



SANTEN PHARMACEUTICAL CO., LTD.

# Environmental Data Book 2009

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Year Ending March 31, 2009

Corporate Social Responsibility Group

# Contents



Environmental Highlights	1
Impact on the Environment	1
Environmental Accounting	2
Input	3
Output	3
Emission of used containers and packaging	3
Greenhouse gas emissions by establishment	4
Energy usage by establishment	4
Waste reduction/Recycling	5
Water resource protection	5
Amounts of PRTR substances handled	5

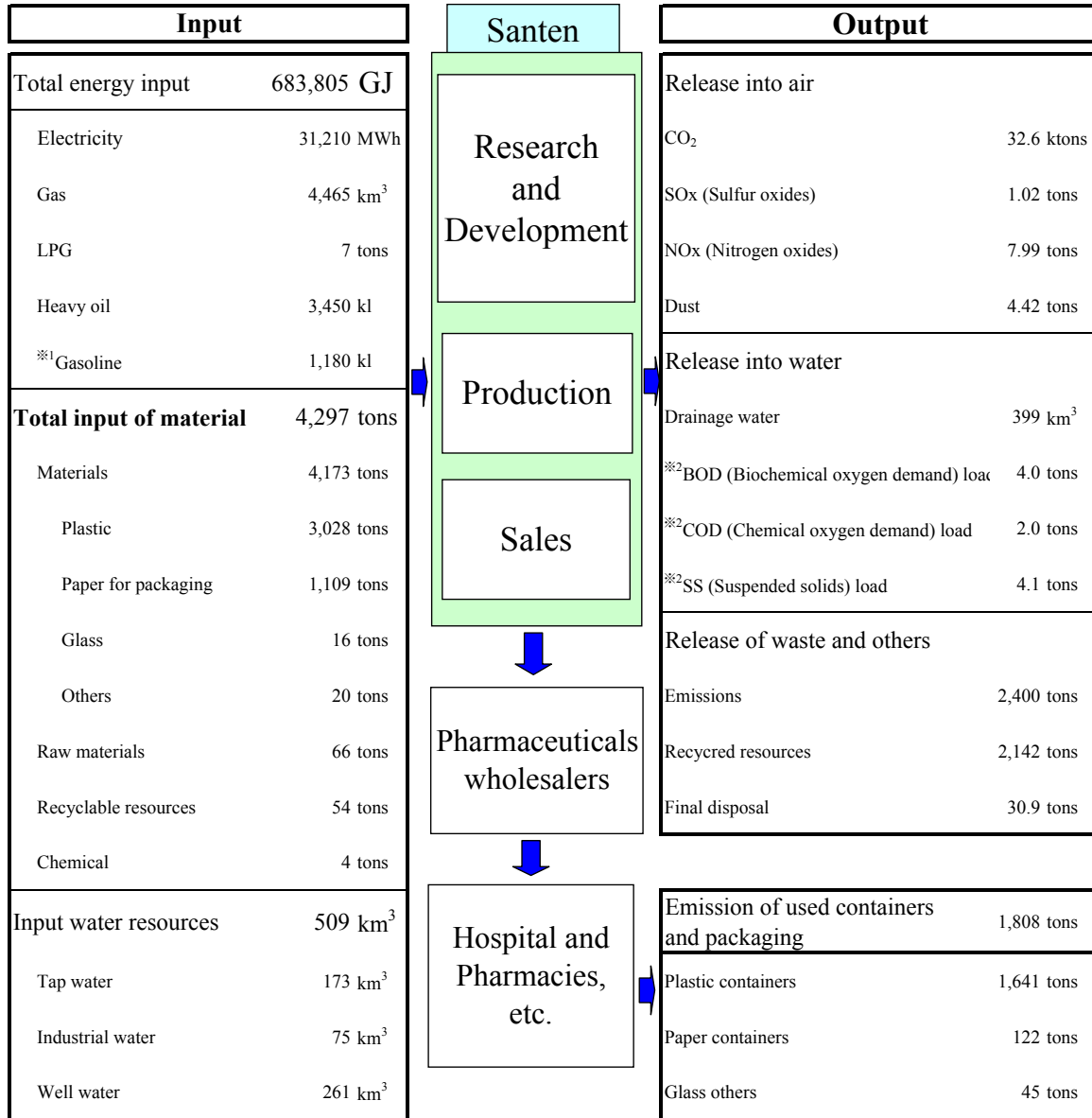
## Scope of reporting

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

It also includes some data of Santen's subsidiaries.

# Environmental Highlights

## Impact on the Environment



※<sup>1</sup> : Gasoline input is mainly input from commercial vehicles.

※<sup>2</sup> : Emission is based on results from regular examinations.

# Environmental Highlights

## Environmental Accounting

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

Period covered: April 1st, 2008 to March 31st, 2009

Scope: The cost and effect of environmental preservation in Santen

Reference: MOE (Ministry of the Environment) "Environmental Accounting Guideline(2005)"

unit:millions of yen

Category	Major activities	Investment	Expenses
Business area costs		120	247
Pollution prevention	Maintenance of wastewater treatment facilities, replacing the chemical absorbent, maintenance of boilers, maintenance of individual sewage treatment facilities	24	99
Global environmental conservation	Energy conversion of boiler facilities, replacement the high efficient boilers, maintenance of cogeneration facilities, inverter of equipment and facilities, setting the motion sensors, heating steam line	92	71
Resource circulation	Change of wastewater treatment, proper treatment and recycling of industrial and general waste, recycling confidential documents, using industrial cold water	4	77
Upstream/downstream costs	Subcontracting of container and packaging recycling	-	16
Administration costs	Maintenance of ISO certification, tree-planting and beautifying in the office, labor cost of environmental department, measurement of water quality and gas emissions, environmental education cost	6	111
R&D costs	-	-	-
Social activity costs	Participation in the Clean Beach event in Ishikawa, participation in the Euryale Ferox Project in Hikone Castle, cleaning activities at Lake Biwa, cleaning campaign on the Tomio River in Nara	-	0
Environmental damage costs	-	-	-
Total		126	374

- 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.
- The employment cost of the environmental management department and operation and maintenance of the environmental management system was accounted for as administration costs.
- "-" means no cost or no activities, and "0" means less than half a million yen.

## Input

	Category	unit	Year ending March 31				
			2005	2006	2007	2008	2009
Energy	Total energy usage	GJ	734,454	720,918	697,774	693,696	683,805
	Electricity	kWh	32,279	32,075	31,428	31,156	31,210
	Gas	km <sup>3</sup>	3,946	4,066	3,830	3,797	4,465
	LPG	tons	8	8	8	8	7
	Heavy oil	kℓ	5,156	4,761	4,610	4,575	3,450
	Gasoline	kℓ	1,086	1,043	1,035	1,078	1,180
Water resources	Total water usage	km <sup>3</sup>	617	592	519	529	509
	Tap water	km <sup>3</sup>	203	191	193	181	173
	Industrial water	km <sup>3</sup>	79	69	63	60	75
	Well water	km <sup>3</sup>	336	332	263	288	261
Raw materials	Raw materials	tons	3,571	5,324	4,946	4,700	4,239

## Output

	Category	unit	Year ending March 31				
			2005	2006	2007	2008	2009
Global warming	CO <sub>2</sub>	ktons	36.2	35.2	34.1	33.9	32.6
Atmospheric pollutants	Sulfic oxide emissions	tons	4.9	6.3	4.2	5.5	4.4
	Nitrous oxide emissions	tons	19.5	17.1	12.7	12.2	8.0
	Dust	tons	1.4	1.5	1.3	1.3	1.0
Water pollutants	Drainage water	km <sup>3</sup>	479	485	417	409	399
	BOD (Biochemical oxygen demand) load	tons	4.2	3.8	3.6	6.3	4.0
	COD (Chemical oxygen demand) load	tons	3.2	2.8	3.1	2.8	2.0
	SS (Suspended solids) load	tons	5.1	3.5	3.3	4.4	4.1
Waste materials	Emmissions	tons	2,345	2,530	2,240	2,509	2,400
	Recycred resources	tons	1,805	2,120	1,878	2,216	2,142
	Final disposal	tons	47	39	40	34	31

## Emission of used containers and packaging

	Category	unit	Year ending March 31				
			2005	2006	2007	2008	2009
Plastic containers		tons	1,283	1,334	1,327	1,453	1,641
Paper containers		tons	188	187	160	157	122
Glass others		tons	128	115	116	115	45
Total		tons	1,599	1,636	1,604	1,725	1,808

## Greenhouse gas emissions by establishment (CO<sub>2</sub> equivalent) [tons]

Name of establishment	Year ending March 31				
	2005	2006	2007	2008	2009
Osaka Office and Osaka Plant	4,993	5,444	5,234	7,151	6,690
Noto Plant	14,244	13,472	12,999	12,670	11,895
Shiga Plant	6,571	5,992	7,226	6,068	5,954
Nara Research and Development Center	7,626	7,642	5,933	5,238	5,117
Branch and sales offices and others	244	2,816	2,662	2,764	2,968
<b>Total</b>	<b>33,678</b>	<b>35,366</b>	<b>34,054</b>	<b>33,891</b>	<b>32,624</b>

### \*Overseas subsidiaries

Name of establishment	Year ending March 31				
	2005	2006	2007	2008	2009
Santen Oy (Finland)	1,518	1,600	1,661	1,660	1,540
Santen Inc.(US)	431	373	318	292	285
<b>Total</b>	<b>1,949</b>	<b>1,973</b>	<b>1,979</b>	<b>1,952</b>	<b>1,825</b>

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

Name of establishment	Year ending March 31				
	2005	2006	2007	2008	2009
Osaka Office and Osaka Plant	170,926	172,380	162,686	161,337	150,034
Noto Plant	278,208	264,634	257,448	250,528	236,568
Shiga Plant	126,900	116,680	114,304	116,894	129,783
Nara Research and Development Center	113,594	123,274	119,797	119,803	119,689
Branch and sales offices and others	44,827	43,951	43,538	45,134	47,731
<b>Total</b>	<b>734,454</b>	<b>720,918</b>	<b>697,774</b>	<b>693,696</b>	<b>683,805</b>

### \*Overseas Subsidiaries

Name of establishment	Year ending March 31				
	2005	2006	2007	2008	2009
Santen Oy	68,680	69,761	69,616	63,391	68,093
Santen Inc.	5,331	4,343	3,614	3,278	3,085
<b>Total</b>	<b>74,011</b>	<b>74,104</b>	<b>73,230</b>	<b>66,669</b>	<b>71,178</b>

## Waste reduction/Recycling [tons]

Name of establishment		Year ending March 31				
		2005	2006	2007	2008	2009
Osaka Office and Osaka Plant	Emissions	426	471	443	480	395
	Recycled resources	304	354	324	354	282
	Final disposal	10.6	6.5	7.8	6.4	4.8
	Recycle rate	71.4%	75.2%	73.1%	73.9%	71.3%
Noto Plant	Emissions	1,389	1,677	1,549	1,755	1,502
	Recycled resources	1,195	1,557	1,472	1,727	1,492
	Final disposal	11.8	9.1	6.1	3.0	1.7
	Recycle rate	86.0%	92.8%	95.0%	98.4%	99.4%
Shiga Plant	Emissions	376	237	89	117	347
	Recycled resources	290	191	64	115	347
	Final disposal	2.6	1.4	0.7	0.1	0.0
	Recycle rate	77.2%	80.8%	72.1%	98.5%	100.0%
Nara Research and Development Center	Emissions	155	145	159	158	157
	Recycled resources	16	17	17	20	21
	Final disposal	21.8	22.2	25.0	24.7	24.4
	Recycle rate	10.2%	11.8%	11.0%	12.4%	13.6%
Total	Emissions	2,346	2,530	2,240	2,510	2,401
	Recycled resources	1,805	2,119	1,877	2,216	2,142
	Final disposal	46.8	39.2	39.6	34.2	30.9
	Recycle rate	76.9%	83.8%	83.8%	88.3%	89.2%

## Water resource protection [km<sup>3</sup>]

Name of establishment		Year ending March 31				
		2005	2006	2007	2008	2009
Osaka Office and Osaka Plant	Consumption	135	124	121	109	106
	Discharge	87	85	84	74	72
Noto Plant	Consumption	344	340	270	295	268
	Discharge	275	283	231	242	223
Shiga Plant	Consumption	81	71	65	63	77
	Discharge	68	60	57	55	66
Nara Research and Development Center	Consumption	57	57	62	62	58
	Discharge	57	57	41	39	37
Total	Consumption	617	592	519	529	509
	Discharge	488	485	413	409	399

### \*Overseas Subsidiary

Name of establishment		Year ending March 31				
		2005	2006	2007	2008	2009
Santen Oy		90	87	95	99	98

## Amounts of PRTR substances handled [kg]

Substance name	Year ending March 31				
	2005	2006	2007	2008	2009
Acetonitrile	2,049	1,814	2,226	2,499	2,019
Chloroform	498	713	1,466	1,505	1,055
Boron and its compounds	812	731	591	1,393	774
Xylene	456	495	510	585	600
Formaldehyde	159	127	117	127	127
Others	364	211	323	152	175
Total	4,338	4,091	5,233	6,261	4,750

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

	Year ending March 31				
	2005	2006	2007	2008	2009
More than 1kg of the items used for only a year	17	19	17	17	18

