

Main Environmental Indicators (5 Years)

(1) Environmental Impact of Business Activities by the Mandom Group in Japan

Reporting Content	Unit	Apr. 2012 to Mar. 2013	Apr. 2013 to Mar. 2014	Apr. 2014 to Mar. 2015	Apr. 2015 to Mar. 2016	Apr. 2016 to Mar. 2017
		FY2012	FY2013	FY2014	FY2015	FY2016
Total energy input	GJ	106,176	112,987	117,236	116,130	117,212
Electric power	thousand kWh	9,377	10,056	10,471	10,354	10,511
Kerosene	kl	364	369	368	367	355
Gas	m ³	20,459	20,457	20,175	20,929	19,838
Energy input in distribution	GJ	24,985	28,878	31,111	31,498	32,715
Energy input in sales activities *1	GJ	13,488	13,061	12,113	11,530	11,142
Water input	m ³	98,248	99,097	86,669	95,416	90,229
water supply	m ³	75,891	75,900	74,321	84,930	81,399
industrial water supply	m ³	22,357	23,197	12,348	10,486	8,830
Raw materials input	t	13,644	15,211	15,801	16,856	16,912
PRTR-listed raw materials in use	kg	46,548	68,778	46,315	102,330	96,016
CO ₂ emissions *2	t-CO ₂	5,044	5,774	5,803	5,955	5,672
CO ₂ emissions in Distribution	t-CO ₂	1,689	1,962	2,121	2,148	2,229
Distribution (by truck) *3	t-CO ₂	1,612	1,898	2,069	2,096	2,174
Distribution (by ship) *4	t-CO ₂	29	28	27	26	28
Distribution (by railroad) *4	t-CO ₂	47	35	25	26	27
Business activities CO ₂ emissions *1	t-CO ₂	905	876	813	774	748
Wastewater	m ³	44,169	47,336	45,109	48,740	41,845
Waste	t	3,548	4,064	3,722	3,620	3,405
Recovered resources	t	3,496	4,005	3,685	3,594	3,380
Resource recovery rate	%	98.5%	98.5%	99.0%	99.3%	99.3%
Sulfur oxide (SO _x) emissions	kg	30	26	28	25	34
Nitrogen oxide (NO _x) emissions	kg	281	263	210	141	245
Dust emissions	kg	5	5	14	3	4

<Per unit of sales>

energy input	GJ/ million yen	2.779	2.756	2.816	2.633	2.551
Water input	m ³ / million yen	2.571	2.420	2.082	2.163	1.964
CO ₂ emissions	t-CO ₂ / million yen	0.132	0.141	0.139	0.135	0.123
Distribution CO ₂ emissions	t-CO ₂ / million yen	0.044	0.048	0.051	0.049	0.049

*1 Includes estimated impact of part-time workers, etc.

*2 The CO₂ emissions coefficient from electricity use is calculated as the actual emissions factor for each fiscal year per electricity supplier.

*3 Calculation based on revised ton-kilometer method (described in Energy Conservation Act).

*4 Calculation based on original ton-kilometer method (described in Energy Conservation Act).

1 – a. Amount and Emissions of PRTR-listed Substances and Movement

Substances used in volume of one ton or more (unit: kg)

Class I Designated Chemical Substance	FY2016	
	Amount Used	Emissions and Movement
Water-soluble zinc compounds	1,065	119
2-aminoethanol	3,121	6
Methyl 4-hydroxybenzoate	5,120	174
Poly(oxyethylene) alkyl ether	2,497	41
Sodium poly(oxyethylene) dodecyl ether sulfonate	66,329	1,066
Xylene※	2,839	14
Ferric chloride	12,316	0

※Xylene indicates emission amount

1 – b. Graphs of main environmental data

Mandom Group Domestic Sites

■ Production site ■ Site Name/Address

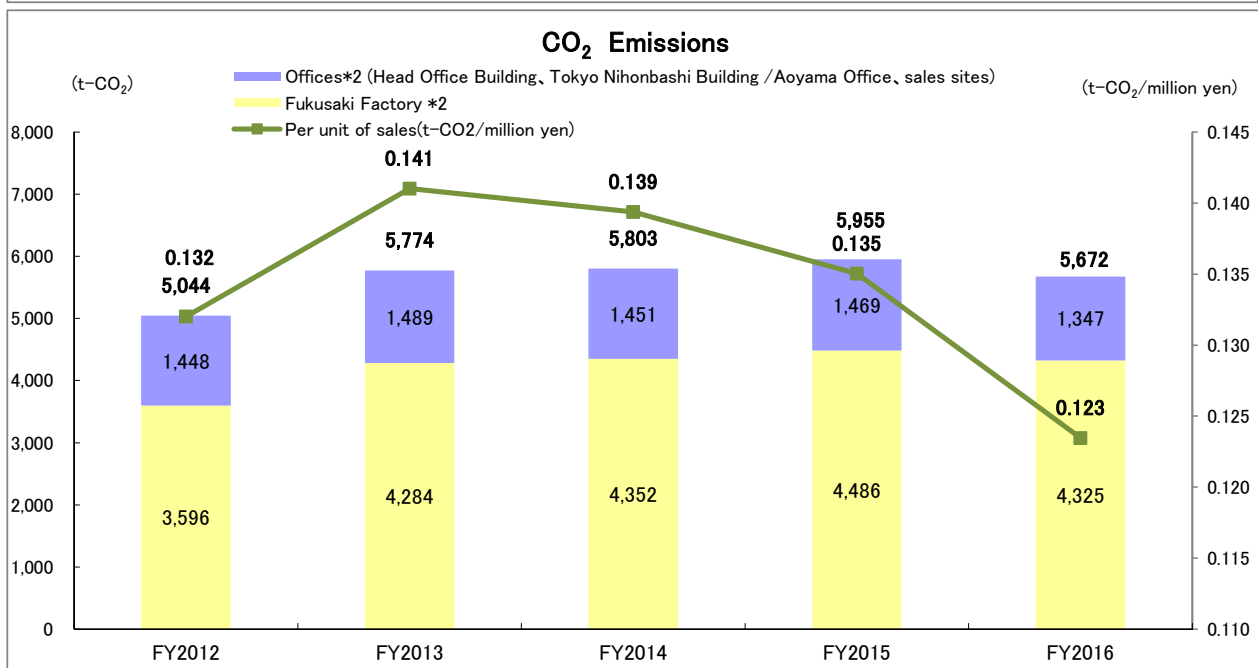
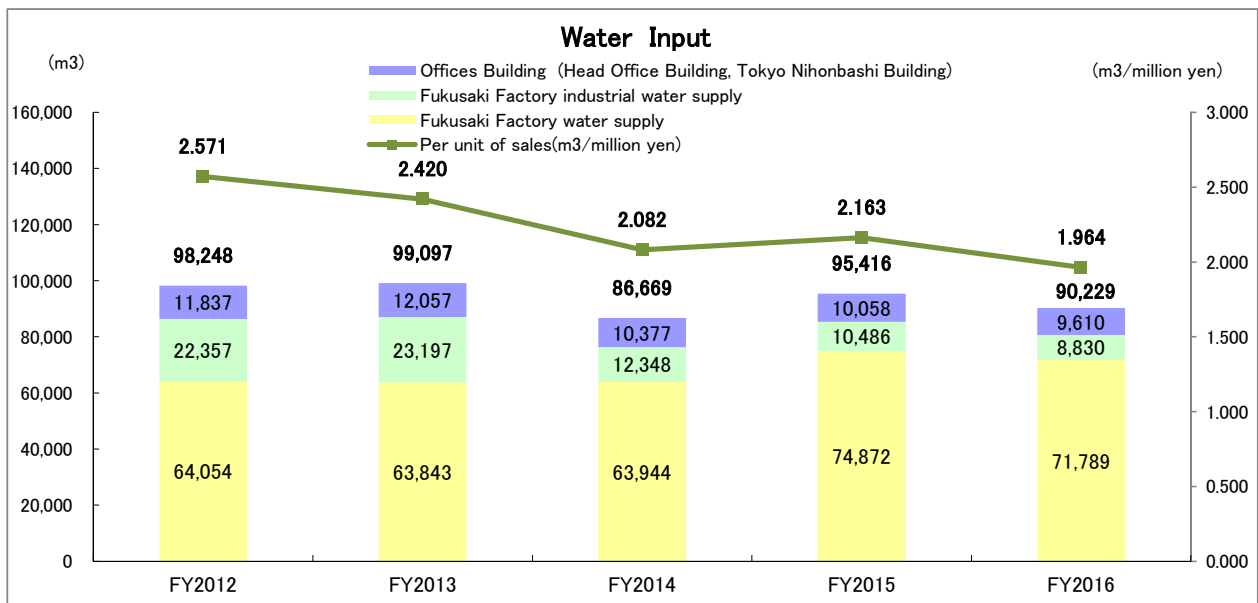
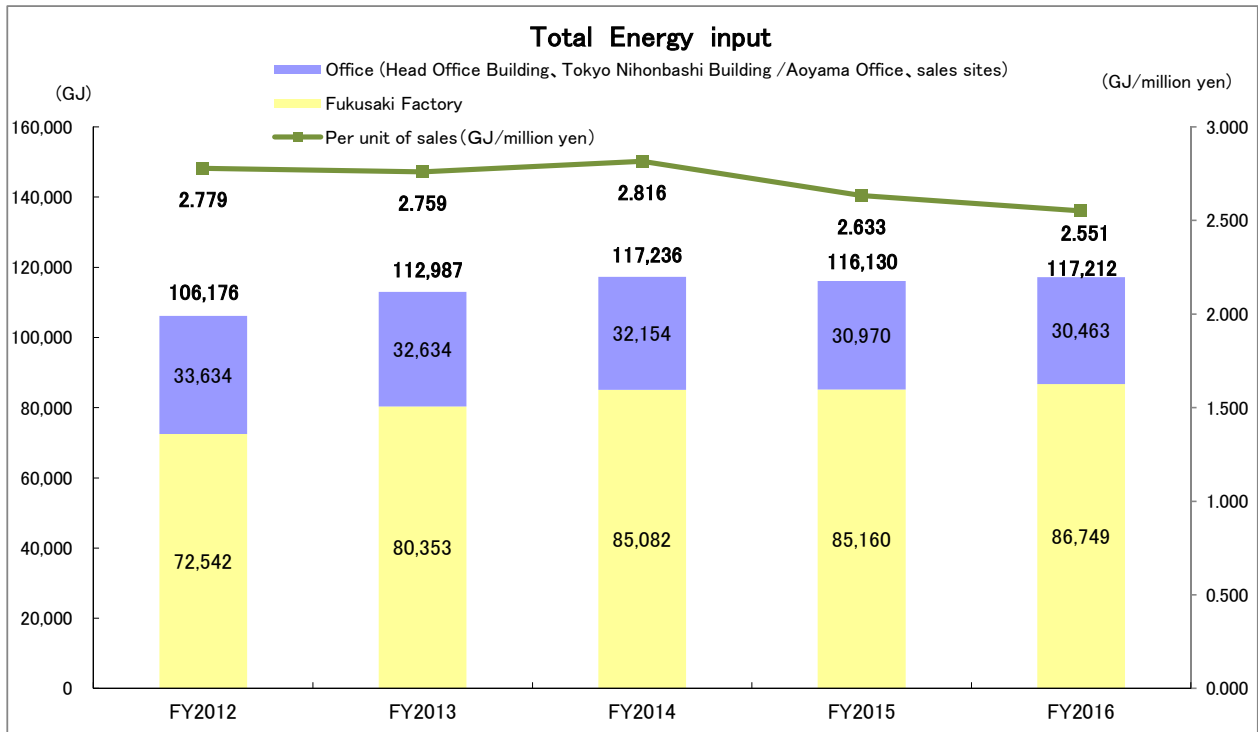
○Fukusaki Factory	Fukusaki-cho, Kanzaki-gun, Hyogo
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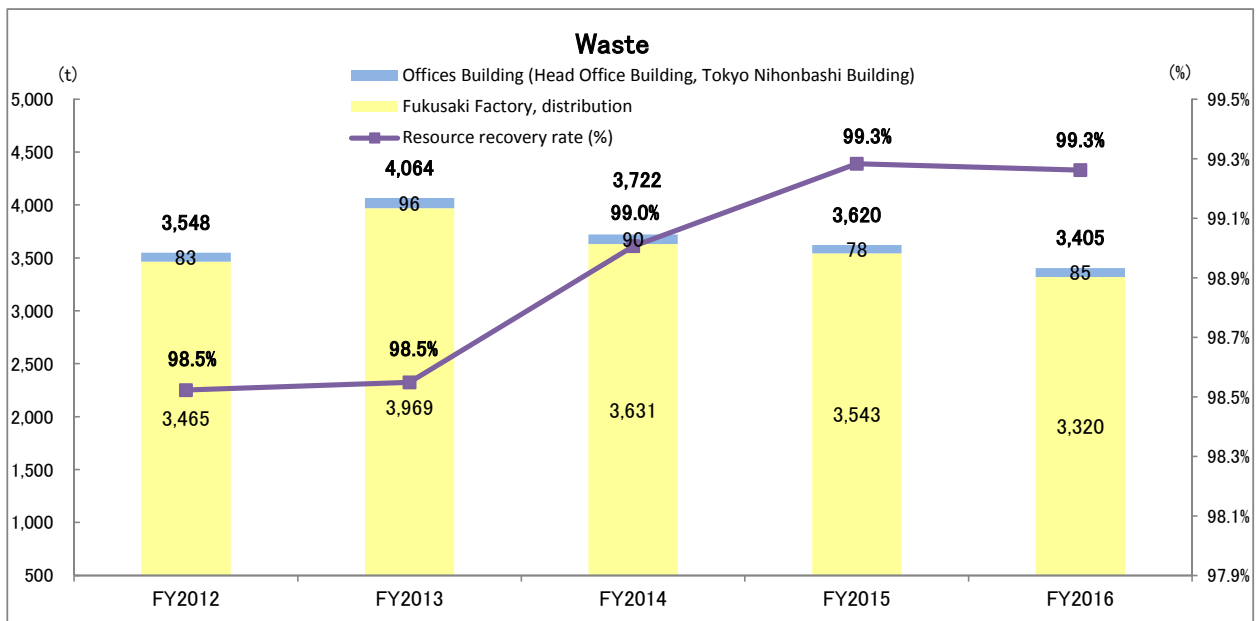
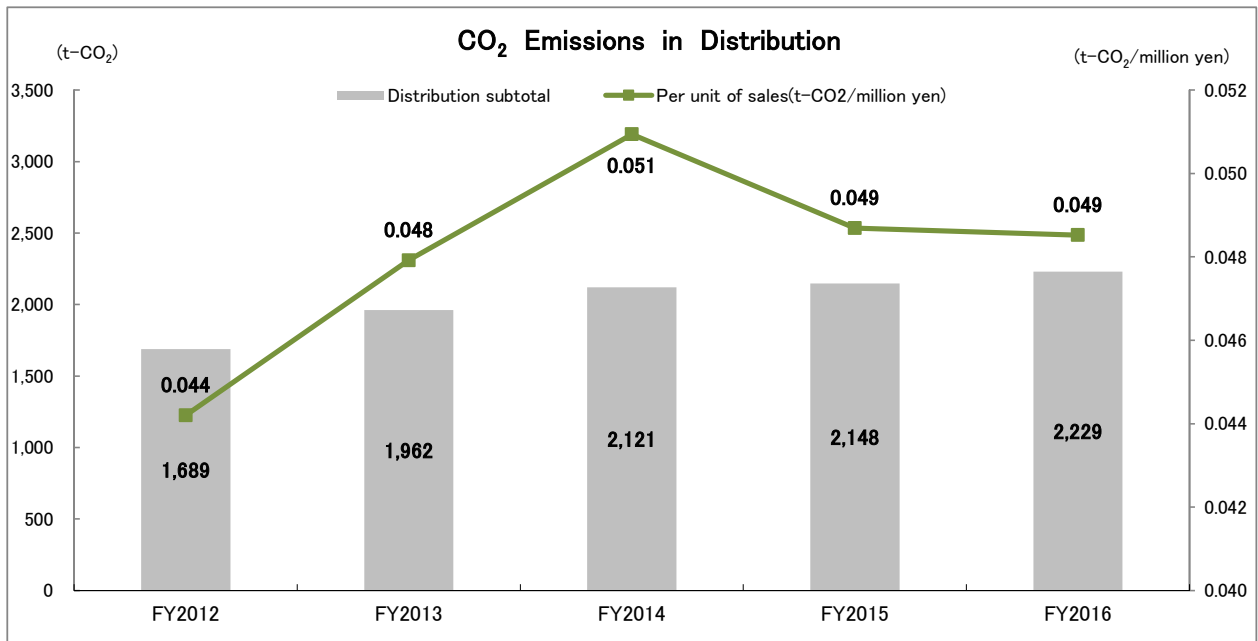
■ Office ■ Site Name/Address

○Head Office Building • Mandom Corporation • PIACELABO Corporation • mbs Corporation	Chuo-ku, Osaka	○Tokyo Nihonbashi Building/Aoyama Office	Minato-ku, Aoyama/ Nihonbashi, Chuo-ku, Tokyo
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○Sales Sites

•East Japan Sales Division Sapporo Sales Office	Kita-ku, Sapporo
•East Japan Sales Division Sendai Sales Office	Aoba-ku, Sendai
•East Japan Sales Division Saitama Sales Office	Omiya-ku, Saitama
•East Japan Sales Division Saitama Sales Office	Nihonbashi, Chuo-ku, Tokyo
•East Japan Sales Division Yokohama Sales Office	Kohoku-ku, Yokohama
•West Japan Sales Division Nagoya Sales Office	Naka-ku, Nagoya
•West Japan Sales Division Hiroshima Sales Office	Higashi-ku, Hiroshima
•West Japan Sales Division Hiroshima Sales Office	Hakata-ku, Fukuoka
•PIACELABO Corporation Tokyo Sales Office	Tsukiji, Chuo-ku, Tokyo





2. Environmental Impact of Mandom Group Business Activities (Excluding Distribution, Transport, and Sales Activities)

Mandom Group Overseas

■ Production site ■	Site Name
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○OPT Mandom Indonesia Tbk Factory1、Factory2	Indonesia
○Zhongshan City Rida Cosmetics Co., Ltd.	China (Zhongshan)

■ Office ■	Site Name
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○OPT Mandom Indonesia Tbk	Indonesia
○Mandom Corporation (Thailand) Ltd.	Thailand
○Mandom Philippines Corporation	The Philippines
○Mandom (Malaysia) Sdn. Bhd.	Malaysia
○Mandom Corporation (Singapore)Pte. Ltd.	Singapore

■ Office ■	Site Name
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○Mandom Taiwan Corporation	Taiwan
○Sunwa Marketing Co., Ltd.	China (Hong Kong)
○Mandom Korea Corporation	Korea
○Zhongshan City Rida Cosmetics Co., Ltd.	China (Zhongshan)
○Mandom China Corporation	China (Shanghai/Beijing /Guangzhou)
○Mandom Vietnam Company Ltd.	ベトナム

Reporting Content		Apr. 2012 to Mar. 2013	Apr. 2013 to Mar. 2014	Apr. 2014 to Mar. 2015	Apr. 2015 to Mar. 2016	Apr. 2016 to Mar. 2017	
		FY2012	FY2013	FY2014	FY2015	FY2016	
Energy input	GJ	375,403	387,626	399,163	426,709	449,303	
Japan	GJ	106,176	112,987	117,236	116,130	117,212	
Overseas	GJ	269,227	274,639	281,927	310,579	332,091	
Type of energy	Electric power	thousand kWh	35,179	36,432	37,379	40,342	42,327
	LPG/LNG	kg	31,211	36,327	60,640	58,223	52,747
	City gas	m ³	18,908	18,786	18,194	18,941	17,986
	Kerosene	kl	364	369	368	367	355
	Diesel fuel	kl	278	269	279	228	322
Greenhouse gas emissions	t-CO ₂	25,298	26,458	26,979	29,314	30,640	
Japan	t-CO ₂	5,044	5,774	5,803	5,955	5,672	
Overseas	t-CO ₂	20,254	20,684	21,176	23,359	24,968	

<Per unit of sales>

energy input	GJ/ million yen	6.21	5.68	5.63	5.68	5.81
Greenhouse gas emissions	t-CO ₂ / million yen	0.419	0.388	0.380	0.390	0.396

Note1: Energy consumption calculated based on formulas in the Japanese Act on the Rational Use of Energy.

Note2: Aggregate data for each fiscal year is based on the period April 1 to March 31 for Japan and January 1 to December 31 for overseas sites.

Note3: Overseas CO₂ emission coefficients by country are drawn from "CO₂ Emissions from Fuel Combustion: Highlights, 2013 Edition."

Source: IEA. Fiscal year CO₂ emission coefficients for Japan are based on data from individual electric power produce

