



A Clear Vision For Life

SANTEN PHARMACEUTICAL CO., LTD.

Environmental Data Book 2016

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Coverage of reporting

Japan: All facilities including sales offices

Other countries: Principal production facilities: Tampere plant (Finland) and Suzhou plant (China)

Period of reporting

Japan: 01/04/2015~31/03/2016

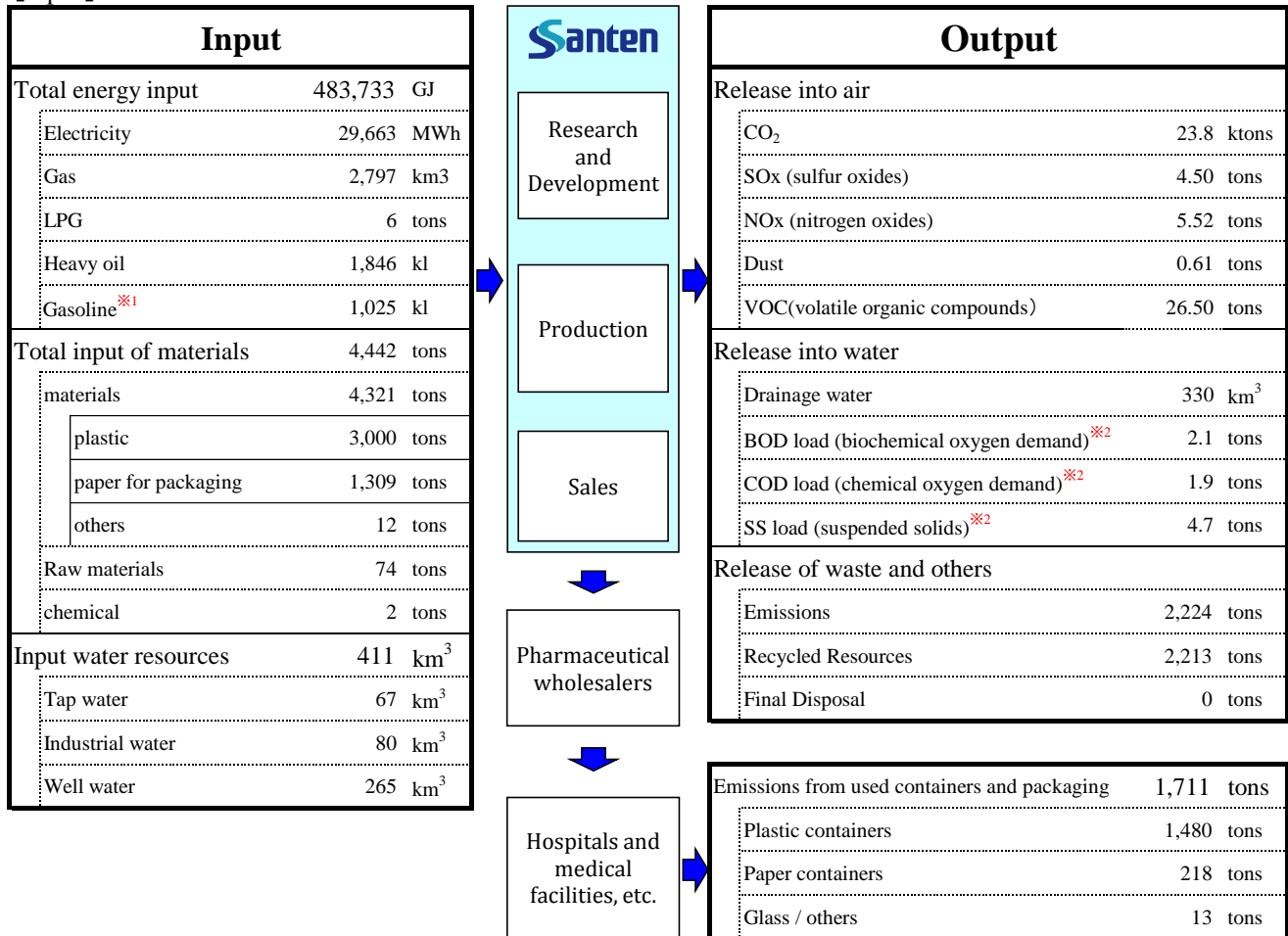
Other countries: 01/01/2015~31/12/2015

Overview of Environmental Impact

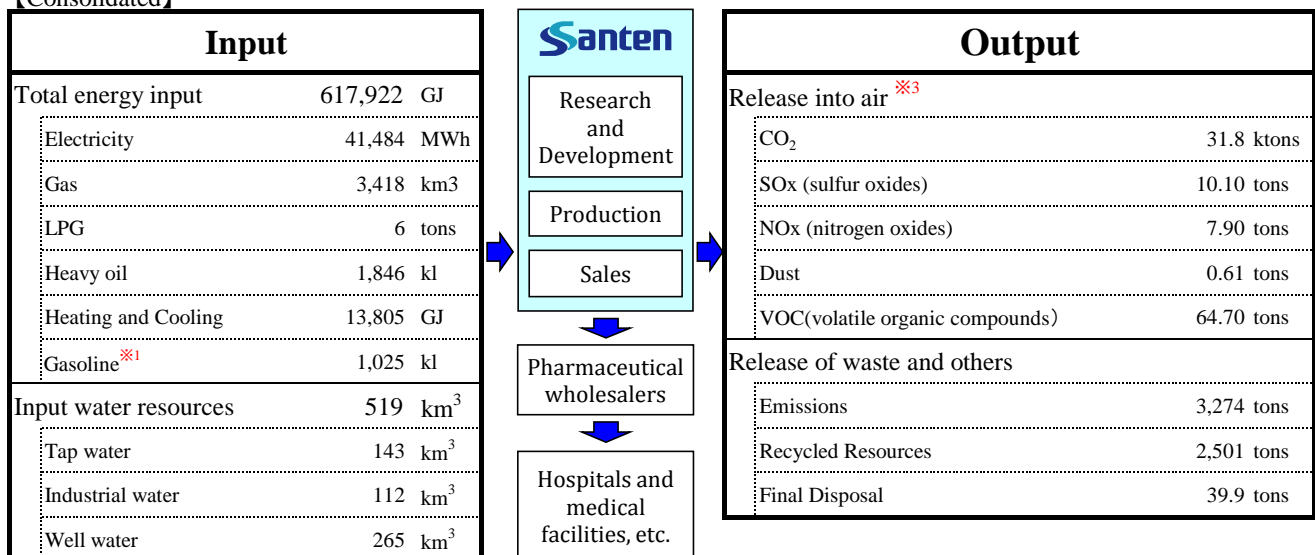
Santen works to determine the impact on the environment regarding energy input, input of materials, input of water resources, emissions into the air and water, and disposal of waste and others accompanying its business activities and acts continually for the reduction of environmental burdens.

This report covers the whole Santen group including all principal production facilities. Santen continues to make efforts to enhance information disclosure.

【Japan】



【Consolidated】



※1: Gasoline input is mainly input from commercial vehicle.

※2: Emission is based on results from regular examinations.

※3: Suzhou plant in China is excluded.

Greenhouse gas (CO₂) emissions [tons]

【Japan】

Operational site	Year ended March 31					%Change 2016/2015
	2012	2013	2014	2015	2016	
Osaka Office and Osaka Plant	4,967	4,510	3,265	4,345	336	-92.3
Noto Plant	11,829	10,868	9,340	9,761	10,097	3.4
Shiga Product Supply Center	4,708	5,158	5,416	5,431	6,544	20.5
Nara Research and Development Center	4,778	4,837	4,666	4,331	4,034	-6.9
Branch and sales offices and others	2,785	2,709	2,803	3,369	2,740	-18.7
Total	29,067	28,082	25,491	27,237	23,751	-12.8

For the CO₂ conversion factor for electric power, the emission factor of the Federation of Pharmaceutical Manufacturers' Associations of Japan is used.

CO ₂ emissions per unit of sales	[t-CO ₂ /billion yen]	2.82	2.63	1.98	1.97	1.52	-22.7
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【Other countries' plant】

Tampere plant (Finland)	2,144	2,265	2,252	2,120	2,015	-5.0
Suzhou plant (China)	4,600	5,226	5,467	5,293	6,074	14.8
Total	6,744	7,491	7,719	7,413	8,089	9.1

For the CO₂ conversion factor for electric power, the emission factor of the International Energy Agency(IEA) is used.

【Consolidated】

Greenhouse gas emissions (CO ₂)	35,811	35,572	33,210	34,650	31,840	-8.1	
CO ₂ emissions per unit of sales	[t-CO ₂ /billion yen]	3.13	2.99	2.23	2.14	1.63	-23.9

Energy usage [GJ]

【Japan】

Operational site	Year ended March 31					%Change 2016/2015
	2012	2013	2014	2015	2016	
Osaka Office and Osaka Plant	117,961	106,892	79,094	100,595	9,625	-90.4
Noto Plant	232,515	222,110	204,470	212,605	219,213	3.1
Shiga Product Supply Center	110,679	121,064	127,411	129,066	153,088	18.6
Nara Research and Development Center	111,585	112,775	109,050	101,513	93,807	-7.6
Branch and sales offices and others	44,346	43,193	44,768	55,237	8,001	-85.5
Total	617,085	606,035	564,792	599,016	483,733	-19.2

Energy usage per unit of sales	[GJ/billion yen]	59.8	56.8	43.9	43.3	31.0	-28.4
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【Other countries' plant】

Tampere plant (Finland)	56,804	59,481	57,067	54,805	51,413	-6.2
Suzhou plant (China)	64,486	72,824	76,348	77,560	83,871	8.1
Total	121,290	132,305	133,415	132,365	135,284	2.2

【Consolidated】

Energy usage	738,375	738,340	698,207	731,381	617,922	-15.5	
Energy usage per unit of sales	[GJ/billion yen]	64.5	62.0	47.0	45.2	31.6	-30.0

Waste reduction and Recycling [tons]

【Japan】

Operational site		Year ended March 31					%Change 2016/2015
		2012	2013	2014	2015	2016	
Osaka Office and Osaka Plant	Emissions	306	336	296	331	136	-58.8
	Recycled resources	237	272	241	321	132	-59.1
	Final disposal	3.4	3.1	11.4	2.0	0.2	-88.9
Noto Plant	Emissions	1,467	1,484	1,320	1,532	1,580	3.1
	Recycled resources	1,455	1,484	1,320	1,532	1,580	3.1
	Final disposal	0.6	0.1	0.1	0.1	0.0	-100.0
Shiga Product Supply Center	Emissions	380	378	262	146	405	176.6
	Recycled resources	380	378	262	146	405	176.6
	Final disposal	0.0	0.0	0.0	0.0	0.0	—
Nara Research and Development Center	Emissions	149	146	130	111	103	-6.8
	Recycled resources	22	8	71	71	97	35.8
	Final disposal	22.8	29.4	11.9	8.7	0.2	-97.6
Total	Emissions	2,303	2,344	2,008	2,121	2,224	4.9
	Recycled resources	2,094	2,142	1,894	2,071	2,213	6.8
	Final disposal	26.8	32.7	23.3	10.7	0.4	-96.0

【Other countries' plant】

Tampere plant (Finland)	Emissions	1,098	1,190	1,171	1,055	992	-6.0
	Recycled resources	283	294	237	252	263	4.4
	Final disposal	21.8	25.3	17.9	7.6	6.5	-14.2
Suzhou plant (China)	Emissions	33	50	34	43	58	36.7
	Recycled resources	15	17	11	15	25	66.9
	Final disposal	18.3	32.9	23.0	27.5	33.0	20.0
Consolidated Total	Emissions	3,434	3,585	3,213	3,219	3,274	1.7
	Recycled resources	2,391	2,452	2,142	2,338	2,501	7.0
	Final disposal	66.9	90.8	64.2	45.8	39.9	-12.8

Water resource protection [km³]

【Japan】

Operational site		Year ended March 31					%Change 2016/2015
		2012	2013	2014	2015	2016	
Osaka Office and Osaka Plant	Consumption	74	67	44	60	5	-91.4
	Discharge	54	47	44	60	5	-91.4
Noto Plant	Consumption	324	257	239	247	271	9.8
	Discharge	225	225	214	225	215	-4.3
Shiga Product Supply Center	Consumption	69	82	75	71	94	32.2
	Discharge	60	65	48	52	69	34.7
Nara Research and Development Center	Consumption	49	52	46	41	41	-1.6
	Discharge	31	33	46	41	41	-1.6
Total	Consumption	516	459	405	419	411	-1.9
	Discharge	369	370	352	377	330	-12.4

【Other countries' plant】

Tampere plant (Finland)	Consumption	66	70	50	53	51	-3.8
Suzhou plant (China)	Consumption	36	33	34	44	57	29.5
Consolidated Total	Consumption	618	562	489	516	519	0.6

Amounts of PRTR substances handled [kg]

【Japan】

substances	Year ended March 31					%Change 2016/2015
	2012	2013	2014	2015	2016	
Acetonitrile	2,071	1,819	1,602	1,407	1,776	26.2
Boron and its compounds	705	636	632	646	695	7.5
Xylene	390	256	220	166	166	0.3
Chloroform	430	364	139	12	28	133.3
Norman hexane	615	350	108	6	22	266.7
Formaldehyde	76	314	63	16	16	0.0
Others	726	521	239	171	102	-40.4
Total	4,398	3,910	2,895	2,418	2,783	15.1

Note : The data included chemical materials used more than 1kg in a year

The number of substances over 1kg used per year	19	19	24	19	18	-5.3
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