



SANTEN PHARMACEUTICAL CO.,LTD.

Environmental Data Book 2013

Year Ended March 31, 2013

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Scope of reporting

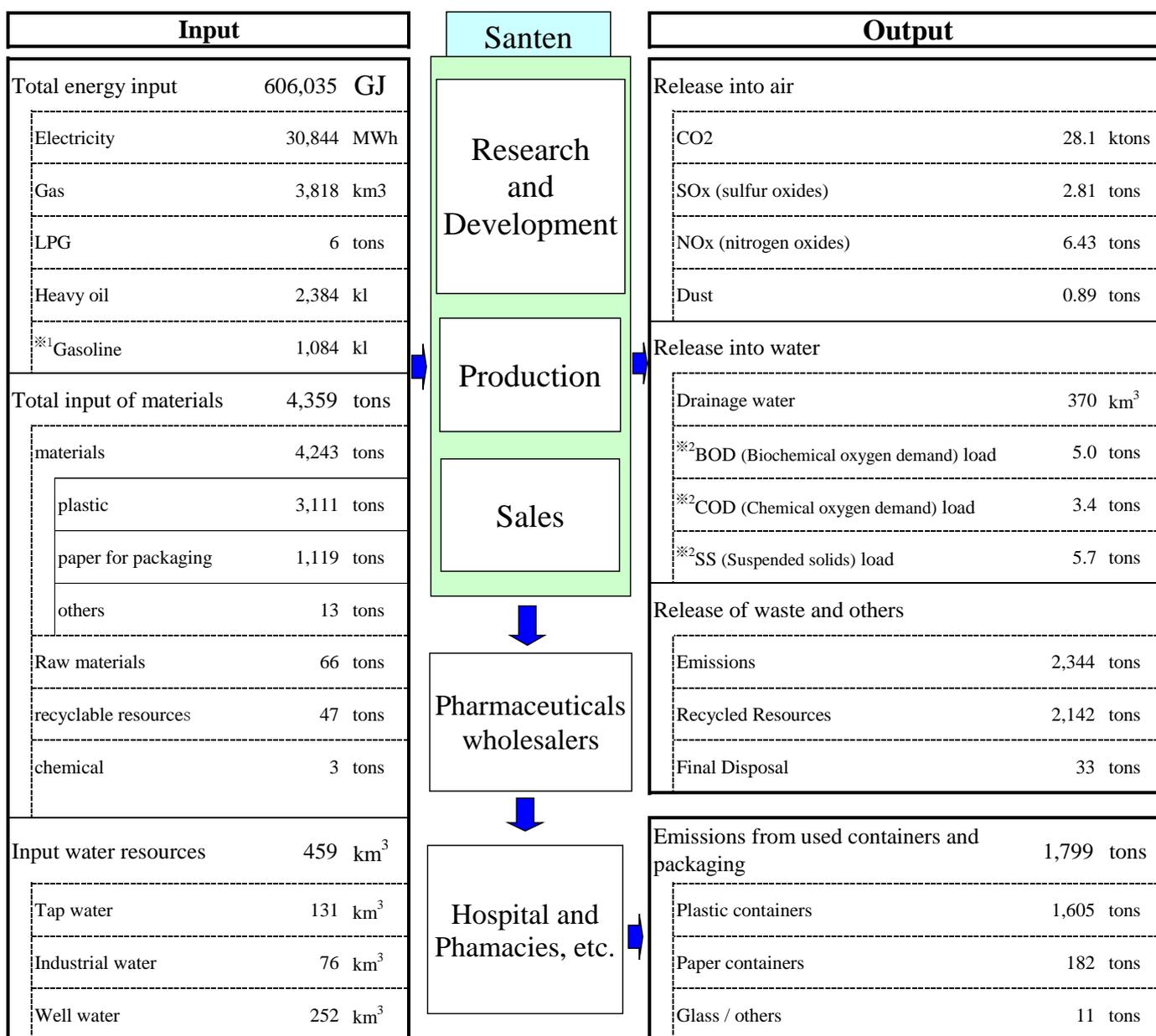
This report primarily presents data of Santen Co., Ltd.

It also includes some data of Santen's subsidiaries.

Environmental Highlights

Impact on the Environment

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



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

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

Environmental Highlights

Environmental Accounting

For more efficient environmental management, Santen accepts the (economic and environmental preservation) effect and the cost (investment amount and expense) for environmental preservation efforts and works to reduce the effects on the environment.

Period covered: April 1st, 2011 to March 31st, 2012

Scope: The cost and effect of Environmental preservation in Santen

Reference: MOE Environmental Accounting Guideline (2005)

unit:millions of yen

Category	2011		2012		2013	
	Investment	Expenses	Investment	Expenses	Investment	Expenses
Business area costs	10.2	259.7	147.6	314.4	75.2	309.6
Pollution prevention	3.4	103.0	17.2	126.2	7.3	110.9
Global environmental conservation	5.2	89.7	130.4	124.0	67.5	131.1
Resource circulation	1.6	67.0	—	64.2	0.4	67.6
Upstream/downstream costs	—	25.7	—	20.3	—	18.1
Administration costs	1.4	98.1	—	100.7	16.9	100.0
R&D costs	—	—	—	—	—	—
Social activity costs	—	0.9	—	0.7	—	0.7
Environmental damage costs	—	—	—	—	—	—
Total	11.6	384.4	147.6	436.1	92.1	428.4

- We could clearly understand the environmental cost and this was taken into account.
- The cost includes the depreciation amount and was accounted for in the same way as the accounting.
- Current investment includes both the investment amount and expense.
- Total number was only a rough estimation because the totals were rounded off.
- The employment cost of the environmental management department and operation and maintenance of the environmental management system was accounted for as administration
- "—" means no cost or no activities.

Input

Category	unit	Year ended March 31					
		2009	2010	2011	2012	2013	
Energy	Total energy usage	GJ	683,805	661,762	652,509	617,085	606,035
	Electricity	MWh	31,210	32,541	31,991	30,310	30,844
	Gas	km ³	4,465	4,217	4,111	3,772	3,818
	LPG	tons	7	7	7	7	6
	Heavy oil	kℓ	3,450	2,829	2,878	2,824	2,384
	Gasoline	kℓ	1,180	1,189	1,160	1,116	1,084
Water resources	Total water usage	km ³	509	468	508	516	459
	Tap water	km ³	173	150	142	133	131
	Industrial water	km ³	75	70	68	65	76
	Well water	km ³	261	248	298	318	252
Raw materials	Raw materials	tons	4,239	3,977	4,153	4,177	4,309

Output

Category	unit	Year ended March 31					
		2009	2010	2011	2012	2013	
Global warming	CO ₂	ktons	32.6	31.0	30.7	29.1	28.1
Atmospheric pollutants	Sulfic oxide emissions	tons	5.8	2.4	4.3	3.8	2.8
	Nitrous oxide emissions	tons	8.6	6.5	10.9	6.0	6.4
	Dust	tons	1.2	0.9	1.4	0.9	0.9
Water pollutants	Drainage water	km ³	399	370	382	369	370
	BOD (Biochemical oxygen demand) load	tons	4.0	4.4	3.7	4.2	5.0
	COD (Chemical oxygen demand) load	tons	2.0	2.0	2.2	2.6	3.4
	SS (Suspended solids) load	tons	4.1	3.8	4.1	4.0	5.7
Waste materials	Emmitions	tons	2,400	2,254	2,236	2,303	2,344
	Recycred resources	tons	2,119	2,003	2,040	2,094	2,142
	Final disposal	tons	36	36	27	27	33

Emissions from used containers and packaging

Category	unit	Year ended March 31				
		2009	2010	2011	2012	2013
Plastic containers	tons	1,641	1,402	1,499	1,520	1,605
Paper containers	tons	122	126	156	163	182
Glass others	tons	45	108	68	12	11
Total	tons	1,808	1,636	1,723	1,695	1,799

Greenhouse gas emissions by establishment (CO₂ equivalent) [tons]

Name of establishment	Year ended March 31				
	2009	2010	2011	2012	2013
Osaka Office and Osaka Plant	6,690	5,659	5,476	4,967	4,510
Noto Plant	11,895	11,776	11,976	11,829	10,868
Shiga Plant	5,954	5,239	4,948	4,708	5,158
Nara Research and Development Center	5,117	5,356	5,331	4,778	4,837
Branch and sales offices and others	2,968	2,987	2,925	2,785	2,709
Total	32,624	31,017	30,656	29,067	28,082

*Overseas subsidiaries

Name of establishment	Year ended March 31				
	2009	2010	2011	2012	2013
Santen Oy (Finland)	1,540	1,402	1,418	1,158	1,253
Santen Inc. (US)	285	257	273	—	56
Total	1,825	1,659	1,691	1,158	1,309

Energy usage by establishment (heat amount equivalent) [GJ]

Name of establishment	Year ended March 31				
	2009	2010	2011	2012	2013
Osaka Office and Osaka Plant	150,034	134,427	129,940	117,961	106,892
Noto Plant	236,568	230,745	234,627	232,515	222,110
Shiga Plant	129,783	122,956	116,277	110,679	121,064
Nara Research and Development Center	119,689	125,786	124,671	111,585	112,775
Branch and sales offices and others	47,731	47,848	46,994	44,346	43,193
Total	683,805	661,762	652,509	617,085	606,035

*Overseas Subsidiaries

Name of establishment	Year ended March 31				
	2009	2010	2011	2012	2013
Santen Oy	68,093	72,898	67,491	56,804	59,481
Santen Inc.	3,085	2,860	3,214	—	613
Total	71,178	75,757	70,705	56,804	60,095

Waste reduction/Recycling [tons]

Name of establishment		Year ended March 31				
		2009	2010	2011	2012	2013
Osaka Office and Osaka Plant	Emissions	395	359	323	306	336
	Recycled resources	282	275	257	237	272
	Final disposal	4.8	4.2	3.3	3.4	3.1
	Recycle rate	71.3%	76.4%	79.7%	77.6%	81.0%
Noto Plant	Emissions	1,502	1,365	1,410	1,467	1,484
	Recycled resources	1,492	1,361	1,405	1,455	1,484
	Final disposal	1.7	0.1	0.2	0.6	0.1
	Recycle rate	99.4%	99.8%	99.7%	99.2%	100.0%
Shiga Plant	Emissions	347	370	359	380	378
	Recycled resources	324	348	359	380	378
	Final disposal	5.1	6.9	0.0	0.0	0.0
	Recycle rate	93.3%	94.2%	100.0%	100.0%	100.0%
Nara Research and Development Center	Emissions	157	160	144	149	146
	Recycled resources	21	19	18	22	8
	Final disposal	24.4	25.3	23.4	22.8	29.4
	Recycle rate	13.6%	11.9%	12.5%	14.4%	5.2%
Total	Emissions	2,400	2,254	2,236	2,303	2,344
	Recycled resources	2,119	2,003	2,040	2,094	2,142
	Final disposal	36.0	36.5	26.9	26.8	32.7
	Recycle rate	88.3%	88.9%	91.2%	90.9%	91.4%

Water resource protection [km³]

Name of establishment		Year ended March 31				
		2009	2010	2011	2012	2013
Osaka Office and Osaka Plant	Consumption	106	85	80	74	67
	Discharge	72	60	55	54	47
Noto Plant	Consumption	268	254	305	324	257
	Discharge	223	214	239	225	225
Shiga Plant	Consumption	77	72	70	69	82
	Discharge	66	62	58	60	65
Nara Research and Development Center	Consumption	58	57	53	49	52
	Discharge	37	34	30	31	33
Total	Consumption	509	468	508	516	459
	Discharge	399	370	382	369	370

*Overseas Subsidiary

Name of establishment		Year ended March 31				
		2009	2010	2011	2012	2013
Santen Oy		98	100	97	66	70

Amounts of PRTR substances handled [kg]

Substance name	Year ended March 31				
	2009	2010	2011	2012	2013
Acetonitrile	2,019	1,492	1,704	2,071	1,819
Chloroform	1,055	508	403	430	364
Boron and its compounds	774	709	650	705	636
Norman hexane	—	578	496	615	350
Xylene	600	489	391	390	256
Formaldehyde	127	450	97	76	314
Others	175	156	128	111	171
Total	4,750	4,382	3,868	4,398	3,910

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

	Year ended March 31				
	2009	2010	2011	2012	2013
More than 1kg of the items used for only a year	18	26	20	19	19

