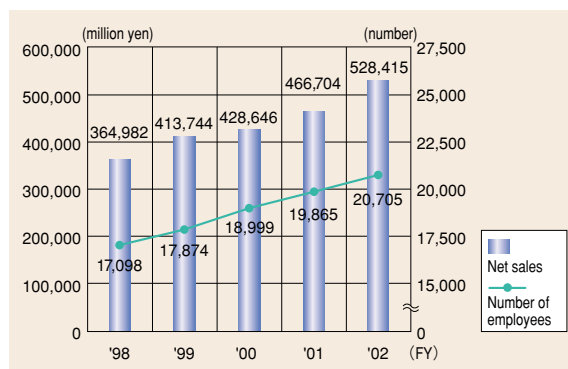




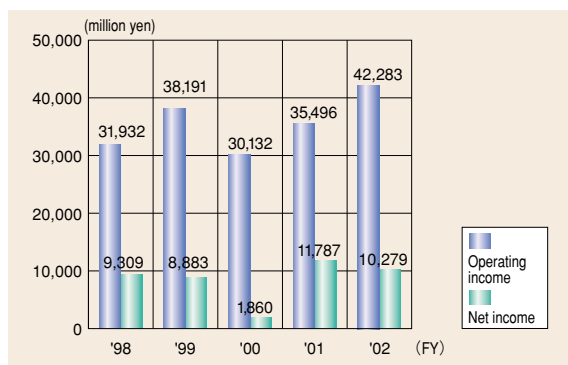
ENVIRONMENTAL  
REPORT  
2002

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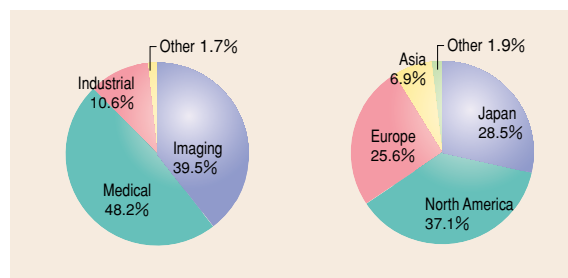
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Consolidated Net Sales and Number of Employees



Operating Income and Net Income



Consolidated Net Sales Ratio by Business Area in FY2002

Consolidated Net Sales Ratio by Region in FY2002

## Company Overview (As of March 31, 2002)

<b>Company Name:</b>	Olympus Optical Co., Ltd.
<b>Date Established:</b>	October 12, 1919
<b>Head Office:</b>	Shinjuku Monolith, 3-1 Nishi-Shinjuku 2-chome, Shinjuku-ku, Tokyo 163-0914, Japan
<b>Telephone:</b>	+81-(0)3-3340-2111
<b>Business Areas:</b>	Manufacturing and sale of equipment and devices for medical and health-care, imaging and information, and industrial applications Silver-halide cameras, digital cameras, recording equipment, magneto-optical (MO) drives, binoculars, endoscopic equipment for treatment of digestive disorders, external medicine and ultrasound, biological microscopes, analysers, information equipment, industrial endoscopes, industrial microscopes, others.
<b>Capital:</b>	JPY40,832 million
<b>Total Number of Employees in Olympus Group:</b>	20,705
<b>Total Number of Employees in Olympus Optical Co., Ltd.:</b>	4,847
<b>Net Sales for Olympus Group:</b>	JPY528,415 million (in FY2002)
<b>Net Sales for Olympus Optical Co., Ltd.:</b>	JPY328,268 million (in FY2002)

This report encompasses the whole Olympus Group. However, the data on pages 2-3 and pages 24-30 cover the 13 facilities in the following table.

Period covered: April 1, 2001 to March 31, 2002  
Number of employees: 5,722 (As of March 31, 2002)

Categories	Business Facilities	
Olympus Optical Co., Ltd.	Technology Research Institute (Hachioji)	
	Hinode Plant	
	Ina Plant	
	Tatsuno Plant	
Manufacturing Affiliates	Tokyo Kinzoku Co., Ltd., Kyowa Plant	
	Olympus Opto-Electronics Co., Ltd.	Tokyo Plant
		Aomori Plant
		Aizu Plant
	Ohmachi Olympus Co., Ltd.	
	Mishima Olympus Co., Ltd.	
	Sakaki Olympus Co., Ltd.	
	Shirakawa Olympus Co., Ltd.	
Okaya Olympus Co., Ltd.		



## Message from the President

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It is ten years since the Earth Summit and since that time problems needing solutions have been revealed to us as well as a redefinition from a variety of perspectives of the relationship between human beings and the earth.

On our earth where natural resources are limited, it is the mission of humankind to build up a society where sustainable growth is possible to bequeath to future generations. This is a major priority for our company as a corporate citizen of the earth.

In 1992, the Olympus Group drafted the Olympus Environmental Principles which established a philosophy of “Management in harmony with the environment respecting nature and the safety and health of mankind.” We have also addressed tasks based on our Environment Basic Plan determined every three years and our annual Fiscal Plan. We have achieved results including total elimination of CFC and 1,1,1-Trichloroethane use. We have also obtained certification of the environmental management system ISO14001 standard. The introduction of these standards was announced in 1996, at our major Japanese development and production facilities up to FY 2000. Furthermore, we have been taking a lead in the industry by performing green procurement from overseas, and have integrated the application of the quality system ISO9001 standard and the environmental management system ISO14001 standard in the medical related facilities.

In FY2002, as part of the implementation of our Environmental Management Diagnosis Programme by the head office Environmental Development Department, we identified the risk of soil and ground water pollution in development and manufacturing facilities. Dilapidated underground piping requiring replacement was discovered. As a solution, we have undertaken the conversion of all such piping from underground to above ground, scheduled for completion by the end of FY2003. FY2003 is also the first year of implementation of the medium-term environmental plan, the 02 Environment Basic Plan. We will prepare a company-wide environmental management system with myself as the responsible person and we will address the issue of more environmentally harmonious management with the focus on the essential strategy of the following slogans - “Environmental technology development and environmental-conscious products”, “Challenge of zero emissions” and “Promotion of integrated environment management for the Group.”

This year, we have made strenuous efforts to enrich the content of our environmental report so that more people can understand our company’s environmental activities. We sincerely hope that our report will encourage readers to provide us with feedback.



June 2002

**Tsuyoshi Kikukawa**  
**President**  
**Olympus Optical Co., Ltd.**

# Olympus and the Environment



## Business Activities and Environmental Impacts

When the Company develops the business activities such as R&D, manufacturing, distribution, sale and service for imaging and information, medical and health-care, and industrial equipment, we consider the various impacts such activities will have on the environment. To control the impact, the Company gives consideration to the environment by taking into account the features of each business area.

INPUT

### Energy → page 24

● Electric power	96,120MWh
● Heavy fuel oil	3,124kl
● Kerosene	331kl
● Diesel fuel	73kl
● Gasoline	69kl
● City gas	700,000m <sup>3</sup>
● LPG	50,000m <sup>3</sup>
<b>Total</b>	<b>1,159 TJ</b>
	<b>TJ (tera-joule) = 10<sup>12</sup>J</b>

### Raw Materials

- Metals  
Steel, aluminium, brass
- Optical glass
- Plastics  
ABS, PC, polyethylene, polypropylene
- Chemicals  
Acids, alkalines, solvents, paints

### R&D



### Design



### Facilities under the Corporate R&D Center

- Olympus Optical Co., Ltd.  
Technology Research Institute
- Tokyo Kinzoku Co., Ltd., Kyowa Plant

### Production

#### Imaging and information

- Olympus Optical Co., Ltd., Tatsuno Plant
- Olympus Opto-Electronics Co., Ltd., Tokyo Plant
- Ohmachi Olympus Co., Ltd.
- Sakaki Olympus Co., Ltd.



Silver-halide camera

#### Medical and health-care

- Olympus Optical Co., Ltd., Hinode Plant
- Olympus Optical Co., Ltd., Ina Plant
- Olympus Opto-Electronics Co., Ltd., Aomori Plant
- Olympus Opto-Electronics Co., Ltd., Aizu Plant
- Mishima Olympus Co., Ltd.
- Shirakawa Olympus Co., Ltd.



Endoscopic videoscope system

#### Industrial

- Olympus Optical Co., Ltd., Ina Plant
- Olympus Optical Co., Ltd., Tatsuno Plant
- Olympus Opto-Electronics Co., Ltd., Aizu Plant
- Shirakawa Olympus Co., Ltd.
- Okaya Olympus Co., Ltd.



Semiconductor inspection equipment

OUTPUT

### CO<sub>2</sub> Emissions → page 24

● Electric power	34,315 tons- CO <sub>2</sub>
● Heavy fuel oil	8,653 tons- CO <sub>2</sub>
● City gas	1,511 tons- CO <sub>2</sub>
● Kerosene	831 tons- CO <sub>2</sub>
● Other	655 tons- CO <sub>2</sub>
<b>Total</b>	<b>45,966 tons- CO<sub>2</sub></b>

### Emission of PRTR-Listed Substances → page 28

● Trichloroethylene	0.3 tons
● Toluene	4.9 tons
● Xylene	5.4 tons
● Dichloromethane	0.4 tons
● Other	1.2 tons
<b>Total</b>	<b>12.2 tons</b>

### Boiler Air Pollutants → page 30

● SO <sub>x</sub>	6 tons
● NO <sub>x</sub>	38.4 tons

### Materials Discharged into Water → page 30

● BOD	4.2 tons
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**Other Utilities → page 25**

● Piped water	130,000m <sup>3</sup>
● Ground water	1,380,000 m <sup>3</sup>

**Office supplies**

● Copy paper	125 tons
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Digital camera



IC recorder



Biological microscope



Blood analyser



Industrial endoscope



Magneto-optical (MO) disk drive

**Recycled Wastes → page 26**

● Waste paper	745 tons
● Waste metal and glass	609 tons
● Waste plastics	302 tons
● Waste oil	150 tons
● Raw waste and sludge	98 tons
● Waste acids and alkalines	16 tons
<b>Total</b>	<b>1,920 tons</b>

**Commissioned Waste Processing → page 26**

● Sludge	468 tons
● Waste plastics	332 tons
● Waste alkalines	190 tons
● Waste acids	179 tons
● Waste paper	140 tons
● Waste oil	139 tons
● Waste metal and glass	79 tons
● Other	3 tons
<b>Total</b>	<b>1,530 tons</b>

**Products → page 18**

● Silver-halide cameras	1,960 tons
● Digital cameras	820 tons
● Microcassette/IC recorders	170 tons
● Endoscopes	650 tons
● Microscopes	640 tons
● Analysers	660 tons
● Measuring devices	380 tons
● Printers	290 tons
● Magneto-optical disk drives	240 tons
● Other	150 tons

**Weight of all products in Olympus Group 5,960 tons**

**Packaging Materials → page 22**

● Cardboard	1,300 tons
● Paper	472 tons
● Plastics	158 tons

**Packaging materials for all Olympus products 1,930 tons**

**Distribution**



**Sales**



**Service**



**Environmental Management**

**Product-Related Measures**

**Manufacturing-Related Measures**

**Communication with Society**

**Environmental Data at Facilities**



In this section the Company will introduce the Olympus Group's major environmental activities in FY 2002.

### Preparation of Guidelines for the Collection of Environmental Information from Olympus Facilities → page 34

Standard documents used throughout the company to obtain an understanding of annual environmental activity in the company's facilities in Japan have been revised. Items of data and their definitions were standardised for analysis and evaluation by each facility and reporting to head office.

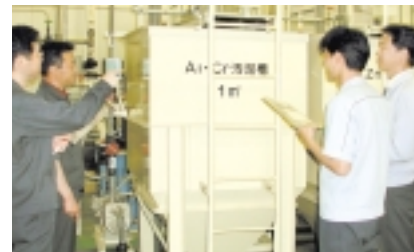
The revisions also conform to the international standard ISO14031, an environmental performance indicator.



Front Cover of Standard Documents  
(left: Japanese version, right: English version)

### Implementation of Environmental Management Diagnosis Programme → page 11

The Environmental Development Department of the head office and specialists such as pollution control managers have systematically visited facilities in order to gain an understanding of the present status of environmental activity and measures which ought to be taken. In FY2002, diagnosis was conducted at 13 facilities in Japan on the subject of soil and groundwater pollution.



Environmental Management Diagnosis in Progress

### Energy-Saving Measures → page 24

The total quantity of energy total consumed in development and manufacturing facilities in Japan was reduced by 3.7% (absolute volume of CO<sub>2</sub> conversion) compared with the previous year and there was a reduction of 8.2% per unit of net sales. A reduction of electrical power and heavy fuel oil each contributed over 1%.

Compared with FY1997, the year when the medium-term goals were established, in FY2002 a 4.8% reduction was achieved on an absolute volume basis and a 41% reduction per unit of net sales which substantially exceeds the target reduction of 10% per unit of net sales.

### Waste Reduction and Recycling → page 26

The total volume of waste discharged from development and manufacturing facilities in Japan reached 3,450 tons, a 10% reduction (in terms of absolute volume) compared with the previous year. From this, 1,920 tons of the waste was recycled (i.e. reused as a resource), and the ratio of recycled waste reached 56%. Although the amount has not quite reached the 60% recycling target of the medium-term plan, there is a notable improvement compared with the results of the previous year.

### Green Procurement → page 18

Green procurement of parts and components from not only the Japanese market but also from overseas is encouraged, and the Company prepared an English version of the Olympus "GREEN PROCUREMENT GUIDELINES" in May 2001. The Chinese version was prepared in March 2002. The publications provided the business partners with a clearer explanation of the green procurement policy.



Olympus "GREEN PROCUREMENT GUIDELINES"  
(left: English version, right: Chinese version)

## Reduction of Trichloroethylene → page 29

The use of trichloroethylene, a chlorinated solvent, was reduced by over 90% by reducing usage and changing to substitutes. In FY2002, 1.4 tons of trichloroethylene was used compared with 13 tons in FY2001.

## ISO14001 Certification for Overseas Facilities → page 10

ISO14001 environmental management system certification was obtained by Olympus Winter & Ibe GmbH (OWI) in May 2001 and in KeyMed (Medical & Industrial Equipment) Limited (KM) in March 2002, both overseas production centers.



KM Certificate and Parties Concerned



Environment and Quality Control Manuals of OWI

## Recycling Center of the Technology Research Institute in Hachioji Starts Operation → page 27

A waste recycling center has been constructed within the Technology Research Institute located in Hachioji City, Tokyo, and started operation from March 2002. The recycling center will mean better separation and recycling of food waste.



Composting Unit for Food Waste (Technology Research Institute)

## Main Distribution Center Starts Operation → page 23

The Tokyo Center in Kawasaki City, which combines the distribution centers of Olympus Logitex, the company responsible for distribution in the Olympus Group, went into full-scale operation from August 2001. This means a substantially faster distribution time and a shorter distance for transfer of products and parts.



Olympus Logitex Co., Ltd., Tokyo Center

## Planning for the 02 Environment Basic Plan → page 9

“02 Environment Basic Plan - Ecology Vision 21”, a medium-term plan, was established, coordinating the policies and goals to be executed by each division in the next five years from FY2003. High-level environmental activity will be developed on the basis of the plan.

### Improvements to Environmental Report 2002

- This year's report provides detailed information with a more comprehensive description of information in guidelines and with due consideration to the “Environmental Reporting Guidelines” published in 2000 by the Japanese Ministry of the Environment. This means that it is 16 pages longer than last year. We, editorial staff, made strenuous efforts to give further information about items covered last year. Numerical data on environmental performance were also provided by reference to the Environmental Reporting Guidelines and the “Environmental Performance Indicators for Business People (2000 version)” published by the Ministry of the Environment.

- The Company internally standardised methods of data provision from each facility and have disclosed each facility's environmental information in this year's environmental report. The publication was designed to incorporate more graphs and drawings. In addition, the scope and conditions for understanding and presentation of data have been clarified, and negative information such as accidents has also been included.
- We envisaged a wide readership when the questionnaires were prepared and the Company received feedback about the results. We hope the environmental report will be of value for two-way communication between interested parties.



## Management Philosophy and Environmental Principles

The Company has developed the environmental activities from the starting point of the management philosophy, a concept called “Social IN” which means incorporating the values of society into our company. We bring together the definition of this philosophy in the form of environmental principles, and the establishment of an environmental action policy with the actual activity.

### Realisation of Social IN

The Olympus Group has positioned “Social IN” as the starting point for its management philosophy. Social IN means the realisation of a healthy and happy life for members of society in harmony with society, the sharing of common values and the proposal of new values through business.

The basis of our actions is “changing the consciousness by breaking down established ideas” and “customer-oriented action.”

### Social IN

The term “Social IN” is a word meaning “social values in our company” and is a concept for establishing a relationship between business and society with the following three INs.

**INvolvement .....Social involvement**  
**INsight .....Sharing social values**  
**INspiration .....Creating new value**

### Olympus Environmental Principles

In accordance with its goal of being an excellent corporate citizen, Olympus drafted the Olympus Environmental Principles in August 1992 to clearly articulate its basic positions on environmental issues and set ambitious environmental protection goals, thereby promoting stepped-up environmental protection activities. This was determined by a management conference after the deliberation of the company-wide environment committee.

#### [Environmental Protection Declaration]

Olympus, respecting nature and the safety and health of mankind, resolves through its technological development and through adopting ecologically compatible business practices to contribute to the reestablishment of a healthy environment and a society in which sustainable development is possible.

#### [Guidelines for Environment Action]

In all business activities, Olympus will give priority to environmental protection and will apply itself with dedication to this task both on an organisational and an individual basis.

#### 1. Technology development

We will develop products and production technologies with conscientious consideration for safety and environmental protection. Furthermore, we will make the results of such developments available to everybody.

#### 2. Drawing up norms and assessing results

We will take the initiative in setting up our own standards and norms. We will assess the environmental impact at each stage of our operations from development through to production and sales.

#### 3. Conservation of natural resources

We will make a united effort to conserve natural resources and save energy. At the same time, we will push forward with recycling activities such as the retrieval of discarded materials and the reuse of resources.

#### 4. Activity support

We will cooperate with the environmental measures recommended by government bodies. We will treat regional and international environmental protection activities with understanding and will actively participate in and support them.

#### 5. Education and total staff participation

We will publicise and engage in other activities with the purpose of informing all Olympus staff of the need for environmental protection. We will encourage each and every staff member to increase his or her understanding of environmental issues and to further demonstrate this understanding in the form of environmental protection activities at home, at work, and in the community.

#### 6. Structure to promote activities

Under our executive in charge of environmental protection, we will make clear our responsibility to promote environmental protection. We will establish a structure through which we can take appropriate measures to deal with changes as they occur inside and outside Olympus.



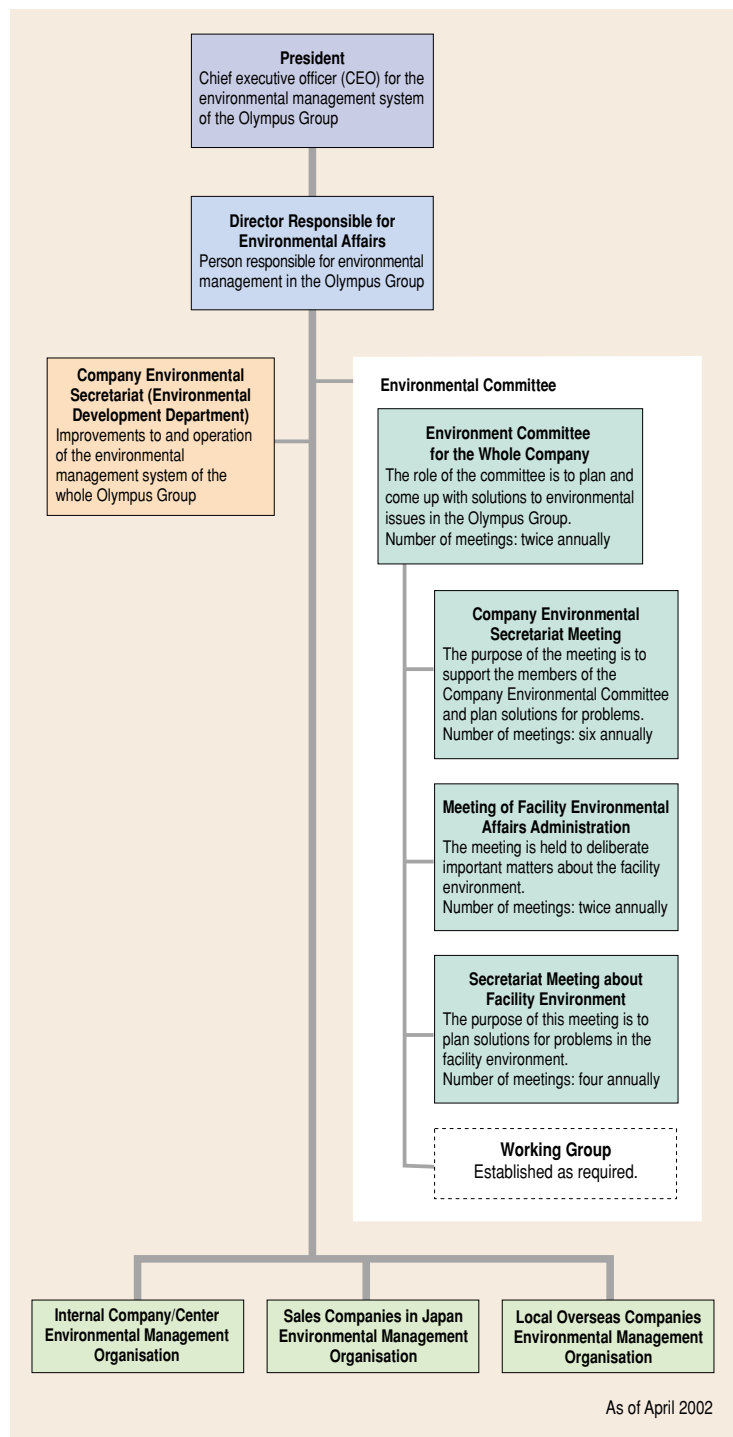


# Environmental Organisation

Olympus has built an integrated environmental organisation for all business functions including design, manufacturing, sales and distribution, under the leadership of the director responsible for environmental affairs.

## Corporate Environmental Organisation

Olympus has appointed a director responsible for environmental affairs since 1992, and has created a corporate environmental organisation at the internal company level, and the center level, as well as the divisional, and affiliate levels. Responsibility for implementation, the actual execution and development of policy lies with internal companies and centers etc. The environmental committee plays a part in the escalation of policy and the conduct of research on common subjects, and establishes, as required, specialist committees categorised by issue and also working groups.





## Medium-Term Environmental Plan

Olympus establishes its Environment Basic Plan every three years with goals set for the coming five years. The Company has formulated the 02 Environment Basic Plan, which reflects results of implementation in FY2002, three years since the 99 Environment Basic Plan.

### The 99 Environment Basic Plan and Results of Implementation in FY2002

Looking at the results of activity up to FY2002, product improvements from product environmental assessment and energy saving, waste reduction and prevention of pollution has meant further improvement in facilities.

#### Environmental Protection Measures Related to Each Stage of Product Life Cycle

Task	Main Implementations	FY2002 Goal	FY2002 Results of Measures Implemented	Page
Implementation of product environmental assessment	Establishing product assessment methodology	Integration of assessment into new systems for product development	After establishing procedures in all product fields, products were assessed in new product development systems.	P18
	Making application of environmental impact assessment to products, packaging materials and services	(Each product area has own goals.)	Goals related to energy savings, conservation of resources and reduced use of hazardous substances have been achieved in each product field.	P18
Improvement of facilities' environment	Conserving energy and resources	CO <sub>2</sub> emissions due to energy use reduced by 10% or more compared with FY1997 level (per unit of net sales)	Reduced by 41% (5% improvement compared with previous year)	P24
	Reducing waste materials and making an increase of recycling	Waste product volume reduced by more than 15% from FY1997 level (Volume of waste for commissioned processing, per unit of net sales.) Rate of waste materials recycled increased to more than 60%	Reduced by 64% (15% improvement compared with the previous year) Rate of recycling increased by 56% (9% improvement compared with previous year)	P26
	Preventing pollution	Air pollutant emission reduced by more than 30% or compared with FY1998	Reduced by 93% (21% improvement compared with previous year)	P29
	Implementing green procurement programme	Introduction of green procurement programme throughout the Group	The "Green Procurement Guidelines" are here to stay.	P18
Creation of systems for recovery of waste products and packaging	Establishing system for recovering waste products	Identification of responsibilities and product recovery partly started.	Commencement of service for recovery of some products by customer request	P18
	Establishing system for recovery of packaging materials	Recovery system planned and started partly.	Drafting of collection and recycling action plan	P22

#### Strengthening of Common Foundation and Systems for Responding to Environmental Problems

Task	Main Implementations	FY2002 Goal	FY2002 Results of Measures Implemented	Page
Creation of environmentally friendly technology	Eliminating lead and volatile organic solvent (VOC) from existing processes and all future processes	Introduction to new products in a product area and commencement of introduction to products in other areas.	Product tests using lead-free solder completed.	P18
	Eliminating trichloroethylene in cleaning processes	Use of trichloroethylene completely eliminated.	Volume used reduced to 1.4 tons (90% reduction compared with previous year)	P28
Creation of environmental administration methods	Establishing "Green Procurement Guidelines" and excusing them	Further improvement to "Green Procurement Guidelines" for raw materials, components, products, office supplies, and services	Development of procurement system overseas by publication of "Green Procurement Guidelines" in English and Chinese. Preparation of standard for selection of industrial waste handlers.	P18
	Establishing Life Cycle Assessment (LCA) system	Preparation of plan for implementation and trials	Provisional application of method to some products	P18
Creation of environmental information collection and dissemination systems	Making architecture of information database related to laws, regulations and the environment	Database system completed and operated effectively.	Maintenance of up-to-date environmental information and provision to all employees	P32
	Constructing environmental reporting system including Pollutant Release and Transfer Register (PRTR)	Reporting system regularly operated	Publication of Olympus Environmental Report 2000 followed by the year 2001 version	P32
Creation of educational systems	Establishing educational programmes	Contents of educational programmes completed for their introduction in FY2003.	Implementation of general and special education throughout the company, at divisional level and department level	P14
Creation of environmental management systems	Introducing environmental management system based on ISO14001 standard to all facilities in the Olympus Group	ISO14001 certification for all facilities in the Olympus Group worldwide	Renewal of application for ISO14001 certification for three facilities in Japan and certification of two production facilities in Europe	P10

## 02 Environment Basic Plan

Environmental activities in the Olympus Group from FY2003 have been progressing in accordance with the 02 Environment Basic Plan. With the 02 Corporate Strategic Plan as a basis, the Company has prepared the 02 Environment Basic Plan, taking into account trends in government and industry including the earth's environmental problems, regulatory systems and the industrial agreements criteria. The 02 Environment Basic Plan was determined at the management director conference in January 2002.

Self-evaluation of FY2003	Issues
Steps for environmental improvement evaluation included in the development of new products	Establishment of standard for environmental friendliness and introduction of products to which such standard is applied.
Overall results greatly surpassed goals set. The rate of recycling however was slightly below the goal.	More promotion of energy and resource conservation. Zero emissions from improvements in reduction of industrial waste and recycling.
With regard to recovery of waste products, no progress was made on maintenance of a system because collection and the "3 Rs" (reduce, reuse and recycle) are difficult due to the nature of products.	Promotion of "3 Rs" packaging materials. Technical research for and approaches to the "3 Rs" for products.

Self-evaluation of FY2003	Issues
With regard to environmental technology, progress has overall been delayed and measures are currently being devised to achieve goals.	Introduction of lead-free solder to products Complete elimination of chlorinated organic solvents
Green procurement is currently being implemented in accordance with our goals, but Life Cycle Assessment (LCA) is delayed.	Establishment of LCA methods and introduction of products to which such methods will be applied.
Publication of the second environmental report. Some partial advances in the system for collection of environmental information have been made, but the construction of such system for the company as a whole is still in the future.	Creation of environmental information networks Better communication about the environment
Preparations for lateral education of the whole company are delayed.	Enhancements to specialist education and education by hierarchical level and maintenance of educational systems
Three production centers, in Japan and overseas, have still not obtained certification.	Re-examination from the perspective of efficiency of the issue of certification for all facilities

Implementation of the 02 Environment Basic Plan	Goals for FY2005
<p>Eco-products</p> <p>1. Environmental technology development and environmentally friendly products</p> <ul style="list-style-type: none"> <li>Application of product evaluation methods (LCA etc.) All products subject to product assessment, green procurement, improvements to life span and preservation, Type III label products (provided by product environmental information)</li> <li>Development of environmental technology and its application to products No use of hazardous substances (lead-free solder, eco-glass etc.) Application of environmental technology to new products</li> <li>Development of the "3 Rs" (reduce, reuse and recycle) for packaging materials. Improvements to packing method (returnable, simpler recycling) Restructuring of system for collection and delivery, and method of transportation (modal shift, more appropriate vehicles)</li> </ul>	<ul style="list-style-type: none"> <li>Introduction of Type III label products</li> <li>Introduction of lead-free solder products</li> <li>Application of eco-glass in all new products</li> <li>Completion of a "3 Rs" operational study</li> <li>Establishment and operation of "3 Rs" procedures for packaging materials</li> </ul>
<p>Eco-facilities</p> <p>2. Challenge to achieve zero emissions</p> <ul style="list-style-type: none"> <li>Promotion of energy saving and conservation of resources Introduction of effective energy systems (co-generation, collection system for regenerated air-conditioning heat etc.) Better circulation of water used in production, closed system for wastewater from lens and surface processing</li> <li>Reduction of waste and more recycling Green purchasing, recycling, returnability, more intermediate processing (processing of raw waste etc.)</li> <li>Elimination of hazardous substances, reduction of environmental risk Introduction of pitchless processing methods, replacement technology for hexavalent chrome compound, less use of cyanide, VOC reduction Soil condition research and measures in workplaces in Japan, enhancement of environmental facility management</li> </ul>	<ul style="list-style-type: none"> <li>40% reduction of CO<sub>2</sub> emission (per unit of net sales from FY2001)</li> <li>Introduction of closed system for water usage</li> <li>Zero emission achieved at major facilities</li> <li>Complete elimination of chlorinated solvents</li> <li>Survey of soil contamination</li> </ul>
<p>Eco-management</p> <p>3. Promotion of integrated environmental management for the Group</p> <ul style="list-style-type: none"> <li>Global development of environmental management Enhancement of ISO14001 expanded environmental education for the whole Group, and evaluation of environmental results</li> <li>Better environmental communication (environmental accounting, reporting, HP, and contributions to society) Ecology exhibits throughout the company, holding of ecology exhibition outside the company</li> </ul>	<ul style="list-style-type: none"> <li>ISO14001 certification in overseas production bases</li> <li>Construction and operation of environmental management system in Japan</li> <li>Evaluation of environmental management</li> <li>Construction and operation of information communicating system</li> </ul>

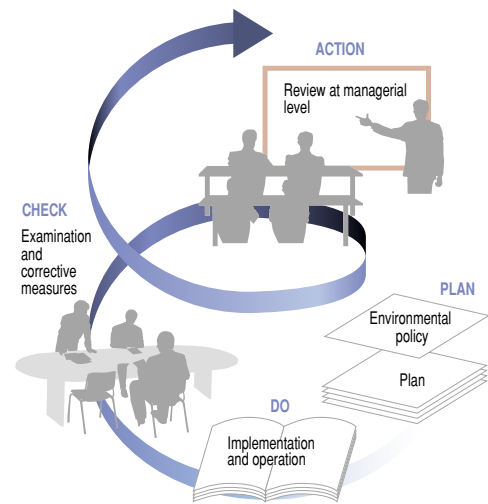


## Environmental Management System

The Olympus Group regards the ISO14001 environmental management system as an effective means for promoting environmental protection activity, and has been systematically introducing it into the company.

### Overview of Environmental Management System

The environmental management system is able to continuously alleviate impact on the environment with the Plan-Do-Check-Action (PDCA) cycle. In the Olympus Group, as well as implementing the PDCA cycle throughout the Group, the PDCA cycle has also been used in each facility and division. The ISO14001 environmental management system has been introduced to every facility. Initially, the Company proceeded with introduction of PDCA with the idea of first introducing it to facilities involved with manufacturing and then successively to expand the programme to development, services, administration and sales workplaces.



■ Environmental Management System Flow

### ISO14001 Certification

Olympus began introduction of ISO14001 certification at its Ina Plant in February 1997. And then the R&D and manufacturing facilities in Japan had obtained ISO14001 certification by March 2000, and certification of nine facilities has already been renewed. Each facility has shown results in terms of energy saving and waste reduction etc. by improvements resulting from an environmental management system.

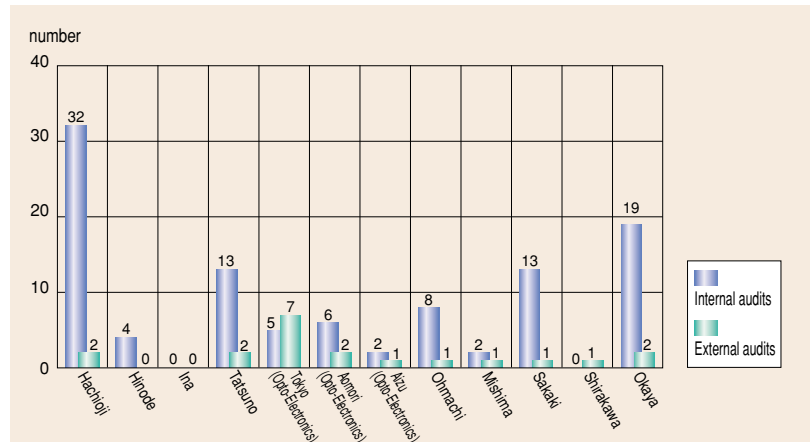
Overseas companies related to manufacturing such as Olympus (Shenzhen) Industrial Ltd. in September 1999, Olympus Winter & Ibe GmbH in May 2001, and KeyMed (Medical & Industrial Equipment) Limited in March 2002 have received certification. From 18 development and manufacturing facilities, both in Japan and overseas, 15 have obtained certification. The total number of employees in facilities which have obtained certification is approximately 11,000, which comprises approximately 53% of all employees in the Olympus Group.

#### ■ ISO 14001 Certification for Olympus Group

Facility	Location	Date of Certification
Ina Plant	Ina-shi, Nagano	Feb. 1997
Tatsuno Plant	Tatsuno-machi, Kamiina-gun, Nagano	Feb. 1998
Hinode Plant	Hinode-machi, Nishitama-gun, Tokyo	Jul. 1998
Technology Research Institute (Hachioji)	Hachioji-shi, Tokyo	Mar. 2000
Okaya Olympus Co., Ltd.	Okaya-shi, Nagano	Apr. 1998
Olympus Opto-Electronics Co., Ltd., Tokyo Plant	Chofu-shi, Tokyo	May 1998
Olympus Opto-Electronics Co., Ltd., Aizu Plant/Opnotech Co., Ltd.	Aizu-Wakamatsu-shi, Fukushima	Oct. 1998
Shirakawa Olympus Co., Ltd.	Nishigo-mura, Nishishirakawa-gun, Fukushima	Oct. 1998
Olympus Opto-Electronics Co., Ltd., Aomori Plant	Kuroishi-shi, Aomori	Nov. 1998
Sakaki Olympus Co., Ltd.	Sakaki-machi, Hanishina-gun, Nagano	Dec. 1998
Mishima Olympus Co., Ltd.	Nagaizumi-machi, Sunto-gun, Shizuoka	Jun. 1999
Ohmachi Olympus Co., Ltd.	Ohmachi-shi, Nagano	Jun. 1999
Olympus (Shenzhen) Industrial Ltd.	Shenzhen, China	Sep. 1999
Olympus Winter & Ibe GmbH	Hamburg, Germany	May 2001
KeyMed (Medical & Industrial Equipment) Limited	Southend-on-Sea, England	Mar. 2002

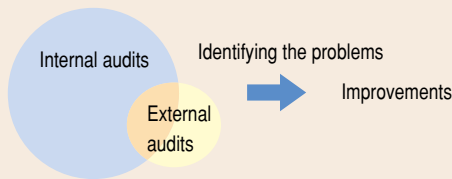
## Environmental Audits in FY2002

Olympus conducts an internal environmental audit at least once a year at facilities which have obtained ISO14001 certification. External environmental audits (i.e. audits by the certification body) are also conducted annually. The results of external audits in FY2002 showed 20 instances of minor non-conformance in 12 facilities in Japan. Standard documents and operation were reviewed on the basis of these points of non-conformance.



Number of Instances of Non-conformance per Workplace in FY2002 Audits

An internal audits is a basic audit conducted by the company itself. In an external audit, the certification body examines conformance with the ISO14001 standard.



Role of External Audits and Internal Audits



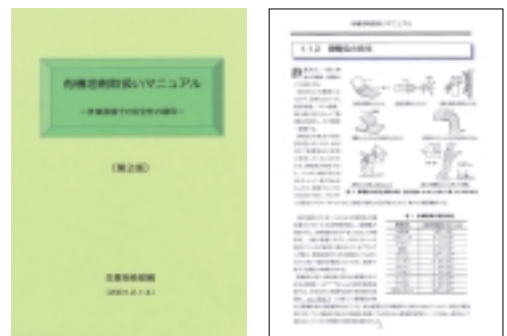
Environmental Audit by Certification Body (Technology Research Institute)

## Environmental Management Diagnosis Programme by Head Office

At Olympus, in addition to the locally conducted audits of environmental management systems at each facility, the head office Environmental Development Department, conducts more specialised wide audits. The Environmental Management Diagnosis Programme is used to examine subject areas with regard to issues involving the whole company, and to examine the implementation status of environmental planning, and execution of each division or facility. In this diagnosis, subject areas different from those in the facility environmental audits are set up, and members with specialist knowledge participate in planning and a diagnostic team is organised. In FY 2002, diagnosis was conducted at 13 facilities in Japan on the subject of risk management. The diagnosis showed up problems with dilapidation of flooring and instrument and underground tanks and piping. Renovation of the flooring and instrument and improvements to checking methods were initiated as a solution to these problems.



Environmental Management Diagnosis (Olympus Opto-Electronics Co., Ltd., Aizu Plant)



Manual for Handling of Hazardous Substances

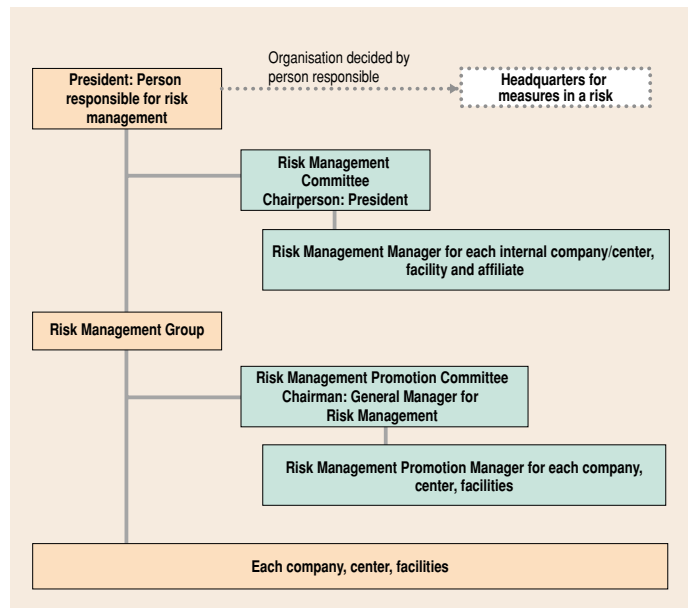


## Risk Management

To prevent accidents and hazards including environmental pollution and to minimise damage if they do occur, Olympus is addressing the issue of risk reduction by the maintenance of a crisis management organisation, the conformance with various laws of which is subject to an independent standard.

### Company Risk Management System

The unforeseen accidents have increased from changes in social systems and public consciousness, and the expansion of corporate economic activity. Olympus is attempting to prevent risks and early containment of risks by specifying risk management rules to unify management of risk information for whole company, with the company president as the responsible person for risk management. These rules are applied to environmental risk management and also work towards environmental protection. Incidentally, there was no litigation, fines or complaints on environmental matters in FY2002.



■ Risk Management Organisation

### Contamination Survey of Soil and Groundwater

In the 1970s, chlorinated solvents were considered to be an excellent detergent and their use became very popular very quickly. There was therefore only a slight perception that chlorinated solvents might cause environmental pollution. However, pollution of soil and groundwater brought about by chlorinated solvents has become a cause for concern in recent years.

In FY2002, opinions were canvassed about the handling of chlorinated solvents and heavy metals in 13 facilities in Japan based on the “Standard for Testing and Operation of Countermeasure Guidelines with regard to Soil and Groundwater Pollution” issued by the Ministry of the Environment. From FY2003, analysis of soil and groundwater will be conducted in facilities which have a history of use of such substances.

■ Results of Survey at 13 Facilities in Japan: Number of facilities with history of use including those which are unknown

Category	Chlorinated Solvents				Heavy Metals			
	Trichloro-ethylene	1,1,1-Tri-chloroethane	Dichloro-methane	Tetrachloro-ethylene	Lead	Cadmium	Arsenic	Hexavalent Chrome
Relevant	11	9	6	1	6	5	3	8
Not relevant	2	4	7	12	7	8	10	5
Future measures	Soil and groundwater analysis survey conducted at facilities where above-mentioned substances are relevant							



Survey Conducted at Tatsuno Plant

## Management of PCB Wastes

The Special Measures for PCB Waste Disposal Law enforced in 2001 specifies better storage practices for used equipment containing PCB and implementation of their disposal. Olympus will continue with its storage management practices until now, as well as proceeding with an investigation of implementation of disposal of PCB waste with the most appropriate processing technology.



Storage for Used Equipment Containing PCB  
(Olympus Opto-Electronics Co., Ltd., Aizu Plant)



The Used Equipment Containing PCB in Storage Box  
(Mishima Olympus Co., Ltd.)

## Conversion of Heavy Fuel Oil Underground Piping to Above Ground

Learning a valuable lesson from the incident of heavy fuel oil flow from the Kyowa Plant of Tokyo Kinzoku Co., Ltd., the Company conducted a check of all relevant facilities in Japan. Below-ground tanks and piping were moved to above ground in order to prevent another incident in the future.



Conversion to Above Ground of Heavy Fuel Oil Tanks and Piping  
(Ina Plant)

### Incident of heavy fuel oil leak at Tokyo Kinzoku Co., Ltd.

At the end of August 2001, underground piping for heavy fuel oil became corroded and an incident in which oil leaked into the soil occurred at the affiliate, Tokyo Kinzoku Co., Ltd., in Ibaraki Prefecture. Residents in the community notified the plant that there was oil film on water in the gutters near the back of the factory. With the cooperation of governmental organisations such as the local fire station, an investigation was conducted and it was discovered that heavy fuel oil from the plant had caused the incident. An inspection of the heavy fuel oil tank and its piping system showed that the underground piping is where the incident occurred. Work above ground was conducted on the piping with the cooperation and understanding of the local residents. At the same time, the Company cleaned and restored the soil to keep any damage to a minimum.

## Emergency Countermeasure Drill

As well as the maintenance of a cabinet for safe storage of various chemicals, the Company has conducted simulation drill for a situation in which an outflow of chemicals has spread to surrounding areas after spillage, based on the premise that the accident with the substance has occurred during the daily bringing into and taking out of the facility.

On the basis of the drill, we have made improvements such as preparation of a manual of measures to take in an emergency, equipment to prevent disasters and measures to prevent flow into footpath gutters. Simulation drill to limit damage from accidents and to prevent accidents before they occur are conducted up to five times a year on a facility-scale.



Emergency Countermeasure Drill  
(Olympus Opto-Electronics Co., Ltd., Aomori Plant)



## Education

To improve the environmental activities, it is important that the environmental awareness of every single employee be raised. To achieve our goals, the Company has implemented an environmental education programme to acquire knowledge and skills and to develop awareness and behaviours.

### Education System

It is important that each employee, from new employees to management, be provided with appropriate education from general to specialist education in order to increase environmental awareness and to independently address environmental protection activity among all members of the Olympus Group.

Education such as education for the whole company conducted by the Environmental Development Department, facility education conducted independently by each facility and education conducted by outside educational institutions, which is adapted to the role of each employee has been set up and implemented.

#### Environmental Education System

Department Where Implemented	Students
Implementation at plants	New employees
	General education and managerial staff
	Special operators
	Developers
Implementation throughout the company	Managerial level
	Internal environmental auditors
Implementation at external institutions	Publicly qualified persons

### Education at Facilities and Divisions

Each facility and each division has devised an educational plan and conduct environmental education.

General education in such things as policy, regulatory systems, planning, standards and implementation procedures is provided to all employees and explained by seminars, workplace meetings and networks. Education ranging from policy to implementation procedures is provided for new and transferred employees. In FY2002, 159 new company employees were provided with environmental education.

Workers specifically handling hazardous substances receive their education using manuals about appropriate implementation procedures and measures to be taken in the event of an accident, and as required on-the-spot training. Developers and designers receive education about environmental assessment of products.



Lectures for Managerial Staff (Technology Research Institute)

### Education Courses for the Employees

Because employees in the facilities are more closely linked with environmental activities, the main environmental education takes place there, but the Company has also held an internal environmental auditor training course since 1997 as part of an educational programme for the whole company. At the end of FY2002, a total of 18 internal environmental auditor training courses had been held and were attended by 401 students. Managerial staff are told about government and industry trends for handling environmental issues and the concept of environmental management evaluation.

### Environment-Related Qualifications

Each facility has established an internal standard which is systematically being developed to the satisfaction of legally-qualified persons involved with environmental protection and workplace safety. The Pollution Control Manager has specified an internal standard with four or more qualified employees at specified plants and one or more employees qualified in water quality management at facilities other than these. Each facility is also staffed with one or more employees qualified in industrial waste management requiring special treatment.

#### Number of Environment-Related Qualified Persons (As of end of March 2002)

\* Accumulative number of persons

Qualifications		Number of Actual Persons*	Internal Standard	Number of Statutory Persons
Pollution control managers	Air	52	18	1
	Water quality	103	34	9
	Noise	21	8	1
	Vibration	19	4	1
Senior pollution control manager		1	0	0
Manager of industrial waste requiring special treatment		67	15	15





## Health and Safety

Olympus not only promotes compliance with related regulatory systems but also a high standard of management of workplace health and safety. The Company is planning to promote the idea of better health from the perspective of medical treatment and health-care products such as the active introduction of new programmes.

### Occupational Safety Management

Olympus aims to completely eliminate work environment hazards at each facility and has been involved in routine crisis prevention for accident elimination and prevention of reoccurrence activities such as regular implementation of patrols.

There were 20 worker accidents in FY2002. Of these, five were caused by traffic accidents on the way to work, and the number of lost days was 161.

Educational campaigns towards elimination of accidents such as safety workshops have been promoted.

#### Number of Work-Related Accident

Item	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002
Incidents	22	13	20	22	20
Accidents resulting in lost days	5	1	5	9	7
Accidents not resulting in lost days	17	12	15	13	13
Lost days	77	14	25	238	163

Remarks: Results tabulated excluding two current applications for Work Accident Compensation Insurance.

### Environment Management for Workplace

For the maintenance of a comfortable work environment, the concentration of noise, dust, organic solvents and specified chemicals in the workplace air was measured at each facility on the basis of Industrial Safety and Health law.

Most were in the category 1, but noise from manufacturing equipment was a problem in four places in two facilities in the category 2 and 3. Olympus is taking action against such problems such as implementation of unmanned operation and the wearing of earplugs while in the workplace, but we are also working towards measures to control the source of the outbreaks to the greatest extent possible.

#### Number of Workplaces Measuring Work Environment

Category	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002
Category 1	155	168	162	105	114
Category 2	3	8	7	1	2
Category 3	2	2	2	2	2
Total	160	178	171	108	118

Category 1: A workplace where environment management is appropriately carried out and where it is desired that current environment management processes be maintained.  
 Category 2: A workplace where the appropriateness of environment management is midway between that of categories 1 and 3 and where it is desired that measures be taken to shift the workplace into category 1.  
 Category 3: A workplace where environment management is inappropriately carried out and where it is desired that environment management processes be quickly improved.

### Medical Checkups and Health Campaign

The Olympus Corporate Health Insurance Society has initiated a new occupational health management system (OHMS) to promote health management by prevention of disease in advance. Olympus has introduced a system whereby employees and their families can undergo a medical checkup or make an enquiry to a doctor at any time, the aim being to improve the self-management of each individual.

The Society has also hosted an annual walking campaign in the autumn for Japanese employees in the Group. In FY2002, more than 1,400 participants have registered in a database the number of steps they have walked, and have addressed the issue of becoming healthier towards achievement of one's goals.



Publications of the Corporate Health Insurance Society



## Environmental Accounting

Olympus believes that evaluation of its environmental protection activity and its effects in terms of volume and monetary units is an integral part of promotion of the environmental management system. Olympus has introduced environmental accounting as a tool for understanding quantitatively the cost of environmental protection activity and its effect, and makes use of environmental accounting in evaluations.

### Features of Environmental Accounting in FY2002

In FY2002 environmental accounting, Olympus was able to gain an understanding of detailed data, establish a format for data common to all facilities and provide more specific definitions when collecting data from each facility. Trends of the past three years in pollution control costs and resource recycling costs which were high and were more precisely calculated than previously were compared on the basis of each facility.

### Method of Calculation and its Conception

The results were tabulated based on our company's definitions with reference to the Japanese Ministry of the Environment "Guidelines for Introduction of Environmental Accounting Systems" published in 2000.

- "Environmental protection costs" means the amount of investment and the cost of environmental protection measures. The "effects of environmental protection" means the effects of environmental protection provided by environmental protection measures indicated in physical units.
- "Economic effects from environmental protection measures" means the effect contributing to profits of business etc. as a result of implementation of environmental protection measures, indicated by monetary units.
- With regard to economic effects from environmental protection measures, only actual effects (economic effects with a definite basis) are calculated.
- With regard to personnel costs, the required number of man hours of an employee giving more than 10% of their time to environmental protection activity is integrated, and is calculated by multiplying the annual average labour costs for each company.
- With regard to R&D costs, research and development costs of hazardous substance replacement, energy saving and improvements to and recyclability of products and manufacturing processes are calculated.

Scope of subject: Olympus Optical Co., Ltd. (including head office) and domestic affiliates related to manufacturing  
 Period covered: April 1 to March 31 of each fiscal year

unit: million yen

#### Environmental Protection Costs

Category	Content of Principal Measures	Amount of Capital Investment			Amount of Costs		
		FY 2000	FY 2001	FY 2002	FY 2000	FY 2001	FY 2002
Costs within business areas	① Pollution control costs	30	9	59	265	237	226
	② Global environmental protection costs	26	52	57	7	24	22
	③ Resource circulation costs	10	15	46	131	153	151
Upper and lower costs	Recycling of packaging materials and waste products	0	0	0	12	9	13
Management activity costs	Creation of environmental management system	0	0	14	336	249	257
R&D costs	Product assessment and material substitutes	5	1	0	161	297	316
Social activity costs	Maintenance of premises and greenification	0	0	6	64	75	93
Environmental damage costs	Measures accompanying heavy fuel oil flow-out	0	0	0	0	0	2
Total		71	77	182	976	1,044	1,080

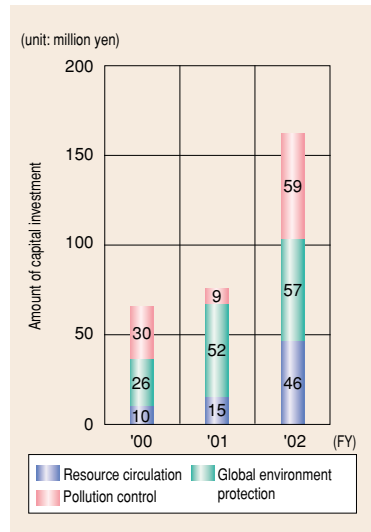
#### Pollution Control Costs and Resource Circulation Costs for Each Plant

unit: million yen

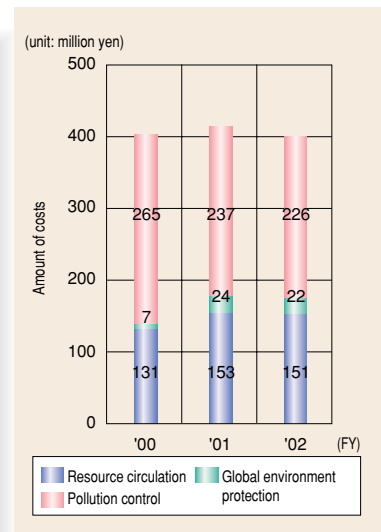
		Hachioji	Hinode	Ina	Tatsuno	Tokyo Kinzoku Co., Ltd., Kyowa Plant	Olympus Opto-Electronics Co., Ltd.			Ohmachi Olympus Co., Ltd.	Mishima Olympus Co., Ltd.	Sakaki Olympus Co., Ltd.	Shirakawa Olympus Co., Ltd.	Okaya Olympus Co., Ltd.	Total
							Tokyo	Aomori	Aizu						
Pollution control costs	FY 2000	56	0	51	63	2	1	5	34	3	4	16	1	15	251
	FY 2001	33	0	55	54	2	1	5	25	2	7	13	0	15	212
	FY 2002	42	0	60	52	1	1	5	23	2	7	14	0	11	218
Resource circulation costs	FY 2000	24	4	8	35	2	2	4	23	6	5	4	4	5	126
	FY 2001	33	3	8	34	2	2	4	19	26	5	5	4	6	151
	FY 2002	21	4	9	39	3	1	2	19	26	5	6	3	6	144

## Overview of FY2002

Comparing the results of FY2000 and FY2001 with FY2002, the amount of capital investment in such things as prevention of water pollution and recycling has doubled. Total costs and each cost item have also stayed almost the same. From the perspective of the effects of environmental protection, the amount of CO<sub>2</sub> emissions, amount of commissioned waste processing, and amount of copy paper purchased have reduced compared with the previous year. The amount of commissioned waste processing in particular has reduced by approximately 25%. Accompanying this is a definite economic benefit in each cost item.



Transition of Costs within a Business Area and the Amount of Capital Investment



Transition of Costs within a Business Area and the Amount of Costs

## Future Issues

In the future, calculations will be conducted in accordance with the Japanese Ministry of the Environment's "Environmental Accounting Guidelines 2002." We shall also make use of cost-effectiveness evaluation of environmental activity in managerial decision-making. The scope of the subject of environmental accounting system is considered to be extended to not only bases in Japan but also bases in the world.

### Environmental Protection Effect

unit: tons

Category	Environmental Load Index	FY 2001	FY 2002	Reduction Volume of Previous Year	Reduction Rate
Effects within business area	CO <sub>2</sub> emissions	47,724	45,966	1,758	3.7%
	Commissioned waste processing	2,049	1,530	519	25.3%
	Volume of copy paper purchased	128	125	3	2.3%

### Economic Effect from Environment Protection Measures

unit: million yen

Category	Details of Effects	FY 2001	FY 2002	Increase and Decrease from the Previous Year
Cost reduction	Energy costs	1,623	1,571	-52
	Cost of commissioned waste processing	86	66	-20
	Cost of copy paper purchased	20	19	-1
Revenue	Revenue from sale of recycled valuable resource	16	13	-3

### Reference: Total Amount of R&D Costs and Amount of Capital Investment in Olympus Optical Co., Ltd.

unit: million yen

	FY 2000	FY 2001	FY 2002
R&D costs	30,781	29,485	29,014
Amount of capital investment	8,800	9,223	5,232

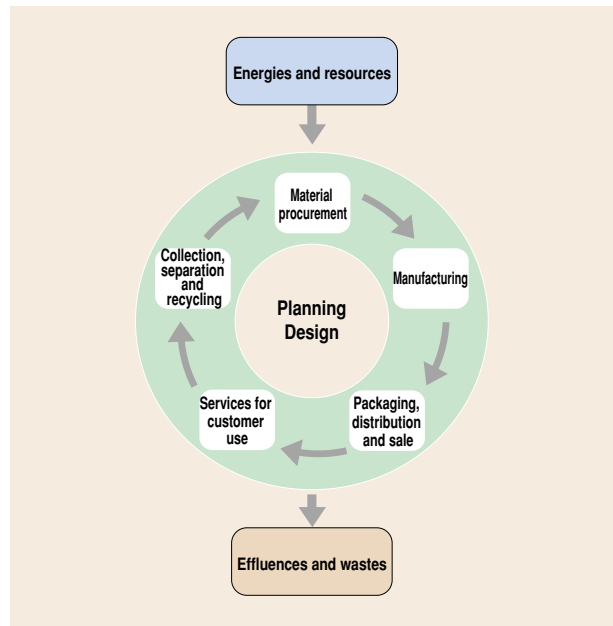


## Environmental-Conscious Product

Olympus has introduced a product environmental assessment system, and is attempting to develop environmentally friendly products and to make such systems stronger. In product development, the Company evaluate the environmental impact through the whole life cycle of the product such as usage, manufacturing, distribution and services for products. The Company has been promoting (1) energy saving (2) elimination of hazardous substances and (3) better recycling efficiency etc.

### Product Life Cycle and Its Environmental Impact

A product has a life cycle from procurement of materials through manufacturing, distribution, usage and service to collection and disposal. In these processes, resources and energy are consumed, and consequently, CO<sub>2</sub> and various chemicals and waste are discharged into the environment and thereby impact on it. The development department for each product area mainly conducts evaluation in an attempt to understand environmental impacts in the product life cycle. The development division evaluates the degree of environmental impact in each process of the product life cycle using a combination of quantitative and qualitative evaluation. The results of evaluation are tied to product design policy and the setting up of subject areas for technology development.



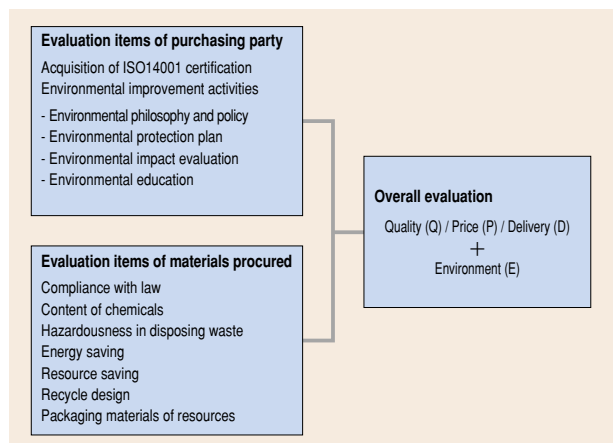
Product Life Cycle and Environmental Impact

### Procurement Based on the "Green Procurement Guidelines"

In FY2002, Olympus conducted a questionnaire with 991 of our major direct business partners, both in Japan and overseas, about the maintenance of environmental management systems such as energy saving and waste reduction, and the results of research into the content of harmful chemicals in purchased materials. We received replies from 903 companies. The Company has this year also prepared booklets in Chinese called "GREEN PROCUREMENT GUIDELINES" and "CHEMICAL USE GUIDELINES" in addition to the English version. The Company has distributed the guidelines to our business partners in local subsidiaries overseas and have requested that they make an effort to alleviate global environmental load. In the future, Olympus will, as part of its responsibility to promote the integration of green procurement throughout the industry, review Olympus procurement standards and will attempt to create even more environmentally friendly products by enrichment of databases.



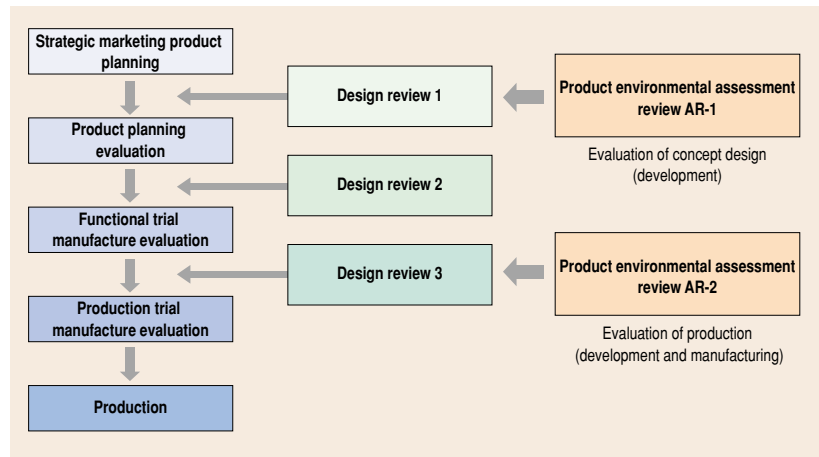
Left and Middle: "GREEN PROCUREMENT GUIDELINES," Right: "CHEMICAL USE GUIDELINES"



Evaluation Points of Green Procurement

## Product Environmental Assessment System

In the process of planning, design and trial manufacture of Olympus products, environmental assessment of the product is conducted at the design review stage. The evaluation is conducted from the standpoint of energy saving, electrical energy consumption, hazardous substances and recycling, with environmental friendliness as a condition. Goals for improvement of each product and conformance with regulatory systems are included in these evaluation items. We have proceeded with improvements to Life Cycle Assessment (LCA) technology to enable quantitative and general comparative evaluation with the previous products and other products.



■ Product Environmental Assessment Flow

## Example of Product Assessment (Microscope)

In the development of the research inverted system microscope “IX71” released in January 2002, the Company sets an improvement goal of the elimination of substances to be avoided in our chemical usage guidelines, improvement in the rate of recyclability and reduction of materials. Measures were implemented and evaluation conducted at each stage of product development. Major improvements are a 26% reduction of electrical power consumption and a 20% reduction in the weight of products compared with previous equivalent products.

### Product Environmental Assessment Results for Research Inverted System Microscope “IX71”

Item	Evaluation	
Electrical power consumption in product use	26% less*	
Rate of recyclability of materials	95%	
Ensuring safety	Rate of use of lead-free glass	71%
	Rate of use of materials regulated by statute (Ni-Cd, mercury battery, bromine type flame retardant, CFC etc.)	0%
Rate of separation and disassembly capability	94%	
Rate of name indication for plastic parts	89%	
Possible rate for shredding/incineration	95%	
Rate of mass reduction by compacting	20% less*	
Amount of styrene foam used in packaging materials	76% less*	

\* Indicates comparison with the previous equivalent products



Research Inverted System Microscope “IX71”



## Examples of Environmental-Conscious Product

More compact and lighter Olympus products have contributed to waste reduction and conservation of resources. Especially, there has been a focus on reduction of consumption of electrical energy by related products as an important condition for the environmental-conscious product. Olympus is proceeding with complete eradication or reduction of use of hazardous chemical substances by development of product design and processing technology.

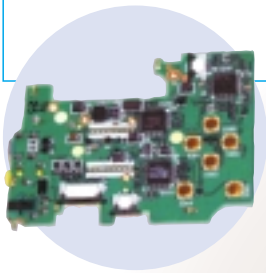
### Environmental Consciousness in Olympus Products

#### Digital Camera CAMELIA C-220 ZOOM\*

\*Model for Europe. Model for north-south America is D-520 ZOOM.

##### Lower electrical power consumption

Schemes for integration of higher level of LSI and power supply sequence have enabled drive by two batteries which previously required four AA batteries and compared with previous equivalent products the number of exposures per battery has increased greatly.

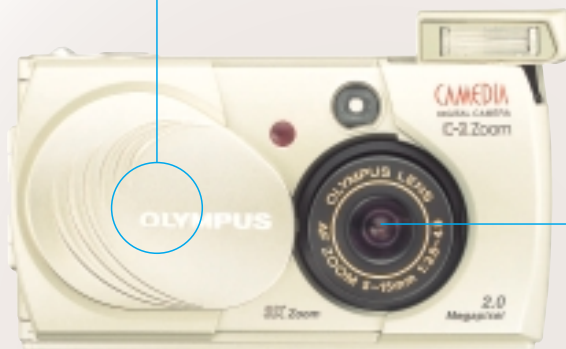


##### More compact optical system

Aspherical lens design and glass moulding processes have made the optical system lighter and more compact.

##### More lead-free glass in lenses

Lead-free glass has been adopted in all areas for optical glass such as in lenses.



##### Identification of plastic materials

The name of the material used is indicated on major plastic parts to simplify separation. Plastics which do not contain bromine type flame retardants are used.



##### Other examples of environmental consciousness

By changing buffer materials to styrene foam and presentation boxes to cardboard, volume was reduced by 30%. Reduction of paper by placing the product instructions on CD-ROM and the use of recycled paper is promoted.

##### No mercury in liquid crystal back lights

The back light source of liquid crystal displays has been replaced with a white light-emitting diode (LED) which does not contain mercury as used in fluorescent tubes.

## Conversion to Lead-Free Optical Glass

Olympus is addressing the issue of environmental friendliness of its camera, microscope and endoscope products by using lead-free optical glass and eliminating environmental pollution by development of lens processing technology.

More than 200 kinds of optical glass are used as the main material in optical devices. Of these, there is glass which contains lead to enhance the rate of refraction. Glass containing lead is an important material in optical design, but in cooperation with glass manufacturers the Company has been promoting conversion to lead-free glass from 1994.

In cameras, we achieved conversion to 100% lead-free glass for internal newly developed products in FY2002 cameras. The Company is attempting to change to lead-free glass to the greatest extent possible in our previous products as well as microscopes and endoscopes. Environmentally friendly olefin system plastics are used from manufacturing to waste disposal as an optical material in the lens prism of the viewfinder optical system, and lead is being eliminated.

Conversion to lead-free glass is an important issue for environmental friendliness and the Company aims to continuously develop optical design and process technology.



Digital Camera in which Lead-Free Glass has been Used.

### Rate of Conversion to Lead-Free Glass of FY2002 Products (Weight)

Item	Total
Volume of lead-free glass used	107.4 tons
Conversion rate to lead-free glass	94.1%

## Cleaning of Endoscopes with Low-Toxicity Antiseptic Cleaning Solution

The Company has developed a peracetic acid endoscope cleaning solution which has a lower toxicity than previous aldehyde antiseptic solutions and has an excellent antiseptic action. We have also adopted the cassette-bottle method for easy replenishing of the liquid, and the cleaning device itself has a compact design.

Such designs have made possible improvements in safety and shorter cleaning time at the site of medical treatment.



Medical Endoscopes



Endoscope Cleaner



## Product Packaging and Distribution

Environmental friendliness is part of not only planning, design and manufacturing of products but the Company has also attempted reduction of the burden on the environment by product packaging and distribution. The distribution centers of the whole Olympus Group were integrated with the aim of reduction of burden on the environment from distribution.

### Conceptions about Packaging and Distribution

In product packaging, Olympus is working towards conversion to packaging materials which have a high level of packaging functional quality and reliability, disposability and user-friendliness, the use of recycled materials and an established recycling infrastructure, and development of packaging design technology. In distribution also, the Company has attempted to reduce the burden on the environment in the whole area of distribution such as energy saving and more efficient energy consumption in land, air and sea transportation. Olympus is addressing the following issues as a means to improve packaging and distribution.

- Changes to materials  
Conversion to paper (conversion to cardboard or thin plates), changes to materials in plastics, conversion to metals, conversion to plywood (conversion to wood) and changes to printing ink.
- Changes to the shape of cardboard boxes  
Conversion to thin-walled, low-layered, smaller, returnable boxes
- Consideration of recyclability  
Identification of material used for container, simplification of separation of different types of materials
- Creation of distribution systems which are considerate to the environment  
Integration of satellite warehouses, partnerships with distribution partners



Vibration Test of Packaging

### Environmental Consciousness in Product Packaging

Under the policy, “the 3 Rs Policy (reduce, reuse and recycle), Olympus has continued with environmental consideration of its product packaging materials with the aim of a packaging design technology which would reduce packaging volume by 30% and styrene foam weight by 30% called “Slim 30.”

At the time, on the basis of the law, (1) reduce, (2) recyclable materials, and (3) single materials became the policy, there was conversion to paper for packaging materials for our cameras and recorders. In the early 1990’s styrene foam was completely eradicated, and a 30% reduction of volume was achieved.

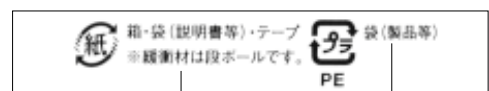
Olympus received the Ministry of Economy, Trade and Industry Director Award for MO packaging in its conversion to cardboard product packaging of buffer and fixed materials at the Japan Packaging Competition sponsored by the Japan Printing Industry Federation in 2001.



Packaging Using Cardboard of Buffer and Fixed Materials



Award Won at the Japan Packaging Competition



Boxes, bags (instructions etc.), tape      Bags (products etc.)  
\* Buffer materials are made from cardboard.

Material Name Indication



## Improvements in Distribution Packaging

In distribution packaging, the containers for transportation of parts between Olympus (Shenzhen) Industrial Ltd., and the Japanese plants are now reusable. Reusable plastic boxes made from polypropylene can be reused more than five times. Approximately 10,000 boxes are being used each month which has enabled dramatic waste reduction.

“One-touch” cardboard has been adopted by the Olympus Logitex Co., Ltd., Tokyo Center. Little paper powder is generated and it is light and compact for storage. When assembled for use, the base is assembled in a criss-cross fashion, requiring no adhesive tapes.

The Company has also partially implemented a system of “no external packaging” for Japanese customers of endoscope products. In product transportation between production bases and the distribution center, the Company will also attempt to expand conversion to a “no external packaging” system such as gradual elimination of cardboard.



Reusable Plastic Box



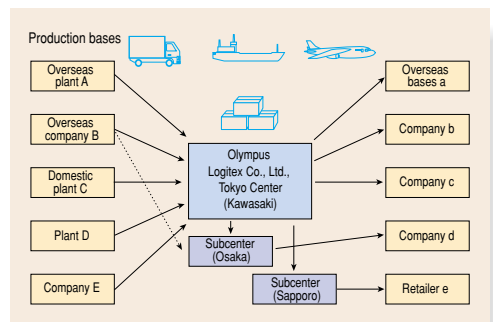
Implemented Examples of no-External Packaging



One-Touch Cardboards

## Operation of main distribution center

The main distribution center (Olympus Logitex Co., Ltd., Tokyo Center) located at Kawasaki city in Kanagawa Prefecture which is the integrated distribution center of 15 domestic satellite warehouses, began operation from August in 2001. This integration of distribution bases is expected to reduce road usage by approximately ten percent, and reduce the FY2001 year's 41,539 tons ¥ km to 37,393 tons ¥ km (multiplying the truck class in tons by the annual distance travelled in kilometres).



Organisational Chart for Integrated Distribution System



Olympus Logitex Co., Ltd., Tokyo Center

# Manufacturing-Related Measures

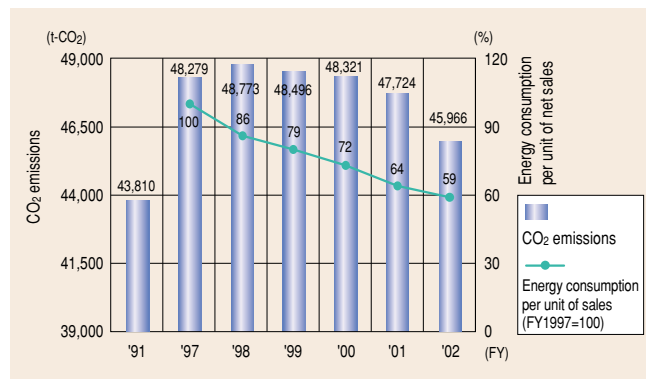
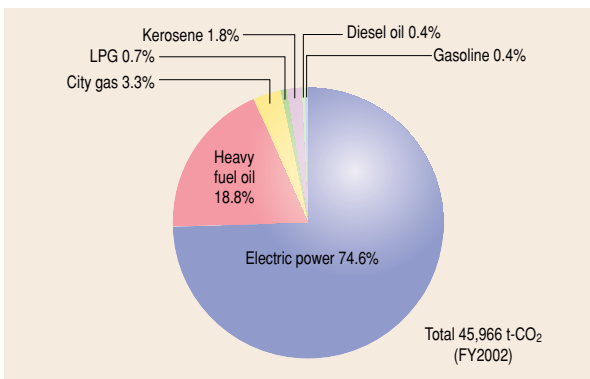


## Energy and Resources Management

To help prevent global warming, Olympus has implemented various energy-saving measures to reduce its CO<sub>2</sub> emissions. The Company achieved in the activities in FY2002 a much larger reduction in total energy consumption on a CO<sub>2</sub> conversion basis than the goal set in the 99 Environment Basic Plan, which aimed to reduce energy consumption per unit of sales by more than 10% by FY2002 from its FY1997 level.

### Volume of Energy Consumed

Olympus' FY2002 energy consumption was 45,966 t-CO<sub>2</sub>, a reduction of 3.7% in terms of absolute volume compared with the previous year. Energy consumption per unit of net sales in FY2002 was 59% of consumption in FY1997, a reduction of 41%, 4.8% in terms of absolute volume compared with FY1997.



■ CO<sub>2</sub> Emissions by Type of Energy Source

■ CO<sub>2</sub> Emissions and Energy Consumption per Unit of Net Sales

■ Energy Consumption and Energy Consumption per Unit of Net Sales

Item	Unit	FY 1991	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002
CO <sub>2</sub> emissions	t-CO <sub>2</sub>	43,810	48,279	48,773	48,496	48,321	47,724	45,966
Energy volume	TJ	1,084	1,187	1,208	1,208	1,200	1,194	1,159
Net sales	100 million yen	1,574	2,017	2,370	2,574	2,794	3,129	3,283
Energy consumption per unit of net sales	t-CO <sub>2</sub> /100 million yen	27.8	23.9	20.6	18.8	17.3	15.3	14.0
Energy consumption per unit of net sales (FY1997=100)	%	-	100	86	79	72	64	59
Crude oil conversion basis	kl	28,069	30,723	31,268	31,280	31,054	30,910	30,000

CO<sub>2</sub> emissions: CO<sub>2</sub> emissions for each year are calculated on the basis of factors specified in the "2000 Regulations for the Law concerning Promotion of Measures to Cope with Global Warming."  
 Conversion to joule: For electrical power, factors specified in "Regulations for the Law concerning Rational Use of Energy" are used for each year but for other types of energy, factors specified in "Overall Statistics about Energy" is used.  
 Conversion to crude oil: Conversion is conducted on the basis of factors specified in "Regulations for the Law concerning Rational Use of Energy."

### Examples of Energy-Saving Measures

#### ● Energy saving in manufacturing processes

Overall electric power is overwhelmingly the type of energy most consumed by the Olympus Group in terms of calories. Most of the electrical energy is consumed by manufacturing equipment. In FY2002, the Company introduced inverter controls at manufacturing facilities to optimise power consumption and save energy. In particular, the Aizu Plant of Olympus Opto-Electronics Co., Ltd., introduced five inverter-controlled pumps into its optical fibre workshop for heating and cooling water for maintaining air-conditioners in optimum condition, reducing energy consumption by 90MWh annually.



Inverter-Controlled Pump  
(Olympus Opto-Electronics Co., Ltd., Aizu Plant)

● Conversion to energy-saving fluorescent lights

Shirakawa Olympus Co., Ltd., and Mishima Olympus Co., Ltd., have replaced their conventional fluorescent lights with an energy-saving type in order to reduce energy consumption. Shirakawa was able to reduce power consumption per lamp from 92 W to 85.5 W with the energy saving lights. It fitted a total of 2,700 new lamps, reducing its annual power consumption by 21,000 kWh.



Energy-Saving Fluorescent Lamps (Shirakawa Olympus Co., Ltd.)

● Use of waste heat from compressors for heating

At Shirakawa Olympus, as a result of an exploration of ways to use waste heat, it was proposed that waste heat discharged into the air from compressors be used for heating in the winter. Blowers and ducts for three of the five compressors and vents in the corridors were fitted, whereby waste heat from compressor was used as an energy source for heating in the winter.



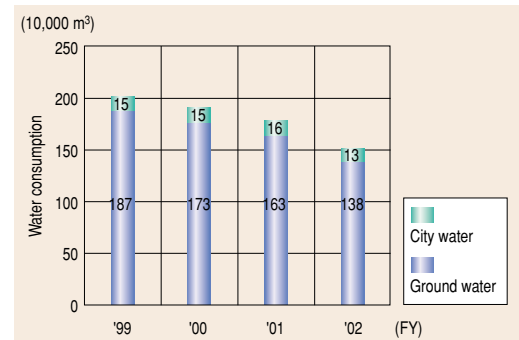
Recovery of Waste Heat from Compressors (Shirakawa Olympus Co., Ltd.)

## Resources-Saving Activities

● Reducing water consumption

In FY2002, the Olympus group consumed a total of 1.51 million m<sup>3</sup> litres of water, representing a 280,000 m<sup>3</sup> (16%) reduction compared with the previous year.

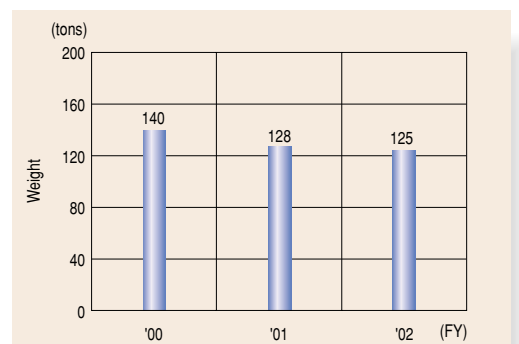
Water consumption has increased each year in some manufacturing processes. In washing processes at surface treatment workshops where volumes of water are consumed, the Company has promoted the introduction of a cascade system, a multi-stage method of water use and have made efforts to reduce water consumption.



■ Total Water Consumption

● Reducing copy paper consumption

As office automation develops, the volume of paper consumed by printers and photocopiers has increased. The Olympus Group has promoted use of both sides of paper in printers and photocopiers to reduce such consumption.



■ Total Consumption of Copy Paper



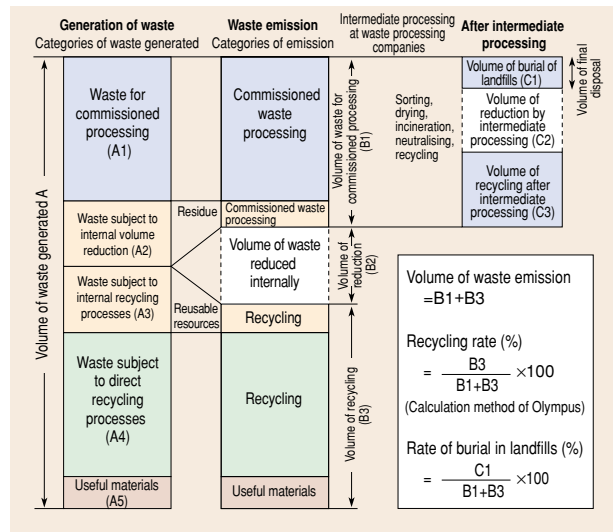
Olympus has implemented various measures to reduce the volume of waste materials and to increase the rate of recycling of such materials, the aim being reduction of the volume of waste for commissioned processing by 15% (in terms of volume per unit of net sales) from FY1997 level by FY2002 and increase of the rate of recycling to more than 60% by FY2002. In FY2002, the Company reduced the volume of waste materials handled by contract waste processors by 64% (in terms of volume per unit of net sales) from the FY1997 level and achieved a recycling rate of 56%.

### Processing of Waste Materials

For waste reduction, the total of waste generated has to be controlled by reuse or some other means. Secondly, waste materials generated from necessity, should be sorted according to type for easier recycling and processing. Thirdly, the rate of waste recycling should be increased. To reduce the volume of waste generated at facilities, we have internally promoted methods of waste reduction such as drying, and recycling processes such as reusing waste acid.

Waste materials emitted from facilities are divided into two categories: waste for commissioned processing and waste to be recycled. Types of waste materials which can be easily reused as a resource such as paper, metals, plastics and food waste are included in the volume of reusable resources. Processing of sludge, mixtures of metals and plastics waste acid and other waste is contracted out to intermediate waste processing companies. Waste contracted out for intermediate waste processing companies undergoes sorting, incineration, and neutralising by the processing company, and is reduced in volume and recycled. Residue from such processes undergoes final disposal in a landfill.

Launching a zero emission programme from the beginning of April 2002, the Company has set a goal for rate of burial in landfills (rate of burial in landfill to volume of waste material) of below 1%.

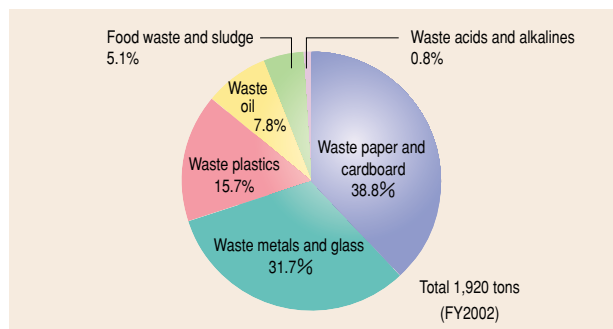


■ Category Grouping of Waste at Each Phase from Generation to Disposal

### Volume and Rate of Recycling in FY2002

From the total waste generated at the facilities of the Olympus Group, the volume of materials for reuse or recycling is counted in the volume of recycling. The volume of recycling also includes materials sold to outside parties as recyclable materials.

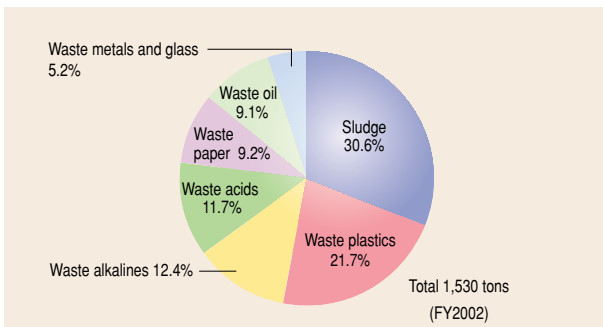
In FY 2002, 1,920 tons of waste was recycled, an increase of 121 tons (7%) compared with the previous year. From the total volume of recycled materials, 378 tons were sold as having use value. The rate of recycling increased by 9% to 56% compared with the previous year.



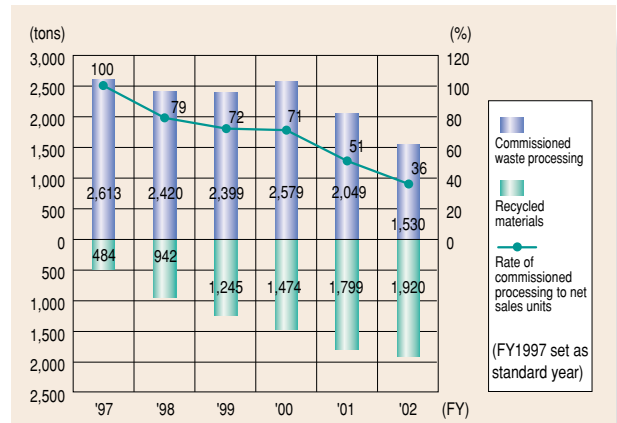
■ Breakdown of Recycled Materials

## Reducing Commissioned Waste Processing

To reduce the volume of waste for commissioned processing, Olympus has been reviewing production processes and introducing recycling apparatus for chemical solutions as well as implementing measures for more recycling of reusable materials. The total volume of waste from R&D and manufacturing facilities in Japan, the processing of which was contracted out to intermediate waste processing companies in FY2002, was 1,530 tons, representing a 519 tons (25%) reduction compared with FY2001 and a 1,083 tons (41%) reduction compared with the standard year (FY1997).



■ Breakdown of Commissioned Waste Processing

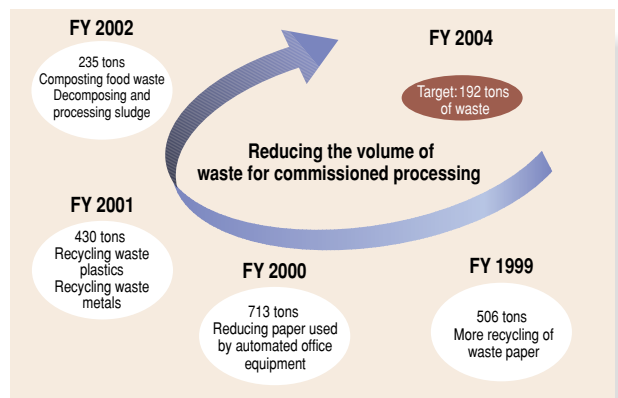


■ Commissioned Waste Processing and Rate of the Volume to Net Sales Units

## Starting Operation of Recycling Center

The Technology Research Institute in Hachioji started operation of a Recycling Center on March 12, 2002. The Center plans and proposes measures to achieve a zero emission goal and also functions as the recovery center for recycling used batteries for all the Olympus Group companies in Japan.

The Center has also started operation of composting unit for food waste in June 2001. Previously food waste was incinerated but now a fermentation accelerator system has been introduced. Compost produced is used by farmers in the region to fertilise vegetables and fruit trees. In FY2002, the Center processed 15 tons of food waste and produced 2.5 tons of compost. The Technology Research Institute held a tasting event for employees to appreciate vegetables and fruits grown with such fertilisers.



■ Technology Research Institute's Concept of Reducing the Volume of Waste for Commissioned Processing



Tasting Event for Appreciation of Vegetables



Recycling Equipment for Waste Acid

## Recycling Waste Acid

The Aizu Plant of Olympus Opto-Electronics Co., Ltd., each year contracted out the processing of one ton of sulfuric acid solution used in the anodising process.\* In March 2001, the company introduced recycling equipment for waste sulfuric acid, eliminating waste acid generated by the anodising process.

\* One of the surface treatment processes used for anodic oxide coating



Olympus uses a variety of chemicals in manufacturing processes and in products. Some chemicals may harm the environment and human health. The company has taken a range of measures to prevent accidental discharge and reduce emissions into the environment.

### Chemical Usage Standards

Olympus approaches the issue of reduction of the volume of potentially harmful chemicals in three ways. Depending on the degree of potential harm, the Company may discontinue use, minimise use, or carefully manage use. The Company has established a standard for use of chemicals with regard to their use in product parts and in production processes. These standards are applied from the product design stage to the manufacturing stage.

#### Chemical Substance usage Standards

Category	Chemicals contained in products	Chemicals used in manufacturing processes
Discontinued use	Asbestos, polychlorinated naphthalene, polychlorinated biphenyls (PCBs), polybrominated biphenyls (PBBs), polybrominated biphenyl ethers (PBEBs)	CFCs (specified chlorofluorocarbons), 1,1,1-trichloroethane, carbon tetrachloride, halon
Minimised use	Mercury, cadmium, lead, hexavalent chrome compounds, cyanide compounds, selenium, organic phosphates	HCFCs (CFC substitutes), methyl bromide, trichloroethylene, tetrachloroethylene, dichloromethane
Managed use	354 chemicals specified in Article 1 of Japan's PRTR* Law (excluding chemicals listed above)	354 chemicals specified in Article 1 of Japan's PRTR Law (excluding chemicals listed above)

\* Pollutant Release and Transfer Register

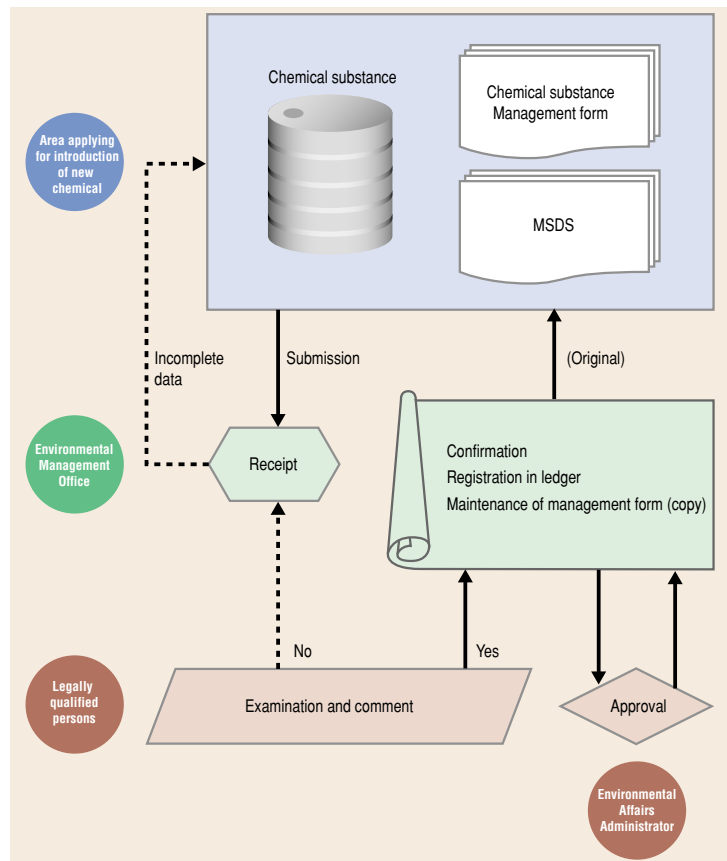
### Introduction of Chemicals and Material Safety Data Sheet (MSDS) Management

The Olympus group manages use, storage and disposal of chemicals, and the introduction of new chemicals into each facility in accordance with the standard for chemicals usage.

When a new chemical is applied to a process, the person in charge of the area into which the chemical is introduced must apply for approval from the Environmental Management Office at the facility by submitting an environment management form and relevant MSDS.\* The office examines the request with a legally-qualified person such as a person qualified to handle organic solvents and makes a decision about the approval. When a new chemical is introduced, the person in charge of the area in which the chemical will be used must inform employees of the content of the MSDS, and educate and train them to ensure the pollution prevention and the human safety. The MSDSs are maintained by the Environmental Management Office and by the area in which the chemical is used and copies are posted in an accessible place for employees.

\* MSDS (Material Safety Data Sheet)

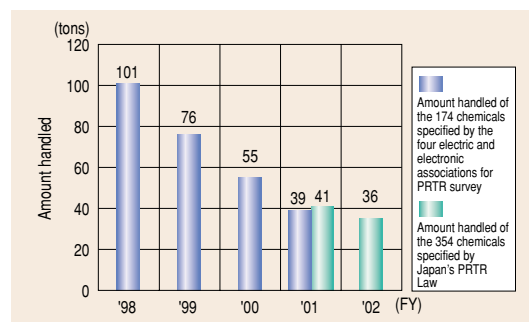
To ensure safe handling of hazardous chemical substances, materials which contain the detailed and necessary information such as substance names, classifications, degree of hazardousness and toxicity, and safety precautions and measures to take in an emergency.



Flow Chart of the Introduction of New Chemical

## PRTR Surveys

In accordance with the guidelines of four electric and electronic equipment manufacturers' associations since 1997, Olympus has conducted surveys on the release and transfer of chemicals specified by the associations. In FY2002, the Company conducted surveys on 354 chemicals specified in Article 1 of Japan's PRTR (Pollutant Release and Transfer Register) Law in accordance with the Law. The surveys were conducted at facilities where the amount of chemicals used was more than 10 kg annually in each facility and the results were tabulated for facilities where more than 100 kg of chemicals was used annually. As the chart shows, the total amount of specified chemicals used by Olympus in FY2002 decreased by five tons to 36 tons compared with the previous year.



■ Amount of PRTR Chemicals Handled

### FY2002 PRTR Survey Results

Unit: tons

Substance No. specified by law	Chemical	Amount handled	Volume released			Volume consumed	Volume removed	Volume transferred	Volume recycled	Volume buried in landfill
			Air	Water area	Soil					
30	Bisphenol-A epoxy resin (liquid)	0.17	0.00	0.00	0.00	0.10	0.00	0.06	0.00	0.00
42	Ethylene oxide	3.04	0.81	0.06	0.00	0.00	1.88	0.30	0.00	0.00
43	Ethylene glycol	1.04	0.00	0.02	0.00	0.00	0.00	1.02	0.00	0.00
63	Xylene	7.87	5.42	0.00	0.00	0.10	0.00	2.35	0.00	0.00
69	Hexavalent chrome compounds	0.61	0.00	0.00	0.00	0.00	0.01	0.60	0.00	0.00
101	2-ethoxyethyl acetate	0.28	0.16	0.00	0.00	0.00	0.00	0.13	0.00	0.00
145	Dichloromethane*1	1.19	0.42	0.06	0.00	0.00	0.00	0.71	0.00	0.00
207	Water-soluble copper salts (excluding complex salts)	0.18	0.00	0.06	0.00	0.06	0.00	0.06	0.00	0.00
211	Trichloroethylene*1	1.41	0.30	0.00	0.00	0.00	0.00	1.11	0.00	0.00
227	Toluene	7.43	4.94	0.00	0.00	0.00	0.04	2.45	0.00	0.00
230	Lead and lead compounds	8.80	0.00	0.00	0.00	4.55	0.00	2.60	1.65	0.00
231	Nickel	0.14	0.00	0.01	0.00	0.09	0.03	0.00	0.00	0.00
232	Nickel compounds*1	1.49	0.01	0.19	0.00	0.51	0.02	0.76	0.00	0.00
243	Barium and water-soluble barium compounds	0.16	0.00	0.00	0.00	0.02	0.00	0.14	0.00	0.00
253	Hydrazine	0.14	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00
283	Hydrogen fluoride and water-soluble hydrogen fluoride salts	0.79	0.00	0.00	0.00	0.00	0.00	0.79	0.00	0.00
304	Boron and boron compounds	0.36	0.00	0.03	0.00	0.05	0.00	0.28	0.00	0.00
307	Poly (oxyethylene)-Alkyl ether*2	0.42	0.02	0.18	0.00	0.00	0.00	0.22	0.00	0.00
Total		35.53	12.14	0.69	0.00	5.49	2.00	13.57	1.65	0.00

\*1 Dichloromethane, trichloroethylene and nickel compounds (including nickel sulfate) are specified as noxious substances subject to survey under the Air Pollution Control Law.

\*2 Limited to 2-alkyl radical with 12 to 15 carbons and their compounds

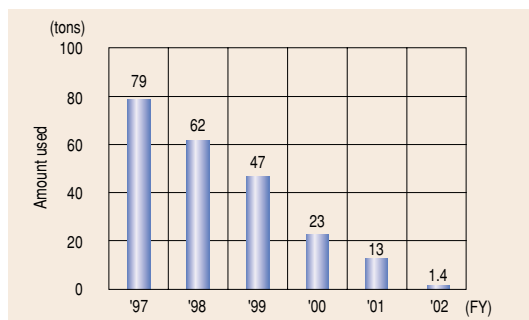
Totals may not correspond to the actual sum due to rounding off.

## Reducing Organic Solvents

The amount of trichloroethylene used by the Olympus Group totalled about 1.4 tons from 13 tons compared with the previous year in FY2002, a reduction of about 90%.

At the Aizu Plant of Olympus Opto-Electronics Co., Ltd., the chlorinated solvent trichloroethylene was used in washing of lens pitches and strip-ping lens jigs. However a replacement product, which is a combination of hydrocarbon solvents, was used and the changeover to the new product was completed in March 2002.

The Ina Plant introduced powder-coating technology in an attempt to reduce organic and waste solvents in the microscope-coating process. We are now promoting its application to other products as a technology able to eliminate use of organic solvents such as xylene and recover powdered paint for reuse.



■ Use of Trichloroethylene

# Manufacturing-Related Measures

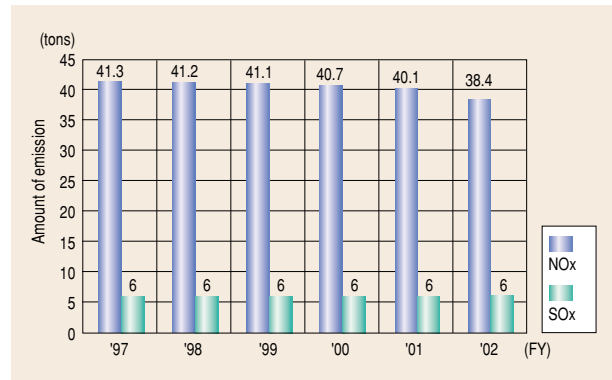


## Prevention of Air and Water Pollution

To prevent pollution of the air and water, which both have a direct impact on the environment, Olympus is making strenuous efforts to maintain and manage facilities by conducting regular checks, in accordance with a self-imposed standard. The Company aims to expand such activities in the future and reduce the burden on the environment.

### Preventing Air Pollution

In addition to regular facilities inspection and combustion management in boilers which are subjects to regulatory control, we measure soot and dust, nitrogen oxide (NOx) and sulfur oxide (SOx) emissions twice annually and are conducting continued activities to maintain and manage, and improve in accordance with a self-imposed standard much stricter than the legal standard.

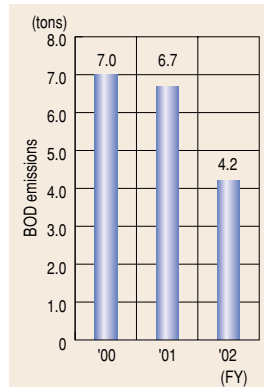


Amount of SOx is measured on an SO<sub>2</sub> conversion basis.

■ NOx and SOx Emissions from Boilers

### Preventing Water Pollution

The Company separates wastewater discharged during the manufacturing process into categories such as acid, alkaline, heavy metal etc., and then subject the fluids to neutralisation and condensation treatment. The Company has set a self-imposed standard in each facility much stricter than the legal standard for hazardous substances such as hexavalent chrome and lead and the living environment such as biological oxygen demand (BOD) and hydrogen ion concentration indexes (pH). After clearing values in the self-imposed standard they are discharged into public water basins or sewage water systems.



■ BOD Emissions



Waste Water Treatment Equipment (Olympus Opto-Electronics Co., Ltd., Aizu Plant)

### Preventing Oil Spills

To prevent leakage outside facilities of heavy oil, the fuel for boilers, the Tatsuno Plant has moved underground piping for auxiliary tanks to above ground and installed catch pans under the burners. Sensors which can detect oil dripping into the pans have been installed and will stop operation of the boiler and give a warning.



Heavy Oil Leak Sensors (Tatsuno Plant)





### Sponsoring Photographic Event

The Olympus Group participated as a premier sponsor in the photography event, "A Day in the Life of Africa," donating 100 sets of Olympus digital cameras and printers to the event. On February 28th, 2001, one hundred of the world's foremost photojournalists, representing 21 countries, took part in a project in which they scattered themselves across 53 nations in the continent of Africa to capture in photographs scenes of the whole African continent in a single day.

The images are to be included in the "A Day in the Life of Africa" book that will represent the most wide-ranging look at Africa ever attempted. The book is scheduled for publication in the fall of 2002. All profits from the book will be used to fund AIDS education programmes in Africa.



Photo Shooting in Kenya

### "Help through Self-Help" Project

Olympus Winter & Ibe GmbH has donated sets of medical equipment including endoscopes to Papua, Indonesia through a project called "Help through Self-Help." Papua is an isolated area with few medical facilities and it is difficult to transport patients to the nearest hospital. German doctors trained local doctors and nurses in the use of medical equipment, enabling local doctors to perform medical treatment and minor operations themselves.



Papuan Doctors with Their Staff

### Olympus Calendars and Support to the WWF

Olympus publishes calendars in English and Japanese annually to distribute to a range of customers. Pictures used in the calendars are taken by famous photographers, with a theme of the natural environment presenting the beauty of wild animals and nature.

Olympus also has been donating several thousand calendars to the WWF (World Wide Fund for Nature) Japan every year to show its support for the fund since 1976.



2002 Olympus Calendar

### Contributing to the "Museum of Science for Children"

To foster the scientific minds of children and develop their interest in science, Hachioji City Museum of Science for Children held an exhibition called "Mechanisms of Clocks and Cameras" from March to April 2001. Olympus provided products such as cameras, endoscopes, and microscopes to the museum. In addition, Olympus set up place for printing souvenir postcards created using a digital camera, an area where visitors could see how endoscopes work and an area where they could observe cells by microscopic imaging.



Microscopes Area at the "Mechanisms of Clocks and Cameras" Exhibition



### Environmental Reports

To inform the public about the environmental activity of the whole Olympus Group, Olympus has published an environmental report in English and Japanese annually since September 2000. This year's report will be the third. The reports are produced by the head office Environmental Development Department which responds to enquiries about our environmental activity. Content of the reports have been posted to the web site (<http://www.olympus.co.jp/>).



Environmental Reports (Left: 2000 edition, right: 2001 edition)

### Printing Issues by Public Relations

Head Office Public Relations delivers corporate information including environmental efforts to customers, business partners, shareholders, and employees as well in the forms of press releases and company profile to get them familiar with the Olympus Group's activities. Such information is also available on the web site. In addition, the Public Relations issues internal bulletins, "OLYMPUS FORUM" and "THE OLYMPUS PURSUIT" to raise awareness on environmental affairs.



(Top left) Company Profile  
(Top right) Technical Publication  
(Bottom left) Internal Publication (Japanese)  
(Bottom right) Olympus Group's Internal Publication (English)

### Environmental Information Delivery

Olympus enters information collected from the head office's Environmental Development Department and facilities into a database, so all employees can access internal environmental regulations and information on environmental activities.



Environmental Database on Screen

### Participation in Regional Activities

Each of the Olympus facilities is actively implementing measures in close contact with the local community. They participate in clean-up initiatives such as cleaning the Suwa Lake and testing of the water of the Tenryu River in Nagano Prefecture. In addition, they sponsor clean-up events in the neighbourhood where they are located several times a year, and these events have already become a part of the community.

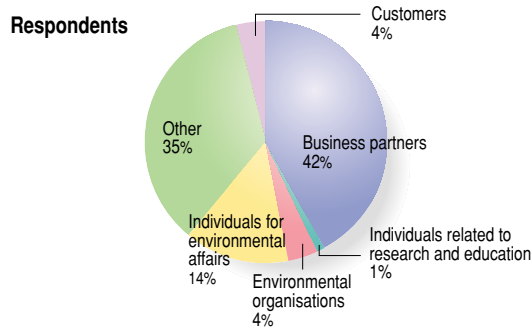


Cleaning up the Tenryu River

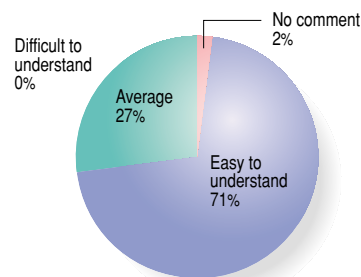
## Feedback from readers about the Olympus Environmental Report 2001

The Company has received enquiries and comments from many readers about the "Olympus Environmental Report." We appreciate your interest in our activities. Questionnaires returned by you were properly processed, and the results are shown in this report.

### Results of questionnaires about Olympus Environmental Report 2001 Number of respondents:81 As of April 12, 2002



#### Q1 What do you think of the Olympus Environmental Report after reading it?

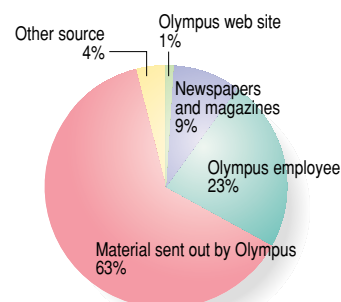


#### Q2 Please note which parts of the report were of particular interest to you.

Items	Responses
Operations and environmental impact	3
Environmental protection goals and measures	2
Environmental management systems	5
Environmental accounting	16
Education	3
Environmentally friendly products	15
Improvements in distribution	7
Energy management	4
Prevention of air and water pollution	2
Chemicals management	7
Waste management and recycling	24
Environmental activities at overseas production bases	2
Contributing to communities and society	2
History of Olympus Group's environmental protection activities and awards	3
Total	95

\*Total does not correspond to the number of the respondents because multiple responses were given for one question.

#### Q3 How did you come to know about this report?



#### Comments and opinions about the Olympus Environmental Report 2001

- "I think that the description of the product environmental impact assessment is inconsistent with the flow chart."
- "Measures" are briefly outlined, but it would be more useful if they were described in more detail to the extent that information can be disclosed."
- "I feel that in general the amount of information contained in the report is limited."
- "Costs incurred for some measures are given, but more disclosure of such information would be appreciated."
- "Regarding environmental accounting, I understand very well that your company is making efforts to include effects as well as costs in the accounting. As there are many aspects of environmental accounting which are difficult to understand, more detailed information would be appreciated."
- "I would appreciate it if you would introduce in the report any cases of measures taken at facilities."
- "I would like you to expand the space for "99 Environment Basic Plan" so that we can understand the overall situation at a glance."
- "With regard to the Environment Basic Plan, it is difficult to understand where the FY2001 Implementation Results were positioned in relation to the goals."
- "I think it would be more informative if the report included information such as how your company evaluated the results for the current year and how you reflected the evaluation in your plans for the following year onward?"
- "I understand that your company has achieved the goals of reducing hazardous air pollutants, but I would like to know about the means you used in achieving the goals."
- "I believe that you should use t-CO<sub>2</sub> instead of t-C as the unit for emissions of carbon dioxide."
- "I ask you to include more information on the activities of overseas production centers."

#### Responses in the Olympus Environmental Report 2002

- We have overhauled both the description and flow chart to make them easier to understand (page 19).
- We have increased the number of the pages to provide more information.
- We have doubled the space for "Environmental accounting" to make the content more complete (pages 16 and 17).
- In "Environmental accounting," we have added calculation methods of values and conceptions to help readers' understanding (page 16).
- With regard to reduction of waste products at workplaces, we have introduced examples at a production plant and a technology research institute (page 27).
- We have doubled the space for the 99 Environment Basic Plan to help readers understand the overall situation at a glance (pages 8 and 9).
- In the results of implementation of the 99 Environment Basic Plan, we have put together the implementation results in fiscal 2001 with respect to the fiscal 2001 goals to give readers a clear picture of achievement levels with respect to the goals (page 8).
- By contrasting FY2001 goals and FY2001 results of implementation, we have conducted self-evaluation and described future tasks and measures (pages 8 and 9).
- With regard to reduction of hazardous air pollutants, we have described the methods used in regular checks of the boilers (page 30).
- We have changed the unit of carbon dioxide emissions from t-C to t-CO<sub>2</sub> in accordance with the international trend (page 24).
- In addition to environmental activities at overseas production centers which were previously included, we have included environment-related data collected at such centers (pages 38 and 39).

# Environmental Data at Facilities



## Overview of Facilities in Japan

### R&D and Manufacturing Facilities

	Name and location of workplace	Overview
Olympus Optical Co., Ltd.	<b>Technology Research Institute (Hachioji)</b> 2951 Ishikawa-cho, Hachioji-shi, Tokyo 192-8507 Tel. +81-(0)426-42-2111	Year of foundation: 1963 Size: 89,552m <sup>2</sup> Business areas: Development of endoscopes, microscopes, clinical blood analysers, silver-halide cameras, digital cameras, and information peripherals and elementary and production technologies
	<b>Hinode Plant</b> 34-3 Hirai, Hinode-cho, Nishitama-gun, Tokyo 190-0182 Tel. +81-(0)42-597-7111	Year of foundation: 1993 Size: 8,486m <sup>2</sup> Business areas: Production of medical and industrial endoscopes and ultrasonic devices
	<b>Ina Plant</b> 5128 Oaza-Ina, Ina-shi, Nagano 396-0021 Tel. +81-(0)265-72-1111	Year of foundation: 1944 Size: 59,400m <sup>2</sup> Business areas: Production of optical microscopes
	<b>Tatsuno Plant</b> 6666 Inatomi, Tatsuno-machi, Kamiina-gun, Nagano 399-0495 Tel. +81-(0)266-41-4111	Year of foundation: 1981 Size: 134,812m <sup>2</sup> Business areas: Production of digital cameras and liquid crystal inspection systems and R&D of semiconductors
Manufacturing Affiliates in Japan	<b>Tokyo Kinzoku Co., Ltd., Kyowa Plant</b> 7001-1 Oaza-Koguri-Kaminakadai, Kyowa-cho, Makabe-gun, Ibaraki 309-1101 Tel. +81-(0)296-57-3555	Year of foundation: 1970 Size: 18,624m <sup>2</sup> Business areas: Production of aluminium die casting and plastic moulding and assembly of optical microscopes
	<b>Olympus Opto-Electronics Co., Ltd., Tokyo Plant</b> 1-60 Shibasaki, Chofu-shi, Tokyo 182-0014 Tel. +81-(0)42-485-2111	Year of foundation: 1969 Size: 4,289m <sup>2</sup> Business areas: Production of precision motors, mobile printers, substrate mounting, products in new areas
	<b>Olympus Opto-Electronics Co., Ltd., Aomori Plant</b> 2-248-1 Okonogi, Kuroishi-shi, Aomori 036-0357 Tel. +81-(0)172-52-8511	Year of foundation: 1973 Size: 26,346m <sup>2</sup> Business areas: Production of medical operating equipment
	<b>Olympus Opto-Electronics Co., Ltd., Aizu Plant</b> 500 Aza-Muranishi, Oaza-lidera, Monden-cho, Aizu-Wakamatsu-shi, Fukushima 965-0846 Tel. +81-(0)242-28-2111	Year of foundation: 1970 Size: 55,019m <sup>2</sup> Business areas: Production of medical and industrial endoscopes
	<b>Ohmachi Olympus Co., Ltd.</b> 3798 Aza-Higashihara, Oaza-Tokiwa, Ohmachi-shi, Nagano 398-0004 Tel. +81-(0)261-22-6111	Year of foundation: 1974 Size: 17,669m <sup>2</sup> Business areas: Designing and production of die assemblies and plastic moulding
	<b>Mishima Olympus Co., Ltd.</b> 128 Shimotogari, Nagaizumi-machi, Sunto-gun, Shizuoka 411-0943 Tel. +81-(0)559-73-1311	Year of foundation: 1978 Size: 3,787m <sup>2</sup> Business areas: Development, production, and service of clinical blood analysers
	<b>Sakaki Olympus Co., Ltd.</b> 1355 Nakanojo, Sakaki-machi, Nagano 389-0602 Tel. +81-(0)268-82-2361	Year of foundation: 1978 Size: 46,096m <sup>2</sup> Business areas: Production of camera lenses and printers
	<b>Shirakawa Olympus Co., Ltd.</b> 3-1 Aza-Ohkamiyama, Oaza-Odakura, Nishigo-mura, Nishi-shirakawa-gun, Fukushima 961-8061 Tel. +81-(0)248-27-2211	Year of foundation: 1979 Size: 76,550m <sup>2</sup> Business areas: Production of light sources and accessories
	<b>Okaya Olympus Co., Ltd.</b> 3-15-1 Shibamiya, Osachi, Okaya-shi, Nagano 394-0083 Tel. +81-(0)266-27-6111	Year of foundation: 1981 Size: 23,022m <sup>2</sup> Business areas: Production of magneto-optical (MO) disk drives, etc.

(As of March 31, 2002)

	Percentage of greenery	Applicable laws	Water consumption (m <sup>3</sup> )		Discharge point
Zoning: Semi-industrial zone Total floor space of building: 70,755m <sup>2</sup>	46.0%	Air Pollution Control Law, Water Pollution Control Law, Law concerning the Rational Use of Energy (specified as Category 1 Types of Energy)	City water Ground water <b>Total</b>	10,585 91,980 <b>102,565</b>	Sewage system
Zoning: Industrial zone Total floor space of building: 10,524m <sup>2</sup>	16.1%	Noise Control Law, Vibration Control Law	City water Ground water <b>Total</b>	8,725 0 <b>8,725</b>	Sewage system
Zoning: Semi-industrial zone Total floor space of building: 41,721m <sup>2</sup>	22.5%	Air Pollution Control Law, Water Pollution Control Law, Sewage Water Law, Noise Control Law, Vibration Control Law, Offensive Odour Control Law, Law concerning the Rational Use of Energy (specified as the Category 2 Types of Energy)	City water Ground water <b>Total</b>	9,400 282,265 <b>291,665</b>	River
Zoning: Industrial zone Total floor space of building: 46,305m <sup>2</sup>	29.3%	Air Pollution Control Law, Water Pollution Control Law, Law concerning the Rational Use of Energy (specified as Category 1 Types of Energy)	City water Ground water <b>Total</b>	11,000 452,000 <b>463,000</b>	River
Zoning: Non-zoning district Total floor space of building: 4,096m <sup>2</sup>	20.0%	Water Pollution Control Law,	City water Ground water <b>Total</b>	9,398 2,866 <b>12,264</b>	Ground infiltration
Zoning: Class II semi-industrial zone Total floor space of building: 5,482m <sup>2</sup>	15.8%	Air Pollution Control Law, Water Pollution Control Law, Noise Control Law, Vibration Control Law	City water Ground water <b>Total</b>	2,916 4,131 <b>7,047</b>	Sewage system
Zoning: Industrial zone Total floor space of building: 8,967m <sup>2</sup>	25.8%	Air Pollution Control Law, Noise Control Law, Vibration Control Law	City water Ground water <b>Total</b>	9,575 4,545 <b>14,120</b>	Sewage system
Zoning: Industrial zone Total floor space of building: 27,105m <sup>2</sup>	27.2%	Air Pollution Control Law, Water Pollution Control Law, Noise Control Law, Vibration Control Law	City water Ground water <b>Total</b>	0 167,832 <b>167,832</b>	River
Zoning: Industrial zone Total floor space of building: 7,117m <sup>2</sup>	21.0%	Law concerning the Rational Use of Energy (specified as Category 2 Types of Energy)	City water Ground water <b>Total</b>	680 17,340 <b>18,020</b>	River
Zoning: Semi-industrial zone Total floor space of building: 5,931m <sup>2</sup>	12.6%	Noise Control Law, Offensive Odour Control Law	City water Ground water <b>Total</b>	17,300 0 <b>17,300</b>	River
Zoning: Industrial zone Total floor space of building: 15,475m <sup>2</sup>	27.0%	Air Pollution Control Law, Water Pollution Control Law, Noise Control Law, Law concerning the Rational Use of Energy (specified as Category 2 Types of Energy)	City water Ground water <b>Total</b>	42,806 113,356 <b>156,162</b>	River
Zoning: Industrial zone Total floor space of building: 11,500m <sup>2</sup>	24.4%	Air Pollution Control Law, Water Pollution Control Law, Noise Control Law, Vibration Control Law	City water Ground water <b>Total</b>	7,840 5,145 <b>12,985</b>	River and Sewage system
Zoning: Semi-industrial zone Total floor space of building: 15,106m <sup>2</sup>	19.2%	Air Pollution Control Law, Water Pollution Control Law, Noise Control Law, Vibration Control Law, Offensive Odour Control Law, Ground Settlement, Soil Pollution	City water Ground water <b>Total</b>	4,849 238,286 <b>243,135</b>	Sewage system

# Environmental Data at Facilities



## FY2002 Domestic Data

Facility	Air				Water						Noise				Power [10,000 kWh]		
	Number of 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> N/h]	pH	BOD [mg/ℓ]	COD [mg/ℓ]	SS [mg/ℓ]	n-H [mg/ℓ]	Bacillus [number/m <sup>3</sup> ]	Morning [dB]	Daytime [dB]	Evening [dB]	Night time [dB]			
Olympus Optical Co., Ltd.	Technology Research Institute (Hachioji)	3	0.015 (0.3)	64 (100)	0.032 (3.62)	7.8 (5~9)	54 (600)		ND (600)							1,797	
	Hinode Plant					7.4 (5~9)	300 (600)		190 (600)			- (55)	54 (60)	- (55)	- (50)	210	
	Ina Plant	4	0.005 (0.3)	130 (180)	0.066 (0.1)	7.9 (5.8~8.6)	2.9 (30)		13 (50)	1.0 (30)	ND (3,000)	- (65)	56 (65)	- (65)	55 (55)	1,214	
	Tatsuno Plant	15	0.010 (0.3)	96 (180)	0.1 (2.4)	7.5 (5.8~8.6)	4.8 (30)		7 (50)	0.2 (30)	5 (3,000)					1,884	
Manufacturing Affiliates in Japan	Tokyo Kinzoku Co., Ltd., Kyowa Plant					8.0	439		82	12	400					520	
	Olympus Opto-Electronics Co., Ltd.	Tokyo Plant	1	0.030 (0.15)	71 (120)	0.021 (1.2)						59 (50)	60 (60)	59 (50)	45 (50)	110	
		Aomori Plant	2	0.011 (0.3)	97 (180)	0.044 (4.4)	7.5	25	100	10	2.2	4,900	50 (65)	51 (70)	50 (65)	47 (55)	247
		Aizu Plant	13	0.088 (0.3)	120 (260)	0.05 (1.05)	7.8 (5.8~8.6)	35 (160)		6.8 (200)	ND (30)	36 (3,000)	52 (60)	59 (65)	53 (60)	54 (55)	1,204
	Ohmachi Olympus Co., Ltd.					6.6 (5.8~8.6)	10 (160)		15 (200)	1.0 (5)	ND (3,000)					1,035	
	Mishima Olympus Co., Ltd.					7.6 (6~8.5)	5.0 (8)		5 (100)	1.0 (30)		- (45)	- (50)	- (45)	- (45)	106	
	Sakaki Olympus Co., Ltd.	1	ND (0.3)	100 (180)	0.14 (2)	8.0 (5.8~8.6)	8.4 (30)		4.2 (30)	ND (30)	11 (3,000)	52 (70)	53 (70)	52 (70)	52 (65)	591	
	Shirakawa Olympus Co., Ltd.	3	ND (0.3)	69 (180)	0.1 (17.5)	6.6 (5.8~8.6)	3.1 (25)		5.8 (70)	0.9 (10)		- (60)	60 (65)	- (60)	- (55)	360	
	Okaya Olympus Co., Ltd.	3	0.016 (0.3)	120 (250)	ND (3.9)	7.5 (5.8~8.6)		0.7 (30)	ND (50)	ND (30)	59 (3,000)		52 (65)		46 (55)	334	

Remarks: Figures enclosed by brackets indicate regulatory values. Cells with no data are not subject to regulations. "-" indicates no measurement. ND indicates below limit of measurement.

Energy						Waste					Amount of PRTR-specified chemicals handled							
	Heavy oil [kℓ]	City gas [10 <sup>3</sup> x m <sup>3</sup> ]	LPG [10 <sup>3</sup> x m <sup>3</sup> ]	Gasoline [kℓ]	Other [kℓ]	Co <sub>2</sub> conversion basis [t-CO <sub>2</sub> ]	General waste [t]	Industrial waste [t]	Special waste [t]	Amount of recycling [t]	Rate of recycling [%]	Trichloro-ethylene [t]	Lead compounds [t]	Xylene [t]	Toluene [t]	Ethylene oxide [t]	Dichloro-methane [t]	Other [t]
	111	677		3.4	58	8,337	54.5	175.3	5.3	342.6	59.3				0.05	0.09		
		22				797	11.9	0.2	0.45	51.9	80.5					0.32		0.04
	264		5.2	20.0	272	5,827	41.1	252.7	68.3	183.3	33.6	0.86	0.30	4.25	1.77		0.77	3.32
	943		7.5	8.5	9	9,428	60.8	50.7	103.6	347.8	61.8		0.32	0.04	0.01			2.06
	540		14.4	8.3	5	3,474	78.6	33.7	0.0	226.7	66.9							
	32	4				490	15.0	0.9	0.0	58.6	78.7		0.49					
	109		2.7	1.1	12	1,233	8.9	0.0	0.0	38.2	81.1				0.24	1.97		0.03
	782		11.0	4.0	5	6,556	59.9	40.9	61.9	170.0	51.1	0.55	3.83	3.49	5.20		0.06	2.68
				3.0	17	3,746	4.2	162.0	15.0	58.0	24.2				0.09		0.09	
						378	15.9	29.0	0.0	44.0	49.5							
	83		2.0	13.0	16	2,422	32.0	45.0	23.0	182.0	64.5			0.08	0.06		0.25	0.07
	43		4.5	3.5	1	1,444	19.7	16.8	0.1	148.9	80.2		2.60			0.66		
	217		1.2	5.0	10	1,838	19.4	16.1	5.9	68.1	62.2		1.26					2.57

The highest value for air, water during the observation period is given.



## Overseas Production Bases

### Olympus (Shenzhen) Industrial Ltd.

Location: Nanshan, Shenzhen City, China

Number of employees: Approximately 3,800

Main business: Assembly of cameras, mainly processing of lenses, plastic moulding and processing of metal parts

ISO14001 Certification: Obtained September 1999

Features: Shenzhen Industrial Ltd is located in the center of the Shenzhen industrial estate approximately 50km from downtown Hong Kong. The company maintains the natural beauty of the estate with garden, ponds and many trees. It started operation in 1991 and expanded into many different kinds of manufacturing.

The company has also actively promoted environmental management together with its occupational safety and health management. In FY2002 the company achieved further environmental progress in terms of energy saving and recycling of synthetics. It has also received many awards for a high level of safety and hygiene maintained over the past few years.

#### Main Data

Period covered: April 1, 2001 to March 31, 2002

Category	Item	Amount	Unit
Energy consumption	Electric power	22,570	MWh
	Fuel oil (mainly diesel oil)	3,239	kl
Waste generation	General waste	12	t
	Sludge	124	t
	Waste chemicals	51	t
Recycling	Plastics	194	t
	Paper	1.5	t



Olympus (Shenzhen) Industrial Ltd.



Coating Solvent Recovery Equipment

### Olympus Diagnostica GmbH (Irish Branch)

Location: Lismeehan, O'Callaghan's Mills, County Clare, Ireland

Number of employees: Approximately 220

Main business: Development and manufacturing of reagents for clinical blood analysers

ISO14001 Certification: The company expects to obtain the certification in 2003 (systems currently under construction)

Features: Located on a 300-acre site (approximately 1.2 million m<sup>2</sup>), which boasts forests, wildlife and three lakes, the factory coexists in harmony with the natural environment.

Waste water is discharged into lakes only after being processed to acceptable licensing level. The level is constantly monitored both in-house and by the local licensing body. Medical and chemical wastes are collected and processed using the appropriate methods, in accordance with regional laws. Waste is removed and disposed off site by licensed handlers.

Main activities in FY2003 include upgrade of waste water treatment systems (expected completion, June 2002).

#### Main Data

Period covered: April 1, 2001 to March 31, 2002

Category	Item	Amount	Unit
Energy consumption	Electric Power	1,511	MWh
	Fuel oil (mainly diesel oil)	68	kl
Waste generation	General waste	75	t
	Sludge	96	kl
	Waste chemicals	240	kl
	Medical waste	7	t
Recycling	Paper	1.5	t



Olympus Diagnostica GmbH (Irish Branch)



Lake on the Premises



## KeyMed (Medical & Industrial Equipment) Limited

Location: Stock Road, Southend-on-Sea, United Kingdom  
 Number of employees: Approximately 650  
 Main business: Sale, repair, development and production of all types of endoscopes.

ISO14001 Certification: Obtained March 2002

Features: The company is located about 40 km east of London in a corner of an industrial estate surrounded by countryside, the headquarters and offices for development and service functions, and the manufacturing facilities are located 500 m apart. The company offers attractive, functional workplaces as well as a high level of welfare. The company has also declared itself a "smoke-free" environment and encourages employees to commute to work by bicycle.

In FY2002 the company introduced the ISO14001 environmental management system which saw progress in the sorting of waste and the saving of energy.

### Main Data

Period covered: April 1, 2001 to March 31, 2002

Category	Item	Amount	Unit
Energy consumption	Electric power	4,629	MWh
	City gas	4,994	MWh*
	Transportation fuel (mainly petrol)	320	kl
Resources	Copy paper	15	t
	Package materials	170	t
	Water	10,345	m <sup>3</sup>

\*Consumption of city gas is expressed on a heat conversion basis (Wh=3,600 J).



KeyMed (Medical & Industrial Equipment) Limited



Environmental Management Manual

## Olympus Winter & Ibe GmbH

Location: Kuehnstraße, Hamburg, Germany  
 Number of employees: Approximately 500  
 Main business: Development, production, sale, and service of rigid borescopes

ISO14001 Certification: Obtained May 2001

Features: The company has operated a strict in-house management system with emphasis on environment and quality. By applying the system and also by urging suppliers to follow suit, the company has been realising great progress on environmental objectives, which include energy consumption, reductions in chemicals and water usage. The company is proud of our relationship with our customers who share our expectation that Olympus products should be environmentally sound. In FY 2002, the company successfully reduced usage of ethyl alcohol in the cleaning process of optical parts through improvements to the washing device, resulting in 45% reduction in annual consumption from 8.2kl to 4.5 kl.

### Main Data

Period covered: January 1, 2001 to December 31, 2001

Category	Item	Amount	Unit
Energy consumption	Electric power	2,193	MWh
	City gas	2,225	MWh*
Resources	Water	6,284	m <sup>3</sup>

\*Consumption of city gas is expressed on a heat conversion basis (Wh=3,600 J).



Olympus Winter & Ibe GmbH



Washing Process Using Ethyl Alcohol



## Environmental Activities and Awards

### History

Date		Major Activities	Activities Outside the Company	
1975	Mar.	Pollution Prevention Committee established.	1967	Enactment of Japan's Basic Law for Environmental Pollution Control
1976	Jun.	Events for Environment Week held at each workplace	1971	Establishment of Japan's Environment Agency
		Commencement of support for WWF (current World Wide Fund for Nature) (provision of calendars etc.)	1972	Announcement by Club of Rome of the "limits to growth." Holding of UN conference on Humans and the Environment in Stockholm
	Latter half of 1970s	Progress of maintenance of regulations and standards related to pollution prevention, waste treatment, chemicals management, and other environmental affairs		
1984	Apr.	Commencement of pollution prevention diagnosis programme (until 1996)	1988	Enactment of Japan's Law concerning the Protection of the Ozone Layer
	Latter half of 1980s	Preparation of annual "Environmental White Paper" of environment protection activity of each workplace and submission to executive responsible for environmental affairs	1989	Announcement of Valdez principles (currently CERES principles)
1992	Jan.	Establishment of Environmental Affairs Office coordination of environmental activity throughout the company	1991	Declaration by International Chamber of Commerce (ICC) of need for sustainable development
	Apr.	Review of all environmental activity organisations such as the Environmental Protection Preservation and maintenance of environmental communication systems with local overseas companies	1992	Holding of Global Environment Summit in Brazil
1993	Aug.	Establishment of Olympus Environmental Principles	1993	Full effect of Germany's law dictating avoidance of disposable packaging
	Jul.	Completion of discontinuation of use of specified chlorofluorocarbons and 1,1,1-Trichloroethane		Enactment of Japan's Environmental Basic Law
1994	Dec.	Completion of discontinuation of use of styrene foam for compact camera packaging	1994	Effect of United Nations Framework Convention on Climate Change
1995	Jul.	Received award from Japan's Construction Ministry for promoting beautification and preservation of Tenryu River		
1996	Mar.	Establishment of 96 Environment Basic Plan	1996	Creation of ISO14001 environmental management system standards
	Jun.	Creation of company environmental management manual	1997	Revision of Japan's Waste Disposal and Public Cleaning Law Revision of Japan's Law concerning Rational Use of Energy
1997	Feb.	Ina Plant obtains ISO14001 certification, the first workplace in the Olympus group. Commencement of product environmental assessment		Announcement of Kyoto Protocol to the United Nations Framework Convention on Climate Change (COP3)
1998	Jun.	Collection and announcement of PRTR data for FY1998 Company receives award from Japan's Labour Ministry for operation of the Ina Plant without accident for 6.6 million hours.	1998	Enactment of Japan's Law concerning Promotion of Measures to Cope with Global Warming
	Oct.	Tatsuno Plant receives FY1998 Superior Factory Greenification Award from Greenery Research and Development Japan		
1999	Feb.	Tatsuno and Ina plants receive FY1998 Energy Management Achievement Award from the Ministry of International Trade and Industry	1999	Enactment of Japan's Law concerning Special Measures against Dioxins
	Jul.	Establishment of 99 Environment Basic Plan		Enactment of Japan's Law concerning Reporting, etc. of Releases into the Environment of Specific Chemical Substances and Promoting Improvements in Management (PRTR Law)
	Sep.	Olympus (Shenzhen) Industrial Ltd., obtains ISO14001 certification.		
2000	Feb.	Hinode Plant receives Award for Outstanding Rationalization of Energy Use from Kanto Electricity Use Rationalization Committee.	2000	Enactment of Japan's Basic Law for Promotion of Creation of a Recycling-oriented Society
	Mar.	Technology Research Institute obtains ISO14001 certification, completing certification of all 12 Olympus development and manufacturing workplaces in Japan.		Enactment of related laws on recycling of food waste and building materials
	Oct.	Introduction of "Green Procurement Guidelines", completion of audit of parts suppliers and drafting of guidelines for purchase of products for commercial use		Enactment of Containers and Package Recycling Law Progress in EU legislation concerning collection of used electrical and electronic appliances and the hazardous substances used in such appliances
2001	Feb.	Hinode Plant again receives Award for Outstanding Rationalization of Energy Use from Kanto Electricity Use Rationalization Committee.	2001	Effect of Japan's revised Energy Conservation Law, PRTR Law, Law for Recycling of Specified Home Appliances, and Green Procurement Law
	Mar.	Introduction of technology to eliminate trichloroethylene in washing process		
	Mar.	Installation of processor for raw waste at Tatsuno Plant		
	May	Olympus Winter & Ibe GmbH obtains ISO14001 certification		
	Jun.	Introduction of fermentation-type processor for raw waste at Technology Research Institute		
	Aug.	Commencement of operation of Olympus Logistics Ltd., Tokyo Center		
2002	Mar.	KeyMed (Medical & Industrial Equipment) Limited obtains ISO14001 certification.		
	Mar.	Commencement of operation of resource recycling center at Technology Research Institute, Hachioji		
	Mar.	Establishment of 02 Environment Basic Plan.		



# Olympus Group's Main Operating Bases

(As of April 1, 2002)

## Japan

- OLYMPUS OPTICAL CO., LTD.
- Headquarters
- Technology Research Institutes
- Hinode Plant
- Ina Plant
- Tatsuno Plant
- Olympus ProMarketing, Inc.
- Olympus Sogo Service Co., Ltd.
- Olympus Opto-Electronics Co., Ltd., Aomori Plant
- Olympus Opto-Electronics Co., Ltd., Aizu Plant
- Olympus Opto-Technology Co., Ltd.
- Olympus Opto-Technology Co., Ltd., Ohmachi Plant
- Olympus Opto-Technology Co., Ltd., Sakaki Plant
- Olympus Opto-Technology Co., Ltd., Shibasaki Plant
- Olympus Logitex Co., Ltd.
- Mishima Olympus Co., Ltd.
- Shirakawa Olympus Co., Ltd.
- Okaya Olympus Co., Ltd.
- Olympus Engineering Co., Ltd.
- Olympus Systems Co., Ltd.
- Tokyo Kinzoku Co., Ltd.
- Tokyo Kinzoku Co., Ltd., Kyowa Plant
- NovusGene Inc.
- Olympus AVS Co., Ltd.
- Olympus Medical Engineering Co., Ltd.
- Olympus Technical Service Co., Ltd.
- Olympus Leasing Co., Ltd.
- KS Olympus Co., Ltd.
- Opnotech Co., Ltd.

## Asia-Pacific

- Olympus Asian Pacific Limited
- Olympus Asset Management Limited
- Olympus Hong Kong and China Limited
- Olympus (Shenzhen) Industrial Ltd.
- Pan Yu Factory
- Beijing Beizhao Olympus Optical Co., Ltd.
- Olympus (China) Investment Co., Ltd.
- Olympus Beijing Industry & Technology Limited
- Olympus Taiwan Co., Ltd.
- Olympus Singapore Pte Ltd
- Olympus Australia Pty Ltd
- Olympus New Zealand Limited
- OLYMPUS TRADING (SHANGHAI) LIMITED
- Olympus (Thailand) Co., Ltd.
- Olympus Technologies Singapore Pte Ltd
- Olympus Korea Co., Ltd.
- Olympus (Malaysia) Sdn. Bhd
- Olympus (India) Pvt. Ltd.
- Olympus Optical Technology Philippines, Inc.

## Europe

- Olympus Optical Co. (Europa) GmbH
- Olympus Winter & Ibe GmbH
- Olympus Optical AB
- Olympus France S.A.
- Olympus Austria Gesellschaft m.b.H.
- Olympus Optical (Schweiz) AG
- Olympus d.o.o. za trgovinu
- Olympus C&S, Spol. s.r.o.
- Olympus Diagnostica GmbH
- Olympus Diagnostica GmbH (Irish Branch)
- Olympus Danmark A/S
- Olympus Italia S.R.L.
- Olympus Software Europe GmbH
- Olympus Endo-Repair Europe GmbH
- Olympus Hungary Kft.
- Olympus Optical Polska Sp.z.o.o.
- Olympus Optical Co Espana, S.A.
- Olympus Technicas S.L.
- Olympus Finland OY
- Olympus Endoterapia Sp.z.o.o.
- Olympus Medical Care (Hungary) Kft.
- Olympus Norge A/S
- Olympus Slovenija d.o.o.
- Olympus Nederland B.V.
- Olympus UK 2002 Limited
- Olympus Optical Co. (U.K.) Ltd.
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Born 1950, Tokyo, Mitsuaki Iwago has travelled to almost every corner of the earth and has taken countless photographs of nature and animals. His photographic masterpieces are highly acclaimed around the world and in recent years he has started taking photographs with a digital camera.



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