

Ajinomoto Group Sustainability Report 2012

Environment Additional Documents and Data

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Business sites of Ajinomoto Group certified with ISO 14001 etc.

As of October, 2012

■ Overview

		Certified	In progress	Total	Progress rate
In Japan	Ajinomoto Co., Inc.	22	0	22	100%
	Subsidiaries in Japan	54	2	56	96%
	Sub total	(76)	(2)	(78)	97%
Outside Japan		45	7	52	87%
	Group total	121	9	130	93%

		Certified	In progress	Total	Progress rate
Ajinomoto Co., Inc.		22	0	22	100%
Subsidiaries of Ajinomoto Co., Inc.	under Planning/Supporting Division	3	0	3	100%
	under Food Products Division	39	8	47	83%
	under Bioscience Products & Fine Chemicals Division	20	0	20	100%
	under Production	1	0	1	100%
Ajinomoto Frozen Foods Co., Inc. and its subsidiaries		17	1	18	94%
AJINOMOTO LOGISTICS CORPORATION and its subsidiaries		9	0	9	100%
AJINOMOTO BAKERY CO., LTD. and its subsidiaries		2	0	2	100%
Ajinomoto Pharmaceuticals Co., Inc.		8	0	8	100%
	Group total	121	9	130	93%

■ Detail

FY	Business sites and Group Company	Certified in
1998	Ajinomoto Co., Inc. Kyushu Plant	1998.07
1999	Ajinomoto Co., Inc. Tokai Plant	1999.11
	Ajinomoto Frozen Foods Co., Inc. Chubu Plant	2000.02
2000	Ajinomoto Vietnam Co., Ltd. Bien Hoa Plant [Vietnam]	2001.03
	Ajinomoto Co., Inc. Kawasaki Plant	2001.03
2001	Ajinomoto Co., (Thailand) Ltd. Pathum Thani Factory [Thailand]	2001.09
	Ajinomoto do Brazil Industria e Comercio de Alimentos Ltda. Limeira Plant [Brazil]	2001.12
	Lianyungang Ajinomoto Ruyi Foods Co., Ltd. [China]	2002.02
	Lianyungang Ajinomoto Frozen Foods Co., Ltd. [China]	2002.02
2002	Ajinomoto Co., (Thailand) Ltd. Kamphaeng Phet I Factory [Thailand]	2002.06
	Knorr Foods Co., Ltd. Tokai Plant	2002.08
	Knorr Foods Co., Ltd. Chubu Plant	2002.11
	Ajinomoto Engineering Corporation	2003.02
	Ajinomoto Frozen Foods Co., Inc. Kyushu Plant	2003.03
	Ajinomoto Co., Inc. Research Laboratories and Center	2003.03
	Ajinomoto Fine-Techno Co., Inc. Head Office	2003.03
2003	Ajinomoto Co., Inc. Head Office and Branch Offices (18 offices)	2003.04
	Ajinomoto do Brazil Industria e Comercio de Alimentos Ltda. Laranjal Paulista Plant [Brazil]	2003.06
	Knorr Foods Co., Ltd. Kawasaki Plant	2003.07
	Ajinomoto Co., (Thailand) Ltd. Phra Pradaeng Factory [Thailand]	2003.07
	Hokkaido Ajinomoto Co., Inc.	2003.09
	AJINOMOTO NORTH AMERICA, INC. Iowa Plant [U.S.A.]	2003.11
	Ajinomoto Fine-Techno Co., Inc. Activated Carbon Division	2003.12
	PT Ajinex International [Indonesia]	2004.02

FY	Business sites and Group Company	Certified in
2003	PT Ajinomoto Indonesia Mojokerto Factory	[Indonesia] 2004.02
2004	Ajinomoto Heartland LLC	[U.S.A.] 2004.04
	FLAVOR FOOD PRODUCTS INTERNATIONAL INC.	[Philippines] 2004.04
	AJINOMOTO NORTH AMERICA, INC. North Carolina Plant	[U.S.A.] 2004.05 *1
	Ajinomoto Packaging Co., Inc. Head Office	2004.07
	Ajinomoto Packaging Co., Inc. Kansai Plant	2004.07
	Ajinomoto Packaging Co., Inc. Kanto Plant	2004.07
	Hokkaido Knorr Foods Co., Ltd. Kunneppu Plant	2004.09
	Hokkaido Knorr Foods Co., Ltd. Mikasa Plant	2004.09
	Hokkaido Knorr Foods Co., Ltd. Tokachi Plant	2004.09
	Okinawa Ajinomoto Co., Inc.	2004.11
	Ajinomoto do Brazil Industria e Comercio de Alimentos Ltda. Valparaíso Plant	[Brazil] 2004.11
	Fuji Ace Co., Ltd. Bangpoo Factory	[Thailand] 2005.03
	Ajinomoto Frozen Foods Co., Inc. Head Office	2005.03
	Ajinomoto Frozen Foods Co., Inc. Kanto Plant	2005.03
	Ajinomoto Frozen Foods Co., Inc. Shikoku Plant	2005.03
	AJINOMOTO BAKERY CO., LTD. Head Office and Shimada Plant	2005.03
	2005	Ajinomoto Packaging Co., Inc. Sano Plant
HENAN AJINOMOTO AMINO ACID CO., LTD.		[China] 2005.07
Ajinomoto Poland Sp. z o.o.		[Poland] 2005.08
Shanghai Ajinomoto Amino Acid Co., Ltd.		[China] 2005.09
Ajinomoto Communications, Inc.		2005.09
FFA International Co., Ltd.		2005.11
Ace Kounai Service Corporation		2005.11
Komec Co., Ltd. Osaka Plant		2005.12
Komec Co., Ltd. Tokyo Plant		2005.12
Ajinomoto Frozen Foods (Thailand) Co., Ltd.		[Thailand] 2005.12
AJINOMOTO HEALTHY SUPPLY, INC. Takasaki Plant		2005.12
Vege Pro Foods Co., Ltd.		2006.01 *2
Ajinomoto Sweeteners Europe S.A.S.		[France] 2006.01
Ajinomoto Co., (Thailand) Ltd. Nong Khae Factory		[Thailand] 2006.01
Ajinomoto Co., (Thailand) Ltd. Kamphaeng Phet II Factory		[Thailand] 2006.02
Ajinomoto (Malaysia) Berhad		[Malaysia] 2006.03
AJINOMOTO EUROLYSINE S.A.S.		[France] 2006.03
Ajinomoto Pharmaceuticals Co., Inc. Kanto Logistics Center		2006.03
Ajinomoto Pharmaceuticals Co., Inc. Shizuoka Distribution Center		2006.03
Ajinomoto Pharmaceuticals Co., Inc. Parenteral & Enteral Nutrition and Dialysis Research Laboratories		2006.03
2006	Ajinomoto Pharmaceuticals Co., Inc. Saitama Plant	2006.04 *3
	Ajinomoto Pharmaceuticals Co., Inc. Fukushima Plant	2006.04 *3
	Ajinomoto Pharmaceuticals Co., Inc. Head Office	2006.04
	Ajinomoto Pharmaceuticals Co., Inc. Oigawa Plant	2006.04
	Ajinomoto Pharmaceuticals Co., Inc. Shimizu Plant	2006.04
	AJINOMOTO LOGISTICS CORPORATION	2006.05 *4
	Chuo Ace Logistics Corporation	2006.05 *4
	Kansai Ace Logistics Corporation	2006.05 *4
	Kanto Ace Logistics Corporation	2006.05 *4
	Hokkaido Ace Logistics Corporation	2006.05 *4
	Tokai Ace Logistics Corporation	2006.05 *4
	Tohoku Ace Logistics Corporation	2006.05 *4
	Kyushu Ace Logistics Corporation	2006.05 *4
	Nippon Protein Co., Ltd. Ashikaga Plant	2006.06
	Wan Thai Foods Industry Co., Ltd.	[Thailand] 2006.07
Xiamen Ajinomoto Life Ideal Foods Co., Ltd.	[China] 2006.09	

FY	Business sites and Group Company	Certified in
2006	ATTB [Thailand]	2006.10 *6
	AJINOMOTO FOODS EUROPE S.A.S. [France]	2006.12
	S.A. Ajinomoto OmniChem N.V. Louvain-la-Neuve Plant [Belgium]	2006.12
	S.A. Ajinomoto OmniChem N.V. Wetteren Plant [Belgium]	2006.12
	S.A. Ajinomoto OmniChem N.V. Balen Plant [Belgium]	2006.12
	FREC KANTO CO., LTD.	2007.02
	ACE BAKERY CO., LTD.	2007.03
2007	Ajinomoto del Perú S.A Callao Plant [Peru]	2007.05
	Ajinomoto do Brazil Industria e Comercio de Alimentos Ltda. Pederneiras Plant [Brazil]	2007.11
	FREC DESSERT CO., LTD. Main Plant	2008.01
	Delica Ace Co., Ltd. Ageo Plant	2008.02
	Shanghai Ajinomoto Seasoning Co., Ltd. [China]	2008.02
2008	Ajinomoto Fine-Techno Co., Inc. Gunma Plant	2008.06
	FD Green (Thailand) Co., Ltd. [Thailand]	2008.10
	Delica Ace Co., Ltd. Yamagata Plant	2008.12
	Global Cebu Foods Corporation [Philippines]	2009.01
2009	Shanghai Amoy Foods Co., Ltd. [China]	2009.06
	Ajinomoto Vietnam Co., Ltd. Long Thanh Factory [Vietnam]	2009.12
	Ajinomoto Betagro Specialty Foods Co., Ltd. [Thailand]	2009.12
	Bonito Technical Laboratory Co., Inc.	2009.12 *2
	FREC DESSERT CO., LTD. Kita-kanto Factory	2010.01
	Ajinomoto Sales (Thailand) Co., Ltd. BIRDY Plant [Thailand]	2010.03
	Ajinomoto Betagro Frozen Foods (Thailand) Co., Ltd. [Thailand]	2010.03
2010	SHANGHAI AJINOMOTO FOOD RESEARCH AND DEVELOPMENT CENTER CO., LTD. [China]	2010.04
	Fuji Ace Co., Ltd. Sinsakhon Factory [Thailand]	2010.10
	Shanghai Amoy Food Co., Ltd. [China]	2010.10
2012	Ajinomoto Pharmaceuticals Co., Inc. Research Center	2012.04 *6
	Ajinomoto Animal Nutrition Group, Inc.	2012.05

*1: Ajinomoto Food Ingredients LLC and Ajinomoto AminoScience LLC were merged into AJINOMOTO NORTH AMERICA, INC.

*2: The certification acquired by Vege Pro Foods Co., Ltd. and Bonito Technical Laboratory Co., Inc. is "Eco Action 21".

*3: Saitama and Fukushima Plant of AJINOMOTO PHARMACEUTICALS CO.,LTD. have renewed their certification in April, 2006 as scope extension of the previous scope certified in March 2005, due to the merger.

*4: The previously obtained Green Management Certifications by the transportation subsidiaries of AJINOMOTO LOGISTICS CORPORATION (ALC) were integrated in ALC's ISO14001 certification.

*5: Ajinomoto Calpis Beverage (Thailand) Co., Ltd. changed the company name to ABBT Co., Ltd., after the divestiture of Calpis Co., Ltd.

*6: The Parenteral & Enteral Nutrition and Dialysis Research Laboratories of AJINOMOTO PHARMACEUTICALS CO.,LTD. expanded the certification in other laboratories, and as the Research Center, newly acquired the certification in May 2012.

Note: 1. Malaysia Packaging Industry Berhad was excluded from the scope of the Ajinomoto Group's environmental management system from fiscal year 2005.

2. Headquarters, Okayama and Gumma Plant of Calpis Co., Ltd., and Calpis Foods Service Co.,Ltd. was excluded from the scope of the Ajinomoto Group's environmental management system since Calpis Co., Ltd. was divested in October 2012.

Environmental Accounting
Environmental Conservation Cost

■ Scope of data collection: Ajinomoto Co., Inc.
■ Period: 2011/04~2012/03

(Unit: ¥ million)

Category	Item	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	Remarks
Business area cost	Environmental conservation cost to control environmental impacts resulted from production and service activities within the business area	55	1,439	883	782	530	1,004	2,085	Investment in environment related facilities/equipment in Head/Branch Office & 3 plants in Japan
	1) Pollution prevention cost	55	965	341	263	216	808	2,018	Investment in facilities for maintaining air and water quality (wastewater treatment facilities etc.)
	2) Global environmental conservation cost	0	340	213	515	58	192	57	CO ₂ emission reduction, energy saving
	3) Resource circulation cost	0	134	329	3	255	5	11	By-products, waste recycle and waste disposal
Upstream/downstream cost	Environmental conservation cost to control environmental impacts resulted from business operations upstream or downstream	0	0	0	0	3	3	1	
Administration cost	Environmental conservation cost stemming from administrative activities	0	7	0	21	14	18	88	
R&D cost	Environmental conservation cost stemming from related R&D activities	0	2	0	13	21	0	1	
Social activity cost	Environmental conservation cost stemming from social activities	0	0	0	1	4	5	0	
Environmental remediation cost	Cost incurred for dealing with environmental degradation	0	0	0	38	9	0	1	
Total		55	1,448	883	854	581	1,029	2,176	

(Unit: ¥ million)

Category	Item	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	Remarks
Business area cost	Environmental conservation cost to control environmental impacts resulted from production and service activities within the business area	3,191	2,277	3,486	3,348	2,750	2,601	2,366	Operating cost in environment related facilities/equipment in Head/Branch Office & 3 plants in Japan
	1) Pollution prevention cost	1,536	1,339	1,767	1,807	1,676	1,592	1,389	Cost for maintaining air and water quality (wastewater treatment etc.)
	2) Global environmental conservation cost	48	0	57	42	39	65	38	CO ₂ emission reduction, energy saving
	3) Resource circulation cost	1,607	938	1,662	1,499	1,034	944	939	By-products, waste recycle and waste disposal
Upstream/downstream cost	Environmental conservation cost to control environmental impacts resulted from business operations upstream or downstream	495	674	550	467	272	275	259	The Containers and Packaging Recycling Act
Administration cost	Environmental conservation cost stemming from administrative activities	433	365	384	536	507	491	438	Maintaining EMS and environment related administration operations in head office (Social activities excluded)
R&D cost	Environmental conservation cost stemming from related R&D activities	289	313	443	2,700	1,809	1,684	2,777	Total amount for the area contributing to the environment (from FY08)
Social activity cost	Environmental conservation cost stemming from social activities	378	295	165	213	116	147	143	Environmental Report, Eco Products and Environmental campaign etc.
Environmental remediation cost	Cost incurred for dealing with environmental degradation	0	9	0	6	0	0	0	Soil clean-up
Total		4,786	3,933	5,028	7,270	5,453	5,199	5,983	

(Unit: ¥ million)

Item	Detail	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	Remarks
Investment	Capital investment	21,600	19,500	17,400	19,847	30,770	7,970	10,389	
	Cost for environment related equipment/facility included in capital investment	55	1,448	883	854	581	1,029	2,177	
R&D	R&D	25,700	25,951	26,800	29,000	31,160	32,283	29,872	(*) Total amount for the area contributing to the environment (from FY08)
	Cost for environment related development included in R&D (*)	289	313	443	2,700	1,809	1,684	2,778	

(Unit: ¥ billion)

Category	Item	Unit	FY2005	FY2006	FY2007	FY2008	FY2009		FY2010		FY2011		
							Actual	Economic Effect *	Actual	Economic Effect *	Actual	Economic Effect *	
Production	Volume	Thousands of tons	182	184	180	188	170	—	175	—	172	—	
Input	Water	River water	Thousands of tons	41,831	41,245	41,888	29,501	23,678	—	15,024	—	12,449	—
		Industrial water	Thousands of tons	33,575	34,507	32,511	33,274	32,502	—	28,762	—	28,682	—
		Other	Thousands of tons	1,177	2,119	1,153	1,235	1,179	—	863	—	808	—
		Total water input	Thousands of tons	76,583	77,871	75,552	64,010	57,359	—	44,649	—	41,940	—
	Energy	Electricity	MWH	104,571	106,426	56,822	61,558	54,057	6.1	71,037	4.0	56,889	5.7
		City gas	KM ³	58,319	181	63,199	60,994	50,150	4.1	40,787	8.8	39,994	9.2
		LNG	KNM ³	29,670	94,730	34,980	34,423	28,980	0.3	29,731	0.0	31,119	-0.7
		Heavy oil	KL	38,377	35,487	35,085	28,241	24,949	6.4	27,814	5.1	30,417	3.8
		Total energy input	TJ	5,580	5,776	5,700	5,323	4,492	—	4,318	—	4,402	—
		Per-unit energy usage	GJ/Production(t)	31	31	32	28	26	—	25	—	28	—
Output	Water	Discharged water	Thousands of tons	76,106	67,875	68,126	57,100	51,509	—	37,346	—	34,573	—
		Per-unit discharged water	Thousands of tons /Production(t)	0.42	0.37	0.38	0.30	0.30	—	0.21	—	0.20	—
		BOD emissions	t	379	125	164	163	90	—	207	—	169	—
		TN emissions	t	3,046	807	857	809	496	—	662	—	477	—
	NO _x	Emissions	t	229	239	199	175	135	—	142	—	153	—
		Emissions	t	685	851	834	589	422	—	640	—	710	—
	CO ₂	CO ₂ emissions	Thousands of tons	339	345	333	308	262	1.5	259	1.6	282	1.5
		Per-unit CO ₂ emissions	t/Production(t)	1.86	1.88	1.85	1.64	1.54	—	1.48	—	1.52	—
	Waste	Waste production	Thousands of tons	101	121	106	97	62	—	67	—	70	—
		Resource recovery ratio	%	98.6	98.9	99.5	99.7	99.7	—	99.8	—	100.0	—
Waste product	Total amount	billion (JPY)	13.3	15.2	18.0	23.5	12.3	1.0	8.0	5.9	17.9	-4.6	
	Total weight	t	2,018	2,122	2,451	1,661	1,732	—	2,348	—	3,070	—	
Economic effect		billion (JPY)	—	—	—	—	—	19.5	—	24.8	—	14.9	

*: ① Compared to FY2005 based on technical cost
② CO₂ reduction benefit is calculated by ¥2,000/t-CO₂

300 million yen are budgeted for reserve fund for environmental measures.

Chemical Substances and Emission Levels

Aggregation period: April 1, 2011 to March 31, 2012
 Aggregation scope: Ajinomoto Co., Inc. and its subsidiaries in and outside Japan

The Ajinomoto Group manages chemical substances and reports on the results in accordance with laws in each region. The Group reports on the results in accordance with PRTR Law or relevant laws/regulations in each country.

(*PRTR: A law which estimates the amounts of specific chemical substances released into the environment, and promotes the improvement of management.)

Japan Applicable laws and regulations : PRTR (Pollutant Release and Transfer Register) System

Class I Designated Chemical Substances			Amount released into				Amount transferred to	
Substance name	No.	Specific Class I	Air	Water (public area)	Land (inside)	Landfills (inside)	Sewer	Outside
Acetonitrile	013		2,002	-	-	-	-	36,800
Asbestos	033	○	-	-	-	-	-	5,300
Bisphenol A	037		-	-	-	-	-	330
Xylene	080		790	-	-	-	33	11
HCFC-22(chlorodifluoromethane)	104		2,000	-	-	-	-	-
Chloroform	127		15	-	-	-	-	1,100
Dichloromethane(methylene dichloride)	186		2,300	-	-	-	-	38,000
N,N-dimethylacetamide	213		-	-	-	-	-	38,000
N,N-dimethylformaldehyde	232		20	-	-	-	-	5,390
Dioxins(unt: mg-TEQ)	243	○	0.04	1	-	-	-	0.01
Thiourea	245		-	-	-	-	-	810
Trimethylamine	277		-	7	-	-	-	2,600
1,2,4-trimethylbenzene	296		24	-	-	-	-	268
Toluene	300		110,297	-	-	-	-	33,400
Naphthalene	302		24	-	-	-	-	16
Piperazine	341		-	-	-	-	-	74
Phenol	349		-	-	-	-	-	366
N-hexane	392		-	-	-	-	-	1,300
Formaldehyde	411	○	8	-	-	-	60	390
Manganese and its compounds	412		-	-	-	-	-	2,000

*Business sites which reported performance are:

Ajinomoto Co., Inc (Kawasaki Plant, Tokai Plant), Ajinomoto Pharmaceuticals Co., Inc (Fukushima Plant, Research Center),
 Ajinomoto Fine-Techno Co., Inc (Head Office, BU Activated Carbon, Gunma Plant), AJINOMOTO FROZEN FOODS CO.,INC. (Shikoku Plant)

*You can check each site's data on the website of Ministry of Economy, Trade and Industry.

(Performance of FY2011 will be released in February, 2013)

http://www.meti.go.jp/policy/chemical_management/law/prtr/6.html (Japanese only)

North America

Applicable laws and regulations :
 EPCRA (Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986)
 (kg)

Chemical substance name	Amount used	Amount tranferred (released)
Ammonia	722,424	80,266
Methanol	600,536	926

*Business sites which reported results are:
 AJINOMOTO HEARTLAND, Inc., AJINOMOTO NORTH AMERICA, Inc.

Europe

Applicable laws and regulations :
 Flemish Decree on General Environmental Policy, Flemish Environmental Regulation (Vlarem II) (Belgium)
 Ministerial order from February the 2nd 1998, modified by the decree from May the 29th 2000 (France)

(kg)

Chemical substance name	Amount tranferred (released) to		
	Waste	Air	Water
Toluene	199,412	26	7
Methanol/Ethanol	16,218	-	1,693
Acetic acid	1,626,970	-	1,108
Dichloromethane	-	1,856	5
Formic acid	32,600	-	1,428
Trichloromethane	-	51	4
Xylenes	-	0.04	0.31
Phenol	-	-	2
Benzene	-	-	2
Ethylbenzene	-	-	0.03
Solvents	1,693,593	-	0.20
Non-methane short chain organic compounds	-	48	-
Halogenated hydrocarbon	-	0.20	-
Other chemical substances	12,817	2	-

*Business sites which reported results are:
 S.A. AJINOMOTO OMNICHEM N.V., Ajinomoto Sweeteners Europe S.A.S., AJINOMOTO EUROLYSINE S.A.S.,
 AJINOMOTO FOODS EUROPE S.A.S.

Other Areas

Brazil : As of September 2012, The relevant new law is still under discussion in Brazil.
 (Name of the law: Registro de Emissões e Transferência de Poluentes(RETP))
 Thailand : Introduction of similar system is under consideration.

Ajinomoto Co., Inc. Kawasaki Plant Site (Plant & Research Laboratories)

INPUT

Item	Unit	FY2011
Input energy	TJ	1,653
Volume of water consumed	km ³	19,612

- Location: Kawasaki City, Kanagawa Prefecture
- Main Products: seasonings, amino acids
- Date ISO14001 Certification Acquired: March, 2001 (plant area)
 March, 2003 (research laboratories)

OUTPUT

●Waste and Resource recovery

Item	Unit	FY2011
Volume of generated waste & by-products	kt	22.3
Volume of recovered resources	kt	22.3
Resource recovery ratio	%	99.9
Volume of disposed waste	kt	0.0

●Atmospheric exhaust

Item	Unit	FY2011
CO ₂ (purchased electricity included)	kt	85.2
SO _x	t	-
NO _x	t	64.1

●Discharged water

Item	Unit	FY2011
Volume of water discharged	km ³	2,547
BOD	t	10.7
T-N	t	92.7
T-P	t	1.2

Ajinomoto Co., Inc. Tokai Plant

INPUT

Item	Unit	FY2011
Input energy	TJ	1,383
Volume of water consumed	km ³	13,920

- Location: Yokkaichi City, Mie Prefecture
- Main Products: sweeteners, seasonings, specialty chemicals, amino acids
- Date ISO 14001 Certification Acquired: November, 1999

OUTPUT

●Waste and Resource recovery

Item	Unit	FY2011
Volume of generated waste & by-products	kt	11.2
Volume of recovered resources	kt	11.2
Resource recovery ratio	%	99.9
Volume of disposed waste	kt	0.0

●Atmospheric exhaust

Item	Unit	FY2011
CO ₂ (purchased electricity included)	kt	73.3
SO _x	t	0.2
NO _x	t	30.3

●Discharged water

Item	Unit	FY2011
Volume of water discharged	km ³	13,920
BOD	t	42.0
T-N	t	46.2
T-P	t	32.3

Ajinomoto Co., Inc. Kyushu Plant

INPUT

Item	Unit	FY2011
Input energy	TJ	1,323
Volume of water consumed	km ³	8,372

- Location: Saga City, Saga Prefecture
- Main Products: amino acids
- Date ISO 14001 Certification Acquired: July 1998

OUTPUT

●Waste and Resource recovery

Item	Unit	FY2011
Volume of generated waste & by-products	kt	35.3
Volume of recovered resources	kt	35.2
Resource recovery ratio	%	99.9
Volume of disposed waste	kt	0.0

●Atmospheric exhaust

Item	Unit	FY2011
CO ₂ (purchased electricity included)	kt	100.2
SO _x	t	710.2
NO _x	t	62.1

●Discharged water

Item	Unit	FY2011
Volume of water discharged	km ³	1,524
BOD	t	116.2
T-N	t	338.1
T-P	t	—

Knorr Foods Co., Ltd. Kawasaki Plant

INPUT

Item	Unit	FY2011
Input energy	TJ	71
Volume of water consumed	km ³	44

- Location: Kawasaki City, Kanagawa Prefecture
- Main Products: soups, sauces
- Date ISO 14001 Certification Acquired: July 2003

OUTPUT

●Waste and Resource recovery

Item	Unit	FY2011
Volume of generated waste & by-products	kt	1.1
Volume of recovered resources	kt	1.1
Resource recovery ratio	%	100.0
Volume of disposed waste	kt	0.0

●Atmospheric exhaust

Item	Unit	FY2011
CO ₂ (purchased electricity included)	kt	5.5
SO _x	t	—
NO _x	t	—

●Discharged water

Item	Unit	FY2011
Volume of water discharged	km ³	-
BOD	t	-
T-N	t	-
T-P	t	-

Knorr Foods Co., Ltd. Tokai Plant

INPUT

Item	Unit	FY2011
Input energy	TJ	103
Volume of water consumed	km ³	515

- Location: Shimada City, Shizuoka Prefecture
- Main Products: retort foods, soups, pharmaceuticals
- Date ISO 14001 Certification Acquired: August 2002

OUTPUT

●Waste and Resource recovery

Item	Unit	FY2011
Volume of generated waste & by-products	kt	0.9
Volume of recovered resources	kt	0.9
Resource recovery ratio	%	100.0
Volume of disposed waste	kt	0.0

●Atmospheric exhaust

Item	Unit	FY2011
CO ₂ (purchased electricity included)	kt	7.6
SO _x	t	-
NO _x	t	-

●Discharged water

Item	Unit	FY2011
Volume of water discharged	km ³	199
BOD	t	0.2
T-N	t	0.4
T-P	t	-

Knorr Foods Co., Ltd. Chubu Plant

INPUT

Item	Unit	FY2011
Input energy	TJ	103
Volume of water consumed	km ³	109

- Location: Yokkaichi City, Mie Prefecture
- Main Products: soups, mayonnaise
- Date ISO 14001 Certification Acquired: November 2002

OUTPUT

●Waste and Resource recovery

Item	Unit	FY2011
Volume of generated waste & by-products	kt	1.5
Volume of recovered resources	kt	1.5
Resource recovery ratio	%	100.0
Volume of disposed waste	kt	0.0

●Atmospheric exhaust

Item	Unit	FY2011
CO ₂ (purchased electricity included)	kt	4.1
SO _x	t	0.0
NO _x	t	0.5

●Discharged water

Item	Unit	FY2011
Volume of water discharged	km ³	68
BOD	t	0.2
T-N	t	0.1
T-P	t	0.0

Ajinomoto Frozen Foods Co., Inc. Kanto Plant

INPUT

Item	Unit	FY2011
Input energy	TJ	93
Volume of water consumed	km ³	245

- Location: Oura-gun, Gunma Prefecture
- Main Products: frozen foods
- Date ISO 14001 Certification Acquired: March 2005

OUTPUT

●Waste and Resource recovery

Item	Unit	FY2011
Volume of generated waste & by-products	kt	1.8
Volume of recovered resources	kt	1.8
Resource recovery ratio	%	100.0
Volume of disposed waste	kt	0.0

●Atmospheric exhaust

Item	Unit	FY2011
CO ₂ (purchased electricity included)	kt	7.6
SO _x	t	0.3
NO _x	t	0.2

●Discharged water

Item	Unit	FY2011
Volume of water discharged	km ³	123
BOD	t	0.7
T-N	t	0.8
T-P	t	-

Ajinomoto Frozen Foods Co., Inc. Shikoku Plant

INPUT

Item	Unit	FY2011
Input energy	TJ	108
Volume of water consumed	km ³	245

- Location: Sanuki City, Kagawa Prefecture
- Main Products: frozen foods
- Date ISO 14001 Certification Acquired: March 2005

OUTPUT

●Waste and Resource recovery

Item	Unit	FY2011
Volume of generated waste & by-products	kt	1.8
Volume of recovered resources	kt	1.8
Resource recovery ratio	%	100.0
Volume of disposed waste	kt	0.0

●Atmospheric exhaust

Item	Unit	FY2011
CO ₂ (purchased electricity included)	kt	9.5
SO _x	t	0.5
NO _x	t	0.2

●Discharged water

Item	Unit	FY2011
Volume of water discharged	km ³	-
BOD	t	-
T-N	t	-
T-P	t	-

Ajinomoto Frozen Foods Co., Inc. Kyushu Plant

INPUT

Item	Unit	FY2011
Input energy	TJ	57
Volume of water consumed	km ³	126

- Location: Saga City, Saga Prefecture
- Main Products: frozen foods
- Date ISO 14001 Certification Acquired: March 2003

OUTPUT

●Waste and Resource recovery

Item	Unit	FY2011
Volume of generated waste & by-products	kt	1.0
Volume of recovered resources	kt	1.0
Resource recovery ratio	%	100.0
Volume of disposed waste	kt	-

●Atmospheric exhaust

Item	Unit	FY2011
CO ₂ (purchased electricity included)	kt	5.1
SO _x	t	0.5
NO _x	t	0.4

●Discharged water

Item	Unit	FY2011
Volume of water discharged	km ³	-
BOD	t	-
T-N	t	-
T-P	t	-

Ajinomoto Frozen Foods Co., Inc. Chubu Plant

INPUT

Item	Unit	FY2011
Input energy	TJ	100
Volume of water consumed	km ³	177

- Location: Ibi-gun, Gifu Prefecture
- Main Products: frozen foods
- Date ISO 14001 Certification Acquired: February 2000

OUTPUT

●Waste and Resource recovery

Item	Unit	FY2011
Volume of generated waste & by-products	kt	1.9
Volume of recovered resources	kt	1.9
Resource recovery ratio	%	100.0
Volume of disposed waste	kt	0.0

●Atmospheric exhaust

Item	Unit	FY2011
CO ₂ (purchased electricity included)	kt	8.0
SO _x	t	166.5
NO _x	t	151.4

●Discharged water

Item	Unit	FY2011
Volume of water discharged	km ³	104.2
BOD	t	0.7
T-N	t	0.5
T-P	t	-

Ajinomoto Pharmaceuticals Co., Inc. Saitama Plant

INPUT

Item	Unit	FY2011
Input energy	TJ	112
Volume of water consumed	km ³	140

- Location: Hiki-gun, Saitama Prefecture
- Main Products: infusions
- Date ISO 14001 Certification Acquired: April 2006 (expanded scope)
 (Originally certified in March 2005)

OUTPUT

●Waste and Resource recovery

Item	Unit	FY2011
Volume of generated waste & by-products	kt	0.6
Volume of recovered resources	kt	0.6
Resource recovery ratio	%	99.8
Volume of disposed waste	kt	0.0

●Atmospheric exhaust

Item	Unit	FY2011
CO ₂ (purchased electricity included)	kt	7.5
SO _x	t	—
NO _x	t	1.4

●Discharged water

Item	Unit	FY2011
Volume of water discharged	km ³	108
BOD	t	0.8
T-N	t	0.8
T-P	t	0.1

Ajinomoto Pharmaceuticals Co., Inc. Fukushima Plant

INPUT

Item	Unit	FY2011
Input energy	TJ	117
Volume of water consumed	km ³	61

- Location: Shirakawa City, Fukushima Prefecture
- Main Products: elemental diet products, insulin secretagogue
- Date ISO 14001 Certification Acquired: April 2006 (expanded scope)
 (Originally certified in March 2005)

OUTPUT

●Waste and Resource recovery

Item	Unit	FY2011
Volume of generated waste & by-products	kt	0.7
Volume of recovered resources	kt	0.7
Resource recovery ratio	%	98.2
Volume of disposed waste	kt	0.0

●Atmospheric exhaust

Item	Unit	FY2011
CO ₂ (purchased electricity included)	kt	8.9
SO _x	t	—
NO _x	t	0.5

●Discharged water

Item	Unit	FY2011
Volume of water discharged	km ³	21
BOD	t	0.0
T-N	t	0.0
T-P	t	—

Ajinomoto Pharmaceuticals Co., Inc. Shimizu Plant

INPUT

Item	Unit	FY2011
Input energy	TJ	73
Volume of water consumed	km ³	332

- Location: Shizuoka City, Shizuoka Prefecture
- Main Products: infusions
- Date ISO 14001 Certification Acquired: April 2006

OUTPUT

●Waste and Resource recovery

Item	Unit	FY2011
Volume of generated waste & by-products	kt	2.0
Volume of recovered resources	kt	2.0
Resource recovery ratio	%	99.7
Volume of disposed waste	kt	0.0

●Atmospheric exhaust

Item	Unit	FY2011
CO ₂ (purchased electricity included)	kt	5.5
SO _x	t	—
NO _x	t	0.4

●Discharged water

Item	Unit	FY2011
Volume of water discharged	km ³	73
BOD	t	0.1
T-N	t	0.1
T-P	t	0.0

Ajinomoto Pharmaceuticals Co., Inc. Oigawa Plant

INPUT

Item	Unit	FY2011
Input energy	TJ	186
Volume of water consumed	km ³	588

- Location: Shita-gun, Shizuoka Prefecture
- Main Products: infusions
- Date ISO 14001 Certification Acquired: April 2006

OUTPUT

●Waste and Resource recovery

Item	Unit	FY2011
Volume of generated waste & by-products	kt	0.4
Volume of recovered resources	kt	0.4
Resource recovery ratio	%	100.0
Volume of disposed waste	kt	0.0

●Atmospheric exhaust

Item	Unit	FY2011
CO ₂ (purchased electricity included)	kt	12.5
SO _x	t	1.4
NO _x	t	5.7

●Discharged water

Item	Unit	FY2011
Volume of water discharged	km ³	94.8
BOD	t	0.2
T-N	t	0.2
T-P	t	—

Calpis Co., Ltd. Gunma Plant

INPUT

Item	Unit	FY2011
Input energy	TJ	431
Volume of water consumed	km ³	2,340

- Location: Tatebayashi City, Gunma Prefecture
- Main Products: beverages
- Date ISO 14001 Certification Acquired: December 2000

OUTPUT

●Waste and Resource recovery

Item	Unit	FY2011
Volume of generated waste & by-products	kt	4.1
Volume of recovered resources	kt	4.1
Resource recovery ratio	%	100.0
Volume of disposed waste	kt	0.0

●Atmospheric exhaust

Item	Unit	FY2011
CO ₂ (purchased electricity included)	kt	27.7
SO _x	t	—
NO _x	t	13.9

●Discharged water

Item	Unit	FY2011
Volume of water discharged	km ³	1,421
BOD	t	6.4
T-N	t	5.9
T-P	t	—

Calpis Co., Ltd. Okayama Plant

INPUT

Item	Unit	FY2011
Input energy	TJ	139
Volume of water consumed	km ³	749

- Location: Soja City, Okayama Prefecture
- Main Products: beverages
- Date ISO 14001 Certification Acquired: June 2000

OUTPUT

●Waste and Resource recovery

Item	Unit	FY2011
Volume of generated waste & by-products	kt	1.5
Volume of recovered resources	kt	1.5
Resource recovery ratio	%	100.0
Volume of disposed waste	kt	0.0

●Atmospheric exhaust

Item	Unit	FY2011
CO ₂ (purchased electricity included)	kt	9.4
SO _x	t	—
NO _x	t	1.5

●Discharged water

Item	Unit	FY2011
Volume of water discharged	km ³	590.3
BOD	t	1.2
T-N	t	1.0
T-P	t	0.1

Thailand Area AJINOMOTO CO.,(THAILAND) LTD.
Phra Pradaeng Factory, Pathum Thani Factory, Kamphaeng Phet Factory, Nong Khae Factory

INPUT

Item	Unit	FY2011
Input energy	TJ	5,312
Volume of water consumed	km ³	15,282

● Location: Thailand

● Main Products: seasonings, feed use amino acids

● Date ISO14001 Certification Acquired: July 2003 Phra Pradaeng Factory
September 2001 Pathum Thani Factory
June 2002 Kamphaeng Phet Factory
January 2006 Nong Khae Factory

OUTPUT

● Waste and Resource recovery

Item	Unit	FY2011
Volume of generated waste & by-products	kt	376.8
Volume of recovered resources	kt	373.7
Resource recovery ratio	%	100.0
		97.0
		99.9
		87.6
Volume of disposed waste	kt	3.1

Phra Pradaeng Factory
Pathum Thani Factory
Kamphaeng Phet Factory
Nong Khae Factory

● Atmospheric exhaust

Item	Unit	FY2011
CO ₂ (purchased electricity included)	kt	452.3
SO _x	t	718.3
NO _x	t	580.9

● Discharged water

Item	Unit	FY2011
Volume of water discharged	km ³	13,301
BOD	t	53.2
T-N	t	102.9
T-P	t	41.9

Brazil Area Ajinomoto do Brazil Industria e Comercio de Alimentos Ltda.,
Limeira Plant, Laranjal Paulista Plant, Valparaiso Plant, Pederneiras Plant

INPUT

Item	Unit	FY2011
Input energy	TJ	5,080
Volume of water consumed	km ³	9,869

● Location: Brazil

● Main Products: seasonings, feed-use amino acids, pharmaceutical-use amino acids

● Date ISO14001 Certification Acquired: December 2001 Limeira Plant
June 2003 Laranjal Paulista Plant
November 2004 Valparaiso Plant
November 2007 Pederneiras Plant

OUTPUT

● Waste and Resource recovery

Item	Unit	FY2011
Volume of generated waste & by-products	kt	881.8
Volume of recovered resources	kt	876.4
Resource recovery ratio	%	98.6
		99.7
		100.0
		99.7
Volume of disposed waste	kt	5.4

Limeira Plant
Laranjal Paulista Plant
Valparaiso Plant
Pederneiras Plant

● Atmospheric exhaust

Item	Unit	FY2011
CO ₂ (purchased electricity included)	kt	217.4
SO _x	t	243.6
NO _x	t	299.8

● Discharged water

Item	Unit	FY2011
Volume of water discharged	km ³	5,773
BOD	t	42.4
T-N	t	53.3
T-P	t	-

France Area Ajinomoto Sweeteners Europe S.A.S. Dunkerque Plant,
 AJINOMOTO EUROLYSINE S.A.S. Amiens Plant,
 AJINOMOTO FOODS EUROPE S.A.S. Nesle Plant

INPUT

Item	Unit	FY2011
Input energy	TJ	5,520
Volume of water consumed	km ³	12,215

- Location: France
- Main Products: sweeteners, feed-use amino acid, seasonings
- Date ISO14001 Certification Acquired: January 2006 Dunkerque Plant
 March 2006 Amiens Plant
 December 2006 Nesle Plant

OUTPUT

● Waste and Resource recovery

Item	Unit	FY2011
Volume of generated waste & by-products	kt	221.9
Volume of recovered resources	kt	216.8
Resource recovery ratio	%	61.3
		99.8
		99.9
Volume of disposed waste	kt	5.2

Dunkerque Plant
 Amiens Plant
 Nesle Plant

● Atmospheric exhaust

Item	Unit	FY2011
CO ₂ (purchased electricity included)	kt	232.7
SO _x	t	0.7
NO _x	t	65.8

● Discharged water

Item	Unit	FY2011
Volume of water discharged	km ³	11,541
BOD	t	90.4
T-N	t	163.0
T-P	t	-

North America Area AJINOMOTO HEARTLAND, Inc.
 Eddyville Plant
 AJINOMOTO NORTH AMERICA, Inc.
 Iowa Plant, North Carolina Plant

INPUT

Item	Unit	FY2011
Input energy	TJ	3,944
Volume of water consumed	km ³	4,619

- Location: U.S.A.
- Main Products: seasonings, feed-use amino acids, pharmaceutical-use amino acids
- Date ISO14001 Certification Acquired: November 2003 Iowa Plant
 April 2004 Eddyville Plant
 May 2004 North Carolina Plant

OUTPUT

● Waste and Resource recovery

Item	Unit	FY2011
Volume of generated waste & by-products	kt	221.8
Volume of recovered resources	kt	221.2
Resource recovery ratio	%	99.8
		99.2
		99.7
Volume of disposed waste	kt	0.6

Iowa Plant
 North Carolina Plant
 Eddyville Plant

● Atmospheric exhaust

Item	Unit	FY2011
CO ₂ (purchased electricity included)	kt	287.2
SO _x	t	1.7
NO _x	t	98.4

● Discharged water

Item	Unit	FY2011
Volume of water discharged	km ³	3,598
BOD	t	1,155.2
T-N	t	406.5
T-P	t	0.8

China Area Shanghai Ajinomoto Seasoning Co., Ltd.,
 Henan Ajinomoto Amino Acid Co., Ltd.
 SHANGHAI AJINOMOTO AMINO ACID CO., LTD.

INPUT

Item	Unit	FY2011
Input energy	TJ	405
Volume of water consumed	km ³	347

- Location: China
- Main Products: seasonings, pharmaceutical-use amino acids, etc.
- Date ISO14001 Certification Acquired: July 2005 Henan Ajinomoto Amino Acid
 September 2005 SHANGHAI AJINOMOTO AMINO ACID
 February 2008 Shanghai Ajinomoto Seasoning

OUTPUT

● Waste and Resource recovery

Item	Unit	FY2011
Volume of generated waste & by-products	kt	22.8
Volume of recovered resources	kt	22.7
Resource recovery ratio	%	77.9
		99.9
		99.8
Volume of disposed waste	kt	0.0

Shanghai Seasoning
 HENAN AMINO ACID
 Shanghai Amino Acid

● Atmospheric exhaust

Item	Unit	FY2011
CO ₂ (purchased electricity included)	kt	44.1
SO _x	t	0.0
NO _x	t	2.4

● Discharged water

Item	Unit	FY2011
Volume of water discharged	km ³	178
BOD	t	4.4
T-N	t	2.1
T-P	t	-