

# Environmental Data of Domestic and Overseas Facilities



Name and Location of Workplaces	Overview						Water Quality		
		Water		Air			pH	BOD (mg/l)	
		Use of water (m <sup>3</sup> )	Boilers	Soot and dust (g/m <sup>3</sup> N)	NOx (cm <sup>3</sup> /m <sup>3</sup> N)	SOx (m <sup>3</sup> /h)			
<b>Olympus Optical Co., Ltd.</b> Technology Research Institute (Hachioji) 2951 Ishikawa-cho Hachioji-shi, Tokyo 192-8507 Phone: +81-426-42-2111 (direct) Hinode Plant 34-3 Hirai Hinode-cho Nishitama-gun, Tokyo 190-0182 Phone: +81-42-597-7111 (direct) Ina Plant 5128 Oaza-Ina Ina-shi, Nagano 396-0021 Phone: +81-265-72-1111 (direct) Tatsuno Plant 6666 Inatomi Tatsuno-machi Kamiina-gun, Nagano 399-0495 Phone: +81-226-41-4111 (direct) * Including Okaya Olympus Co., Ltd.	Year of foundation: 1963 Zoning: Semi-industrial zone Land area: 89,552 m <sup>2</sup> Gross floor area: 70,767 m <sup>2</sup> Business area: Development of medical services, image, industry-related and other matters, development of components, production technology	Piped water Ground water Total	30,213 81,971 112,184	3	0.01 (0.3)	72 (100)	0.04 (3.62)	7.6 (5-9)	120 (600)
	Year of foundation: 1993 Zoning: Industrial zone Land area: 8,486 m <sup>2</sup> Gross floor area: 10,606 m <sup>2</sup> Business area: Production of medical services and industrial endoscopes and ultrasonic products	Piped water Ground water Total	9,516 0 9,516					8.1 (5-9)	280 (600)
	Year of foundation: 1944 Zoning: Semi-industrial zone Land area: 38,863 m <sup>2</sup> Gross floor area: 38,677 m <sup>2</sup> Business area: Optics microscope production	Piped water Ground water Total	10,576 340,492 351,068	7	0.005 (0.3)	115 (180)	0.06 (0.1)	8.3 (5.8-8.6)	17 (30)
	Year of foundation: 1981 Zoning: Industrial zone Land area: 125,840 m <sup>2</sup> Gross floor area: 44,000 m <sup>2</sup> Business area: Digital camera/liquid crystal inspection unit production, semiconductor research and development	Piped water Ground water Total	10,901 580,120 591,021	15	0.01 (0.3)	95 (180)	0.1 (2.4)	7.4 (5.8-8.6)	15 (30)
<b>Manufacturing Affiliates in Japan</b> Tokyo Kinzoku Co., Ltd., Kyowa Plant 7001-1 Oaza-Koguri-Kaminakadai Kyowa-cho Makabe-gun, Ibaraki 309-1101 Phone: +81-296-57-3555 (direct) Olympus Co., Ltd., Aomori Plant 2-248-1 Okonogi Kuroishi-shi, Aomori 036-0357 Phone: +81-172-52-8511 (direct) Olympus Co., Ltd., Aizu Plant 500 Aza-Muranishi Ozaza-Iidera Monden-cho Aizu-Wakamatsu-shi, Fukushima 965-8520 phone: +81-242-28-2111 (direct) OOT Co., Ltd., Head Office 3-15-1 Shibamiya Nagachi Okaya-shi, Nagano 394-0083 Phone: +81-266-27-6111 (direct) OOT Co., Ltd., Oomachi Branch 3798 Higashihara Aza Oaza-Tokwa Oomachi-shi, Nagano 398-0004 Phone: +81-261-22-6111 (direct) OOT Co., Ltd. Sakaki Branch 1355 Nakanogji Sakaki-machi Hanishina-gun, Nagano 389-0602 Phone: +81-268-82-2361 (direct) Mishima Olympus Co., Ltd. 128 Shimodogari Nagaizumi-machi Sunto-gun, Shizuoka 411-0943 Phone: +81-559-73-1311 (direct) Shirakawa Olympus Co., Ltd. 3-1 Aza-Okamiyama Oaza-Odakura Nishigo-mura Nishi-Shirakawa-gun, Fukushima 961-8061 Phone: +81-248-27-2211 (direct)	Year of foundation: 1970 Zoning: Non-zoning district Land area: 18,624 m <sup>2</sup> Gross floor area: 5,304 m <sup>2</sup> Business area: Aluminum die-casting, plastics molding, and assembly of microscopes etc.	Piped water Ground water Total	3,302 6,252 9,554					8.0 (5.8-8.6)	20 (25)
	Year of foundation: 1973 Zoning: Industrial zone Land area: 26,345 m <sup>2</sup> Gross floor area: 8,967 m <sup>2</sup> Business area: Production of medical services processing apparatuses	Piped water Ground water Total	10,930 5,072 16,002	2	0.003 (0.3)	88 (180)	4.3 (17.5)	7.5 (5.8-8.6)	9.5 (160)
	Year of foundation: 1970 Zoning: Industrial zone Land area: 63,657 m <sup>2</sup> Gross floor area: 27,975 m <sup>2</sup> Business area: Production of medical services endoscopes	Piped water Ground water Total	0 250,376 250,376	12	0.095 (0.3)	120 (260)	0.04 (1.05)	7.3 (5.8-8.6)	17 (160)
	Year of foundation: 2002 Zoning: Class 2 semi-industrial zone Land area: 19,967 m <sup>2</sup> Gross floor area: 14,183 m <sup>2</sup> Business area: Technology development and manufacture of digital cameras and optics equipment products	Piped water Ground water Total	3,325 72,795 76,120	3	0.02 (0.15)	110 (120)	ND (1.2)	7.4 (5.8-8.6)	ND (30)
	Year of foundation: 1974 Zoning: Industrial zone Land area: 17,810 m <sup>2</sup> Gross floor area: 7,116 m <sup>2</sup> Business area: Design and fabrication of metal mold, MO molding, parts assembly and production	Piped water Ground water Total	0 22,633 22,633					7.1 (5.8-8.6)	8.9 (160)
	Year of foundation: 1978 Zoning: Industrial zone Land area: 41,415 m <sup>2</sup> Gross floor area: 15,475 m <sup>2</sup> Business area: Production of camera lenses and printers	Piped water Ground water Total	60,824 36,492 97,316	1	ND (0.3)	89 (180)	ND (2)	7.9 (5.8-8.6)	16 (30)
	Year of foundation: 1978 Zoning: Semi-industrial zone Land area: 7,066 m <sup>2</sup> Gross floor area: 5,931 m <sup>2</sup> Business area: Development, manufacture and service of blood analyzing unit	Piped water Ground water Total	19,382 0 19,382					7.6 (6-8.6)	8.0 (8)
	Year of foundation: 1979 Zoning: Industrial zone Land area: 76,550 m <sup>2</sup> Gross floor area: 11,500 m <sup>2</sup> Business area: Production of medical services mechanical appliances	Piped water Ground water Total	8,944 5,479 14,423	3	ND (0.3)	65 (180)	0.44 (17.5)	7.0 (5.8-8.6)	3.2 (25)
<b>Overseas Affiliated Production Companies</b> Olympus (Shenzhen) Industrial Ltd. Nantou, 5th Industrial District, Nanshan, Shenzhen, Guang Pong, P.R.C Phone: +86-755-698-0118 Olympus Winter & Ibe GmbH Kuehnstraße 61, D-22045 Hamburg, Germany Phone +49-40-669660 Olympus Diagnostica GmbH (Irish Branch) O'Callaghan's Mills, Co. Clare Lismoehan, Ireland Phone: +353-656-831100 KeyMed (Medical & Industrial Equipment) Ltd KeyMed House, Stock Road, Southend-on-Sea, Essex SS2 5HQ, UK Phone: +44-0-1702-616333	Year of foundation: 1991 Zoning: Industrial zone Land area: 104,446 m <sup>2</sup> Gross floor area: 33,334 m <sup>2</sup> Business area: Mainly camera assembly, lens processing, plastics molding, metal component processing	Piped water Ground water Total	244,453 0 244,453	2	0.08 (0.08)	1.5 (-)	ND (0.7)	7.5 (6-9)	
	Year of foundation: 1954 Land area: 13,300 m <sup>2</sup> Gross floor area: 11,980 m <sup>2</sup> Business area: Development, production, marketing and service of endoscope products	Piped water Ground water Total	5,322 0 5,322						
	Year of foundation: 1987 Land area: 1,300,000 m <sup>2</sup> Gross floor area: 5,700 m <sup>2</sup> Business area: Development and production of blood analyzer reagent	Piped water Ground water Total	14,935 0 14,935						
	Year of foundation: 1970 Land area: 30,000 m <sup>2</sup> Gross floor area: 15,000 m <sup>2</sup> Business area: Marketing, repair and development and production of endoscope products	Piped water Ground water Total	15,739 0 15,739						

Parenthesized values in bottom layer are regulatory values.



(As of March 31, 2003)

Track Record Data																						
Water Quality				Energy							Waste					Amount of PTRT-specified Chemicals handled						
COD (mg/l)	SS (mg/l)	n-H (mg/l)	Bacillus (number/m <sup>3</sup> )	Power (10,000 kWh)	Heavy fuel oil (kl)	City gas (1,000 m <sup>3</sup> )	LPG (1,000 m <sup>3</sup> )	Gasoline (kl)	Others (kl)	CO <sub>2</sub> conversion basis (t-CO <sub>2</sub> )	General waste (tons)	Industrial waste (tons)	Specialized waste (tons)	Amount of recycling (tons)	Rate of recycling (%)	Trichloroethylene (tons)	Lead compounds (tons)	Xylene (tons)	Toluene (tons)	Ethylene oxide (tons)	Dichloromethane (tons)	Others (tons)
	2 (600)			1,842	153	680		3	60	8,624	38.2	149.0	10.7	570.0	74.2			0.01	0.03	0.10		0.13
	250 (600)			217			25			930	10.7	0.0	0.7	51.5	81.9		0.01			0.44		0.12
	2 (50)	- (30)	140 (3,000)	*1,146	938		5	18	203	7,272	9.7	31.1	16.0	395.4	87.4	0.47	0.28	0.04	0.08		0.07	1.50
5.8 (20)	4 (30)	0.5 (30)	0 (3,000)	2,075	1,012		8	8	8	10,298	23.0	23.6	66.6	577.5	83.6		1.30	0.07	0.07			2.21
	27 (40)	2.0 (3)	2,000 (3,000)	499	543		33	6	4	3,515	63.1	32.1	0.0	236.7	71.3							
5.7 (160)	6 (200)	2.4 (30)		286	135		3	1	12	1,447	7.4	0.0	0.0	53.0	87.7		0.01		0.15	2.81		0.02
	6 (200)	ND (30)	980 (3,000)	*1,251	865		11	4	6	6,952	31.4	31.0	13.0	235.6	75.8		3.27	3.44	4.95		0.06	2.62
ND (30)	ND (50)	2.1 (30)	- (3,000)	208	176		1	2	11	1268	3.5	2.3	0.0	37.6	86.6		0.26					
	6 (200)	1.0 (5)	ND (3,000)	1,041			37	2	17	3,991	0.0	149.3	0.0	128.5	46.3		0.02	0.56	5.12		0.06	0.04
	27 (30)	- (30)	29 (3,000)	638	73		2	4	19	2,550	29.3	40.3	17.4	136.7	61.1			0.12	0.16		0.16	0.07
	9 (100)			110				3		400	9.4	27.6	0.0	46.1	55.5							
	10 (70)	0.5 (10)		327	46		5	4	1	1,334	7.5	4.3	0.1	161.1	93.1		0.71			0.30		
71 (130)	31 (100)			1,496			51	2	3,931	16,042	8.3	42.8	71.6	492.9	80.1							
				241		2,303				1,834	316.0	16.1	35.1	343.0	49.4							
				190	72					1,328	84.5		220.1	55.7	15.5							
				301		4,799				2,208	3.8	5.8	1.0	346.4	97.0							

Fields left blank are not applicable. A hyphen means no measurement. ND means below the detection limit. Asterisk numbers are totals for plants (Aizu, Opno, Kita-Aizu) (Ina, Miyata)

CO<sub>2</sub> conversion for the Shenzhen plant is calculated with the same factor as in Japan.

# Overseas Production Bases

Address to environmental affairs is adjusted to the characteristics of each district in overseas production bases.



## Olympus (Shenzhen) Industrial Ltd.

Location: China  
 Shenzhen, Guandong, China  
 Number of Employees: 5,800  
 Main Business: Assembly of Film Camera and Digital Camera, and Lens processing, Plastics Molding  
 ISO 14001 certification: Obtained in September 1999

After a wide range of Environmental Protection Activities such as Energy Saving, Public Nuisance Prevention, and Waste Reduction, the Shenzhen Plant was highly evaluated in reexamination for ISO 14001 certification in September 2002. The company was appointed a candidate for clean production corporations by Guandong province in April 2002, and certified as the Green Corporation of FY2003 by Shenzhen City in February 2003.

For energy saving, we renovated illumination in the molding workplace and changed ventilation in the painting workplace to an inverter system. In Public Nuisance Prevention, we automated the filter press of the drain treatment system to improve processing efficiency, and also expanded the volume of the aerobic tank, anaerobic and adjustment tanks to raise processing capacity.

To reduce waste, we expanded the scope of components applicable to recycling scraps produced in the plastics molding process, and as a result, enabled an annual 118 tons of materials to be regenerated and reused.



Di Bao Feng (at right in photograph) and Ms Luo Ying Environment safety section, Personnel/general affairs department



Olympus (Shenzhen) Industrial Ltd.



Testimonial of Green Corporation



Waste Resin Regeneration Facility



Renovation of Public Nuisance Treatment Facilities

## Olympus Winter & Ibe GmbH: Abbreviation OWI

Location: Kuehnstraße, Hamburg, Germany  
 Number of Employees: Approximately 500  
 Main Business: Development, Production, Sales, and Service of Rigid and Flexible Endoscopes.  
 ISO14001 Certification: Obtained May 2001

During FY2003 OWI modified the existing gas-heating installation as an environmental project. In this context 3 units have been equipped with so called "Ceramic-Nozzles" in order to optimize the burning. The idea behind this is that the Ceramic-Nozzle, which is additionally mounted in the burning chamber, will lead to an optimized burning of the gas and improved heat transmission. Additionally, a part of the exhaust gas will be guided again into the burning flame (re-circulation).

From this modification the following environmental related improvements arise:

- Lower Gas Consumption (approx. 15%)
- Lowering of Pollutant-Emission
- Reduced Smoke Build-up
- Reduced CO<sub>2</sub> Emission



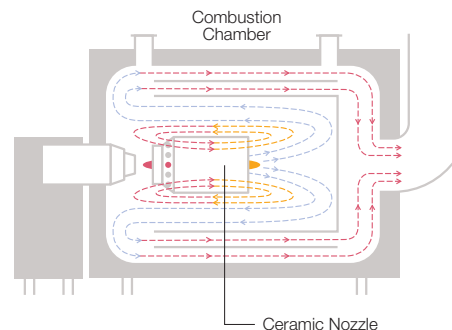
Mr. Bruno Soltau, Head of Regulatory Affairs



OWI



Gas-Heating



■ Diagram of Combustion Chamber

Location: O'D Callaghan's Mills, County Clare, the Republic of Ireland  
 Number of employees: Approximately 220  
 Main Business: Development and manufacturing of reagents for clinical blood analyzers  
 ISO14001 Certification: This company expects to obtain the certification in 2003

ODI has a 300 acre site which boasts forests, wildlife, and three lakes. ODI's effluent is directed into one of the three lakes or the Olympus property where our effluent quality has no impact on the environment. It is worth noting that this lake is an important lake in the local community for fishing.

During FY2003, ODI upgraded its effluent Treatment Plant for improving the quality of effluent discharge and increased capacity and control of the effluent treatment process.

One of the key elements is the introduction of wetlands polishing beds to further purify final effluent. Since the introduction of the wetlands immediate improvements were evident for parameters such as Phosphate, Ammonia, BOD and Suspended Solids levels. For instance, before the introduction in the Wetland Polishing beds, the data of phosphate was 0.368 mg/L (License limit is 1.0mg/L), after the introduction, the data changed to 0.038mg/L.

The other key element is an introduction of vermiculture units to treat and dispose of sludge. This involves releasing a controlled amount of sludge, which is a by-product of ODI's effluent treatment plant, into a sludge digester which contains worms. The worms with the aid of physical, microbiological and chemical actions change the organic matter into Vermicompost. ODI is one of the first companies to install this technology for industrial waste treatment in Ireland.

Location: Stock Road, Southend-on-sea, United Kingdom  
 Number of employees: Approximately 650  
 Main Business: Sale, repair, development and production of endoscopes.  
 ISO 14001 Certification: Obtained March 2002

Since obtaining ISO 14001 certification in March 2002, KeyMed has continued to develop the Environmental Awareness of its staff, and has introduced a number of measures to further reduce its environmental impact and enhance its contribution to the local community. Most significant of these is the 'Green Travel Plan'. KeyMed is a founding contributor and enthusiastic supporter of this initiative from the local authority.

The Green Travel Plan is aimed at encouraging local companies to reduce the environmental impact of their staff traveling to and from work. It promotes such aspects as cycling, car sharing, use of public transport and walking. KeyMed has established a car share database, has negotiated discounts for its staff with local public transport providers and has extended its existing changing and showering facilities. KeyMed is also proposing to fund the construction of a cycle path running adjacent to the company's site, to provide safe access to the company's premises for cyclists approaching from the north.