0	0	2,106	0

Settsu Plant



■ Kanegasaki Plant

Energy and resource consumption

(FY)

Item	Unit	2016	2017	2018	2019	2020
Electricity	thousand kWh	14,900	13,835	13,745	16,672	14,995
Gasoline	kL	5	4	4	3	4
Kerosene	kL	0	0	0	0	0
Light oil	kL	0	0	1	0	0
Heavy oil A	kL	325	48	80	37	55
Liquefied petroleum gas (LPG)	tons	14	13	12	11	11
Liquefied natural gas (LNG)	tons	8,530	8,067	7,932	7,113	7,876
Town gas	thousand Nm ³	0	0	0	0	0
Water	thousand m ³	938	826	818	795	726

Impact released

(FY)

Item	Unit	2016	2017	2018	2019	2020
CO ₂ emissions	tons-CO ₂	32,295	29,541	28,869	28,148	29,286
Waste generated (excluding valuable resources)	tons	2,261	1,881	2,120	1,372	1,883
Waste put to landfill	tons	43	22	21	16	19
Drainage (sewers)	thousand m ³	0	0	0	0	0
Drainage (public waters)	thousand m ³	818	743	740	704	735
NO _x	tons	18	10	12	12	12
SO _x	tons	0	0	0	0	0
BOD	tons	3	1	1	1	1
COD	tons	-	-	-	-	-

Substances subject to the PRTR Act

(kg)

Substance name	Amount used	Amount released			Amount transferred	
		Atmosphere	Public waters	Soil	Outside operating sites	Sewers
<i>N,N</i> -Dimethylacetamide	1,314	0	0	0	1,314	0
<i>N,N</i> -Dimethylformamide	7,146	48	0	0	2	0
Acetonitrile	23,337	0	0	0	19,554	0
Dichloromethane (methylene chloride)	147,796	70,241	4	22,160	34,586	0
Tributylamine	7,319	0	0	0	0	0
Pyridine	18,623	391	0	0	9,489	0
Triethylamine	13,583	0	0	0	13,204	0
Benzen	596	0	0	0	0	0

Kanegasaki Plant



■ Tokushima Plant

Energy and resource consumption

(FY)

Item	Unit	2016	2017	2018	2019	2020
Electricity	thousand kWh	4,455	4,521	5,065	4,646	5,444
Gasoline	kL	0	0	0	0	0
Kerosene	kL	0	0	0	0	0
Light oil	kL	0	0	0	0	0
Heavy oil A	kL	0	0	0	0	0
Liquefied petroleum gas (LPG)	tons	0	0	0	0	0
Liquefied natural gas (LNG)	tons	0	0	0	0	0
Town gas	thousand Nm ³	366	401	388	365	449
Water	thousand m ³	172	143	112	105	143

Impact released

(FY)

Item	Unit	2016	2017	2018	2019	2020
CO ₂ emissions	tons-CO ₂	3,782	3,270	3,560	3,289	3,266
Waste generated (excluding valuable resources)	tons	313	482	692	690	1,353
Waste put to landfill	tons	1.2	0.3	1	6	0
Drainage (sewers)	thousand m ³	0	0	0	0	0
Drainage (public waters)	thousand m ³	172	143	112	105	140
NO _x	tons	-	-	-	-	-
SO _x	tons	-	-	-	-	-
BOD	tons	1	0	0	0	0
COD	tons	0	0	0	1	0

Substances subject to the PRTR Act

(kg)

Substance name	Amount used	Amount released			Amount transferred	
		Atmosphere	Public waters	Soil	Outside operating sites	Sewers
<i>N,N</i> -Dimethylacetamide	6,099	30	0	0	6,069	0
Acetonitrile	95,331	953	0	0	94,378	0
Toluene	1,756	18	0	0	1,739	0

Tokushima Plant



■ UMN Pharma Inc. Akita Plant

Energy and resource consumption (FY)

Item	Unit	2020
Electricity	thousand kWh	1,827
Gasoline	kL	0
Kerosene	kL	0
Light oil	kL	0
Heavy oil A	kL	0
Liquefied petroleum gas (LPG)	tons	0
Liquefied natural gas (LNG)	tons	0
Town gas	thousand Nm ³	287
Water	thousand m ³	10

Impact released (FY)

Item	Unit	2020
CO ₂ emissions	tons-CO ₂	1,502
Waste generated (excluding valuable resources)	tons	4
Waste put to landfill	tons	0.4
Drainage (sewers)	thousand m ³	10
Drainage (public waters)	thousand m ³	0

Substances to be registered under the PRTR Act: None

UMN Pharma Inc. Akita Plant



■ UMN Pharma Inc. Yokohama Research Center

Energy and resource consumption (FY)

Item	Unit	2020
Electricity	thousand kWh	188
Gasoline	kL	0
Kerosene	kL	0
Light oil	kL	0
Heavy oil A	kL	0
Liquefied petroleum gas (LPG)	tons	0
Liquefied natural gas (LNG)	tons	0
Town gas	thousand Nm ³	0
Water	thousand m ³	1

Impact released (FY)

Item	Unit	2020
CO ₂ emissions	tons-CO ₂	83
Waste generated (excluding valuable resources)	tons	1
Waste put to landfill	tons	0.1
Drainage (sewers)	thousand m ³	1
Drainage (public waters)	thousand m ³	0

Substances to be registered under the PRTR Act: None

■ C&O Pharmaceutical Technology (Holdings) Ltd. Nanjing Plant

Energy and resource consumption

(FY)

Item	Unit	2016	2017	2018	2019	2020
Electricity	thousand kWh	7,300	6,998	7,636	9,221	8,405
Steam	GJ	–	–	–	5,930	10,980
Coal	tons	0	0	0	0	0
Liquefied petroleum gas (LPG)	tons	534	462	489	220	3
Water	thousand m ³	236	122	151	137	137

Impact released

(FY)

Item	Unit	2016	2017	2018	2019	2020
CO ₂ emissions	tons-CO ₂	8,431	7,927	6,304	7,368	6,952
Waste generated	tons	153	23	25	70	70
Waste put to landfill	tons	19	2	3	6	5
Drainage (sewers)	thousand m ³	74	31	42	46	48
Drainage (public waters)	thousand m ³	0	0	0	0	0

Substances subject to the PRTR Act: Not applicable

C&O Pharmaceutical Technology (Holdings) Ltd. Nanjing Plant





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