

Annual Report 2003

May 2003

F U S I O N A N D F O C U S



FUSION AND FOCUS

Since our founding in 1916, from a base in the fine chemicals business, Nippon Kayaku has continued to expand into a broad range of new fields, including explosives, dyes, pharmaceuticals, agrochemicals, functional products, catalysts and inflators to construct our current business foundation. We have succeeded in expanding by continually improving ourselves to meet the needs of rapidly changing times. Currently within the Nippon Kayaku Group, future growth is expected in the three promising fields of Medicine/Welfare and Care, Information/Communications, and Environment/Safety Systems. We are creating a fusion of the intellectual assets that the Group has accumulated over many years in a broad range of fields. We are also engaged in promoting active alliances with other companies, and in the rapid start-up of a many new businesses in these growth areas. In this way we are working to establish a new business foundation, break out of the cost competition cycle, secure a superior competitive position, and increase profit-earning capacity.

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* Company information after May 2003 is disclosed as part of company information herein.

* Descriptions about future results imply uncertainty and risks, and do not guarantee realization of these results as such. There are possibilities that discrepancies will occur between goals and results due to such factors as changes in management environment.

NIPPON KAYAKU AT A GLANCE

List of Business Areas and Major Products

Pharmaceutical Business

We manufacture and sell anti-cancer drugs, cardiovascular drugs, immunosuppressants, and other pharmaceuticals and diagnostics for prescription. In the anti-cancer drug field in particular, we offer a lineup of 13 anti-cancer drug products, and are at the top level worldwide both in terms of technology and business performance. We are working with cutting-edge technologies, and have recently entered the clinical phase in the development of DDS (drug delivery system) pharmaceuticals utilizing nanotechnology.



Major Products

Year in parentheses is when product was launched.

Anti-cancer Drugs and Cancer-related Drugs

- IMMUCYST (2003)
- Hycamtin (2003)
- MS-TWICELON (2001) ①
- AREdia (2001)
- FARESTON (1995)
- ODYNE (1994)
- STARASID (1992)
- PINORUBIN (1988)
- LASTET (1987)
- BESTATIN (1987)
- RANDA (1984) ②
- PEPLEO (1981)
- BLEO (1969)



②



③

Immunosuppressants

- SPANIDIN (1994) ③

Cardiovascular Drugs

- ADEHL (1999)
- MILLISTAPE (1998)
- NITROPEN TABLETS (1988)
- MILLISROL (1984) ④
- NITROGLYCERINE TABLETS (1953)



④

Neurological Drugs

- SALIGREN (2001)
- MUSCALM (1975)



⑤

Other Drugs

- ASTRIC DRY SYRUP (2002) ⑤



⑥

Diagnostics

- LANA MAMMO CARD CEA (2002) ⑥
- LANA TP AUTO (2001)
- LANA 1,5AG AUTO LIQUID (2000)
- LANAZYME BFP PLATE (2000)
- LANAZYME ST-439 PLATE (1999)

Fine Chemical Business



Inflators

Based on a Japan-U.S.-Europe tripartite global system, we manufacture and sell airbag inflators, micro gas generators (MGG) for seatbelt pretensioners, and squibs (igniters).

Catalysts

We are engaged in manufacture, sales, and plant license business for acrylic acids and other catalysts used in manufacturing.

Major Products

- Catalysts
- Plant License Business



Functional Products

We manufacture and sell special epoxy resins, UV-curing resins, acrylic-based polymers, and polymer flocculants. Moreover, our consolidated subsidiary Polatech manufactures and sells polarizing films, special treated films, and other optical films.

Major Products

- Epoxy Resins (EOCN-1020, EPPN-500, NC-3000, BREN)
- KAYATORON
- KAYAHARD
- KAYARAD
- KAYAMER
- KAYACURE
- KAYANOVA
- KAYASORB
- KAYAMIRROR



Color Chemicals

We manufacture and sell dyes, as well as color chemicals for non-textile use.

Major Products

- KAYALON POLYESTER
- KAYACRYL-ED
- KAYACELON REACT
- KAYARUS
- KAYACION
- KAYAFECT
- KAYAPHOR LIQUID
- Colors for Color Inkjet Printers



Explosives

We manufacture and sell explosives, black powder, and pyrotechnic products.

Major Products

- Dynamite
- Slurried Explosives
- Ammonium Nitrate Fuel Oil Explosive (ANFO Explosive)
- Black Powder
- Electric Detonators

Agro & Specialty Chemical Business

Agrochemicals

We manufacture and sell agrochemicals and similar products.

Major Products

- DIAZINON
- MATRIC
- PROPETAMPHOS
- CYCLOSAL
- MCPB
- CHLOROPICRIN
- CUCUMERIS
- RATDEN
- NAMEHUNTER
- EVISECT



Specialty Chemicals

We manufacture and sell API for pharmaceuticals, intermediates, and chemical products.

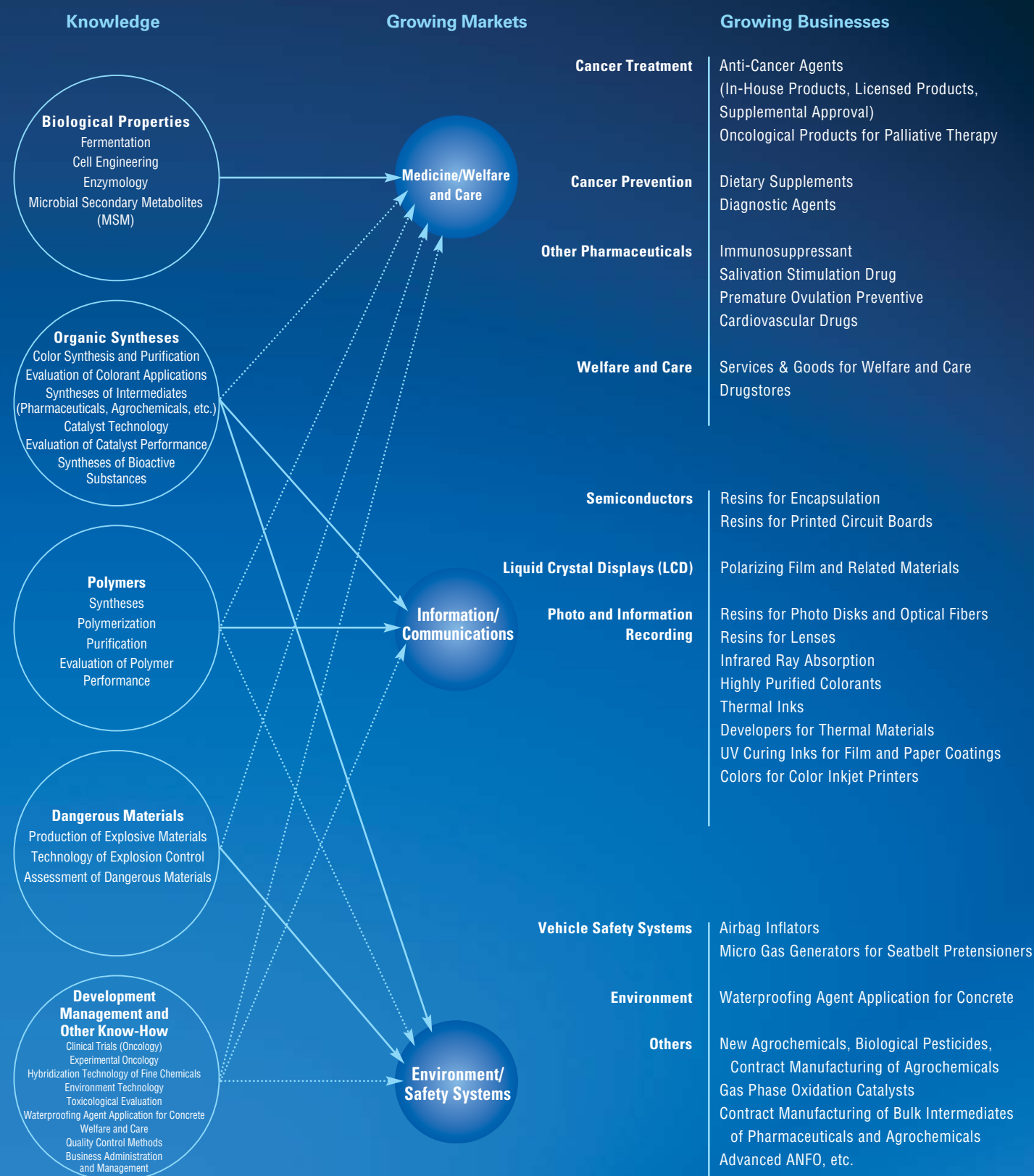
Major Products

- Active Pharmaceutical Ingredients
- Intermediates for Pharmaceuticals and Agrochemicals
- PANAKAYAKU
- Methionine for Animal Feed
- Specialty Chemicals for High Performance Products



■ Fusion of Intellectual Assets and Concentration of Resources

Nippon Kayaku is proceeding with new business development in mature fields and growth fields, aimed at achieving our goal of 150 billion yen in consolidated net sales. We will accomplish this by creating a fusion of the intellectual assets we have previously accumulated in a broad range of fields, and by concentrating our business resources.

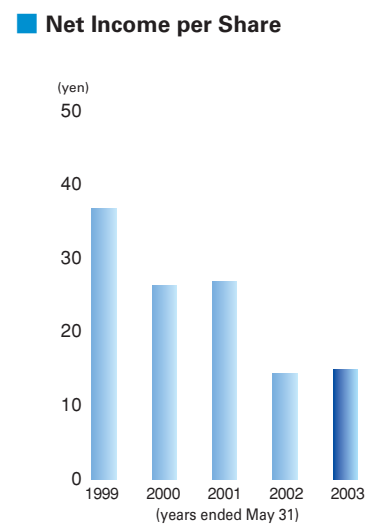
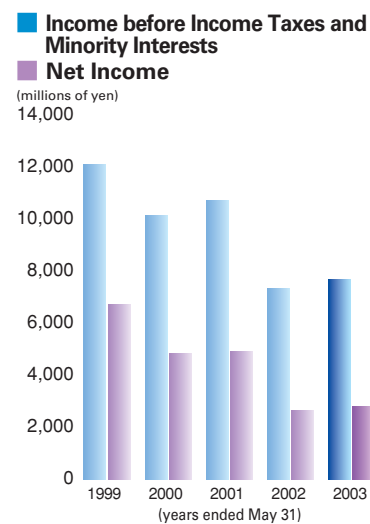
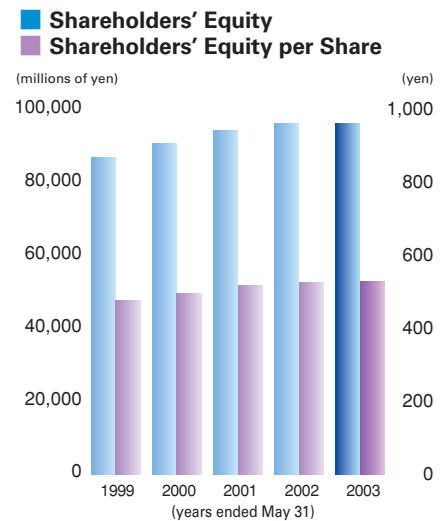
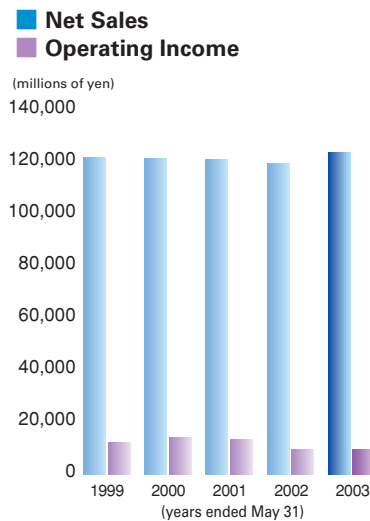


Consolidated Financial Highlights

Years ended May 31

Millions of yen, except per share amounts

	2003	2002	2001	2000	1999
Net Sales	123,431	119,435	121,002	121,302	121,483
Operating Income	9,697	9,384	13,277	14,071	12,147
Income before Income Taxes and Minority Interests	7,643	7,309	10,675	10,132	12,057
Net Income	2,780	2,630	4,903	4,807	6,714
Shareholders' Equity	96,204	96,248	94,331	90,666	86,989
Shareholders' Equity per Share (Yen)	527.93	527.61	516.97	496.90	476.65
Net Income per Share (Yen)	14.92	14.42	26.87	26.34	36.79



Message from the President



Koichiro Shimada
President
(Representative Director)

Through a fusion of our vast store of intellectual assets and development of active alliances with other companies, we are aiming to develop new key technologies and expand our profit-earning capacity.

Further economic deflation, stagnant stock prices, and sluggish personal spending and private capital investment have continued to produce harsh conditions in the Japanese and global economies. However under these conditions, Nippon Kayaku's consolidated business results for FY 2003 (June 2002 – May 2003) showed an increase in income and a slight increase in profits over the previous year.

Development of new key technologies

The background of Japan's current troubles is well documented. With the progress of economic globalization, key technologies have been spread across the entire world, and developing countries with their low labor costs have become overwhelmingly more cost-competitive than the more established economies. To counter this trend, establishing new key technologies is an effective strategy for breaking out of the cost competition cycle, securing a superior competitive position, and increasing profit-earning capacity.

From this perspective, Nippon Kayaku Group is making maximum use of the business resources we currently possess, and we are supplementing our business resources through active alliances with other companies. We are focusing our efforts on our primary management theme – “Creation of the new products and new business that the market requires.”

Active utilization of our vast store of intellectual resources

Nippon Kayaku has achieved success in a broad range of fields throughout the years. From our beginnings with explosives, we have continued to develop as we challenge ourselves in new product areas including dyes, pharmaceuticals, agrochemicals, functional products, catalysts, and inflators. All along we have maintained fine chemicals as our main business base, and have consistently focused on and expanded our specialty fields to keep current with the evolving times.

One example in our pharmaceuticals business is NK911, an exciting new DDS (drug delivery system) product. This product is a microgranule, known as a polymer micelle, which contains an effective anti-cancer drug (doxorubicin). This microgranule enables selective delivery of medication directly to the cancer tissues in the body. This is one of the promising new DDS approaches we are developing, which is also a product of our nanotechnology efforts.

Active utilization of alliances with other companies

As we seek to develop new key technologies, we are not only creating a fusion of our own company’s technologies, but are also actively working to foster alliances with other leading companies in their key fields. Through these alliances, we promote a fusion of our own intellectual assets with those of other industry innovators, aiming for faster development of new products and creation of new businesses.

In the pharmaceuticals area, our strategic alliances include a licensing agreement with NanoCarrier Co., Ltd., a company with unique nanotechnology, for creation of DDS pharmaceuticals – aiming to develop new products to follow NK911. In the fine chemicals field, in December 2002 we established the subsidiary company Kayaku MicroChem Corporation. This company is a joint venture with the U.S. company MicroChem Corp. for the purpose of developing and marketing resins for micro electro mechanical systems (MEMS). In the agro & specialty chemical business, we are conducting research into synthesis processes utilizing microchips at the Research Association of Micro Chemical Process Technology, a nanotechnology research organization established last year in Japan. In addition to these examples, we are also actively engaged in a range of alliances with other companies.

Acceleration of overseas business

With the exception of some protected domestic industries, companies that lack international competitiveness are inevitably driven out of business. In this sense, internationalization is

demand of all businesses, regardless of size. Nippon Kayaku began operations in China for its dye business 5 years ago, and at the present time these operations are running smoothly. In 2003, we began active sales efforts in the China domestic market. In addition, we have purchased land next to our consolidated subsidiary WAC (Wuxi Advanced Kayaku Chemical Co., Ltd.) in the mainland China city of Wuxi. This property is now home to facilities for manufacturing resist-ink resin for functional materials, and to a polarizing film post-processing plant belonging to our consolidated subsidiary Polatechno Co., Ltd. These facilities will both begin operating in autumn 2003.

The U.S. company LifeSparc Inc. and Czech company Indet Safety Systems a.s. began full-scale manufacture of inflator squibs and micro gas generators for seatbelt pretensioners in 2003. Both these companies are production bases for local production and delivery to local customers.

Raising cost awareness

Another important strategy is increasing the cost competitiveness of existing businesses. One means to accomplish this has been to operate businesses overseas. However, what is fundamentally most important is to raise cost awareness among all employees and the company as a whole. A company in which the management and all employees spend the greatest amount of time possible in the creation of added value is a company with competitive strength. The knowledge required for the creation of added value comes less from the individuals themselves than from the results of group thinking. For this reason we will continue promoting the “group creativity” programs begun under the previous president.

Active utilization of IT

Our GMS (Group Management System) began operating in June 2003, centered on the enterprise resource planning application SAP R/3. This new system will be utilized to improve efficiency of indirect divisions, and will also speed up our information processing and streamline our business processes.

Accelerating business reforms

Nippon Kayaku is already working to improve return on assets (ROA) and return on shareholders' equity (ROE) by strengthening the profit base and reinforcing our financial standing. In addition we have introduced new performance evaluation indexes that take capital cost into account. In the future, we will continue to accelerate business reform, with renewed focus on capital efficiency, and further strengthen our business base, in order to maximize the value of our business.

October 1, 2003



Koichiro Shimada
President



Consolidated Review of Operations

Nippon Kayaku Co., Ltd. and Consolidated Subsidiaries
Year ended May 31, 2003

Results of Operations

Although there were some bright signs during the first half of the year, Japan's economic situation in FY 2003 continued to be difficult, with concerns over the future of the global economy, a continuing deflationary cycle, and languishing personal spending and private capital investment.

In the pharmaceuticals industry, reform of the health care system continued to force down drug prices. In addition, because of the need for large-scale R&D such as for genetic drug discoveries, there have been large mergers and widespread changes among overseas pharmaceutical companies. These changes have affected Japan, fueling fierce competition among companies that are now battling for survival. In the chemicals industry, although IT-related demand improved from the previous year, the deflationary cycle and increasing competition with neighboring countries resulted in falling prices and a harsh environment for the industry.

Under these conditions, at Nippon Kayaku we have been engaged in structural reforms including the following:

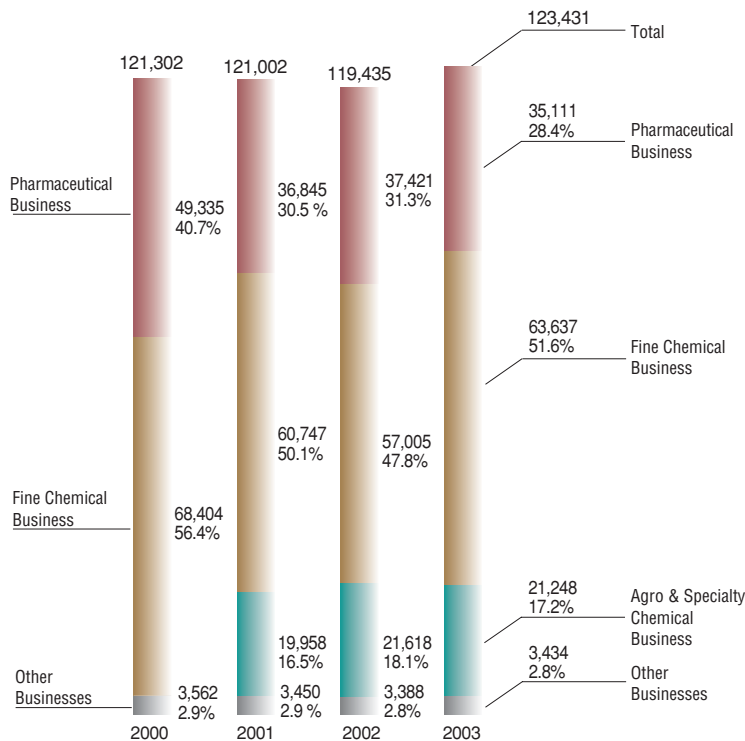
- (1) Development and marketing of new products in growth markets
- (2) Qualitative strengthening and streamlining of the company's sales power
- (3) Restructuring of matured fields and strengthening of our business base
- (4) Structural reform of management divisions and streamlining of indirect business

As a result, consolidated net sales for this year were 123.431 billion yen, an increase of 3.996 billion yen (3.3%) over the previous year. Strong demand in the fine chemicals business resulting from growth in the display materials field, including the polarizing film activities of Polatechno Co., Ltd. (production and sales of optical films), helped to make up for a decline in the pharmaceuticals business as a result of April 2002 drug price revisions and overall increased competition. Thanks to reduced expenditures and expanded cost-cutting, our consolidated operating income was 9.697 billion yen, up 313 million yen (3.3%) over last year. Consolidated net income for this year was 2.78 billion yen, a boost of 149 million yen (5.7%) over the previous year.

For the entire Group, net sales were 131% for those of the parent company alone, while net income was 124%.

Net Sales and Composition Ratio by Business Segment

Years ended May 31
Unit: million yen



* In June 2001 the Pharmaceuticals Group, Specialty Chemicals Division and the Fine Chemicals Group, Agro & Fine Chemicals Division were reorganized to become the Agro & Specialty Chemicals Group, Agrochemicals Division and Specialty Chemicals Division.

* Sales data for FY 2001 was calculated after reorganization of the business into three groups.

Pharmaceutical Business

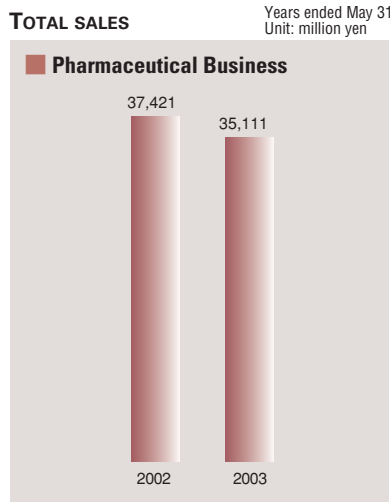
Net sales were 35.111 billion yen, 2.310 billion yen (6.2%) less than previously. Operating income was 6.052 billion yen, 1.914 billion yen (24.0%) less.

Among pharmaceutical products for the Japanese domestic market, sales increased for AREDIA injections (bone resorption inhibitor), SALIGREN capsules (drug for treatment of dry mouth syndrome), and MS-TWICELON capsules (sustained-release drug for cancer pain). However, sales fell for FARESTON tablets (anti-cancer drug), ODYNE tablets (anti-cancer drug), and other products, resulting in an overall sales decline from the previous year.

Exports of the anti-cancer drug ETOPOSIDE grew, while those of another anti-cancer drug, BLEO, decreased. Total exports in this area below those of the previous year.

For our diagnostic agents, sales increased for LANAZYME ST-493

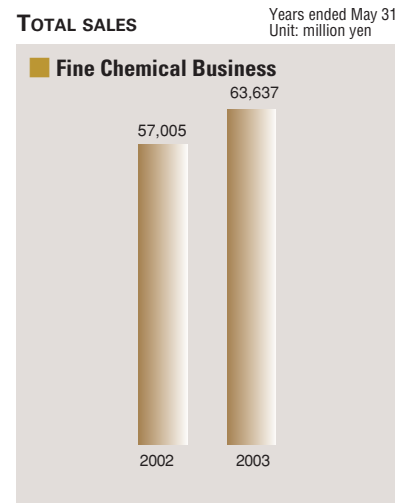
PLATE, used in the diagnosis of breast cancer, while sales fell for LANA 1,5 AG AUTO LIQUID, a diabetes diagnostic agent. Total sales of diagnostic agents fell below those of the previous year.



Fine Chemical Business

Net sales in the fine chemical business were up strongly to 63.637 billion yen, an increase of 6.631 billion yen (11.6%) over the previous year. Operating income was 5.901 billion yen, surging 1.612 billion yen (37.6%).

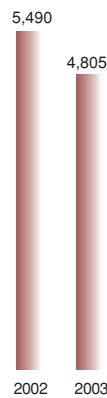
Sales in the inflator business were also up. While sales of airbag inflators were under those of the previous year, as a result of falling product prices and the effects of an accidental explosion in one of our gas-generating agent workshops, both domestic sales and exports of micro gas generators for seatbelt pretensioners increased over the previous year's levels. Sales at our overseas subsidiary Indet Safety Systems a.s. (Czech Republic) also grew steadily, exceeding FY 2002 sales.



Neurological Drugs



Cardiovascular Drugs



Digestive Drugs



Metabolic Drugs



Anti-cancer and Antibiotic Drugs



Others



Inflators



In the catalyst business, efforts to attract new customers resulted in higher sales of catalysts used for acrylic acid production compared to FY 2002.

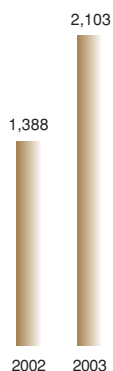
Sales in the functional materials business also increased, both in Japan and overseas. Sales of epoxy resins for semiconductor encapsulation dropped; however, sales of UV-curing resins for cellular telephone uses increased over the previous year. Resins for lenses, LCD sealant, and optical resins all delivered strong sales, exceeding the levels of the previous year. In the optical film business, Polatechno Co., Ltd. sales of polarizing films increased over FY 2002. In addition to use as LCD films, these products are also being used as films for plasma display

screens, a promising growth area.

In the color chemical business, sale of colors for color inkjet printers increased. However, reduced demand caused the sale of textiles dyes to drop below last year's level. Sales of non-textile dyes for paper and pulp remained at about the same level. Sales for the business as a whole were below those of FY 2002.

Sales in our explosives business also were below the previous year, due largely to an explosion that occurred in a gas generating agent workshop at the Asa Plant, and to the effects of decreased demand resulting from cutbacks in public work projects.

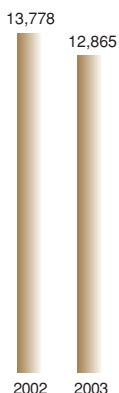
Catalysts



Functional Products



Color Chemicals



Explosives



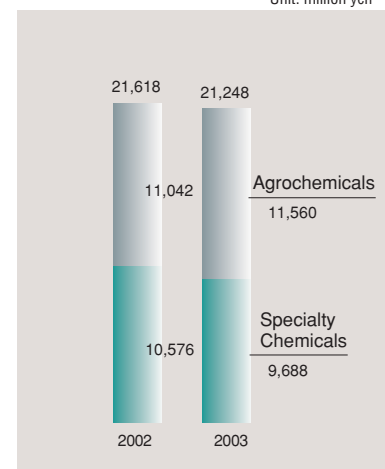
Agro & Specialty Chemical Business

Net sales were 21.248 billion yen, off 370 million yen (1.7%) from the previous year. Operating income was 1.005 billion yen, down 238 million yen (19.2%).

Performance in agrochemicals improved, as a result of products for which we purchased the business rights in FY 2002, and an increase in the level of already-consigned products.

Sales in the Specialty Chemicals Division fell, as a result of decreased sales of consigned products, intermediates for export, and food additives produced by Nippon Kayaku Food Techno Co., Ltd.

TOTAL SALES Years ended May 31
Unit: million yen



Other Businesses

Net sales in this area were 3.434 billion yen, a rise of 45 million yen (1.3%) over the previous year. Operating income was 1.237 billion yen, nicely up by 199 million yen (19.2%).

Income from rent on real estate was improved over the previous year. In April 2003, our health care business, involving the manufacture, sale, and rental of wheelchairs and other nursing care products, was separated and entirely taken over by our 100% subsidiary Nippon Kayaku Medical Care Co., Ltd. (established January 2003).

Pharmaceutical Business

Adapting quickly to changes in the health care environment, and aiming for growth in the “Medicine/Welfare and Care” field.



Haruo Inose
Senior Managing Director
Representative Director
Director of Pharmaceuticals Group

Drastic reform of Japan’s health care system, and an expanded presence of overseas companies in the Japanese market, have led to major changes in the pharmaceuticals market and have heightened the bitter struggle for survival faced by all pharmaceutical companies. The government has designated the following areas that define the directions a pharmaceutical company may take: mega, specialty, OTC (over-the-counter pharmaceuticals), and generic pharmaceuticals.

Moreover, the sharing of expertise and treatment information with patients is progressing with the continued expansion of the Internet. As well, the worldwide trend toward standardization of medical care is changing the health care field faster than ever before. Greater health care business improvements are demanded as a result of social welfare factors that include ranking of health care facilities, a change to an independent administrative institution for national hospitals, the start of Diagnosis Procedure Combination (DPC) at specialized hospitals, and the future shift to the Diagnosis-Related Groups Prospective Payment System (DRG-PPS) at ordinary hospitals.

It is expected that “health care planned from the patient’s perspective” will continue to develop in the future. This entails explanations of latest available treatment regimes, or a “menu,” for each specific illness, including their costs, with treatment started only after agreement is reached between both parties. In order to adapt to these changes in the health care environment, and to continue expanding as a business, Nippon Kayaku is working for growth in the Medicine/Welfare and Care field. Based on our current anti-cancer drugs, we are focused on rapid development of products that benefit patients, from cancer prevention to diagnosis, treatment, and care.

Strengthening cancer-related research and development activities

We expect that the needs for cancer drugs will further increase. The Pharmaceuticals Group has focused its efforts on cancer-related products, and is strengthening our base in this field. We will accelerate the discovery, in-license and development process, and continue to perform R&D specifically for cancer treatment and related business areas. The R&D Division has been involved in developing pharmaceutical agents using applied nanotechnology, and has attracted the attention of the industry with its progress in clinical trials of polymer micelles containing anti-cancer drugs that precisely target and attack cancer cells. As a future corporate research program, this technology will be further studied to apply to fields other than anti-cancer drugs, creating a base for further growth. It is also putting efforts into the early detection of cancer, which is strongly demanded by society.

New drugs to counteract price revisions

The revision of drug price standards is conducted every other year, based on current market prices, and with consideration for a range of other factors. This revision has a major effect on the business performance of all pharmaceutical companies. However, to prevent our own business performance from being affected by the continual lowering of drug price standards, we intend to counteract these changes with new products. In Japan, particular examples include AREDIA (bone resorption inhibitor) licensed in 2001 and VITAJECT (multivitamin product); HYCAMTIN (anti-cancer drug) licensed in 2002 and CARBOMERCK (anti-cancer drug), licensed this year; SALIGREN (drug for dry-mouth symptoms) and MS-TWICELON (sustained-release drug for cancer pain), which were launched in 2001; and IMMUCYST (drug for bladder cancer), which was launched in October 2003. We are also working to expand the applications of RANDA. Overseas, we are planning to expand our company's global sales system, particularly for SPANIDIN, which is being developed in Europe, and 1,5AG, which was approved for the U.S. market in September 2003.

Integration of research, production and sales

The trend in medical practice is to provide fair and open accounting of standard treatment options to patients, with consulting and obtaining patient consent before treatment commencement. To adapt to this trend, this group will focus on the various pharmaceuticals contained in standard treatment regimens for cancer treatments and on areas where our medical information coverage is strongest. We are strengthening the licensing function and integrating the company's system for research, production, and sales to provide pharmaceuticals that are low price and convenient, and which can be administered in a manner appropriate for Medical Risk Management and treatment needs.

Strengthening of the sales division through MRs

An important key in the pharmaceutical market is the expanding use of specially trained medical representatives (MRs) who can promptly respond to the needs of medical institutions, and can both collect and provide accurate information. Nippon Kayaku currently has 500-plus certified MRs. Approximately 60 MRs are positioned in the major cities and assigned to the two strategically important areas of anti-cancer drugs and pharmacologically active drugs such as vasodilators. We plan to increase the number of these specially trained MRs gradually. By assigning MRs possessing wide and updated knowledge of cancer and pharmacology to these areas, we can better understand the needs of medical specialists, and strengthen our promotion activities. To help them in their information-intensive jobs, each MR is provided with a personal computer containing custom software developed by Nippon Kayaku. This software aids in constructing networks with medical institutions, allowing medical information to be provided and collected quickly and efficiently.

Using nanotechnology for active development of anti-cancer drugs

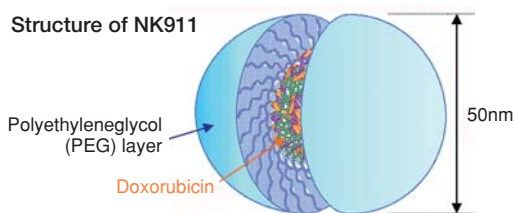
The research into drug delivery systems (DDS) is rapidly advancing with the integration of nanotechnology and information technology (IT). The life-saving drugs patients and doctors have long awaited can be enhanced through an innovative mechanism that properly regulates the release of the drug using DDS at the lesion location or which is especially effective for a specific population that can be selected through screening and diagnosis.

Nippon Kayaku has been successful in new businesses based on the fusion of fine chemical-based knowledge arising from biotechnology, polymers, organic synthesis and related technologies. Now we are focusing on the development of nanotechnology-based DDS. Already we have synthesized a DDS utilizing polymer micelle technology that allows entrapment of an anti-cancer drug and delivery to the site of the tumor. Development of this promising approach has already progressed to the clinical trial stage and is attracting widespread attention.

The blood vessels newly formed by cancer tissues to supply nutrients have small openings in the vessel wall. It is through these small openings that drug-carrying polymer micelles 50 to 200 nanometers in diameter can leach through the blood vessel walls to deliver the drug directly to tumor cells. If this highly specific delivery of anti-cancer drugs is realized, the side effects and dosage can be reduced.

Of the consolidated pharmaceutical net sales of 35.1 billion yen in FY 2003, sales from 13 oncology-related products generated 21.6 billion yen. This world-class lineup of oncology products significantly benefits Nippon Kayaku since multi-drug therapy is the standard for treatment of cancer.

NK911, our first nanotechnology-application DDS, has already reached the clinical study phase. We plan to develop a total of five DDS drugs, adding one each year. The polymer micelle technology is being studied by the Nanotechnology Development Promotion Office to apply it to other anti-cancer drugs.



Phase II for anti-cancer drug NK911

The phase I of clinical trial for NK911, a DDS pharmaceutical based on micelle formulation technology utilizing applied nanotechnology, has been conducted since July 2001 at the National Cancer Center. In the summer of 2003, the early phase II clinical trial started. NK911 containing the anti-cancer drug doxorubicin was consigned to Nippon Kayaku for development by the Japan Science and Technology Corporation. In the future, we will conduct clinical testing from a range of perspectives, and are aiming to market this product in November 2009.

Preparation for clinical trials of DDS pharmaceutical using the anti-cancer drug paclitaxel

We are on track to begin clinical trials in FY 2004 for a joint development project in new pharmaceuticals with the bio-venture company, NanoCarrier Co., Ltd. (Kashiwa, Chiba). In July 2002, Nippon Kayaku concluded a license agreement for paclitaxel DDS pharmaceuticals with this company. NanoCarrier's DDS technology is the formation of a micelle nano-particle with a hydrophilic outer polymer and hydrophobic inner polymer bonded on the molecular level. This nano-particle can contain medication, bio-active agents, or genes, while other compounds or antibodies bond to the outside.

Paclitaxel is an anti-cancer drug used worldwide for the treatment of lung, ovarian, and breast cancer. Although it is injectable, the substance does not dissolve readily in water. A special solvent used in this drug is the drawback for clinical use. However, the exterior of the NanoCarrier nano-particles is hydrophilic. Even when filled with paclitaxel, they will dissolve in a water solution, while the substance is retained inside the nano-particles. This allows longer circulation of the substance in the bloodstream, and provides strong anti-tumor effects.

Alliance with GlaxoSmithKline K.K. for development and sales of the anti-cancer drug HYCAMTIN

In November 2002 Nippon Kayaku concluded an alliance with GlaxoSmithKline K.K. (GSK) for the development and Japan sales of injectable HYCAMTIN in Japan. We have taken over sales from GSK and are conducting joint development for the new indication of ovarian cancer (currently in Phase II).

HYCAMTIN has been sold in Japan since 2001 as a drug for the treatment of small-cell lung cancer. Sales prior to the end of 2001 were approximately 30 million yen, but we are working to increase domestic sales by effectively utilizing our unique sales and development strengths. HYCAMTIN has been approved for the treatment of small-cell lung cancer in more than 35 countries, and for ovarian cancer in over 70 countries. Global sales of this drug in 2002 totaled 17.8 billion yen.



Anti-cancer drug HYCANTIN

Injectable IMMUCYST intravesical for treatment of bladder cancer

Injectable IMMUCYST intravesical, a drug for treatment of bladder cancer, was first marketed in October 2003. The active ingredient of this drug, which is imported from Aventis Pasteur Inc., is the Connaught strain of BCG. It is injected into the bladder to control cancer cell growth. Nippon Kayaku has positioned cancer treatment as our primary business field, and we are utilizing our system of expert medical representatives (MRs) to expand sales promotion. We expect the annual net sales to peak at 1.2 billion yen.

Application for EU sales approval of NKT-01 for treatment of refractory vasculitis

In February 2003, Nippon Kayaku applied for approval in the EU to sell NKT-01, a promising new drug for treatment of refractory vasculitis, with sales expected to begin in FY 2005. This will be an important product for Nippon Kayaku as it is the first product to be approved by the European Agency for the Evaluation of Medicinal Products (EMEA) in the EU. NKT-01 is intended for treatment of vasculitis which involves lymphocyte anti-neutrophil cytoplasmic antibodies that occur in cases of Wegener's granulomatosis, a type of autoimmune disease of unknown cause.

Originally, NKT-01 was an immunosuppressant used to treat organ rejection in kidney transplantation, and it was found to have a unique ability to inhibit growth of antibody-forming and cytotoxic T lymphocytes. There are approximately 10,000 patients with this disease in Europe and the United States, respectively. NKT-01 has been developed for many years by a contract research organization in Germany and designated as an orphan drug by the EMEA. Additionally, the diabetes diagnostic agent 1,5AG received approval in the United States in September 2003.

■ Status of New Product Development by Stage

Stage	Development code Product name (Generic name)	Dosage form or route of administration	Therapeutic category (Indications)	Domestic developer	Characteristics/Others
				Origin	
NDA	BESTATIN (NDA Sep. '01) (Ubenimex)	Oral preparation (Capsule)	Anti-cancer drug (For prolonging the survival period after surgery for lung squamous cell carcinoma)	Own development Institute of Microbial Chemistry	Extended indication
	BLEO (NDA May. '02) (Bleomycin)	Injection	Anti-cancer drug (Testicular tumor, germ cell tumor)	Own development Institute of Microbial Chemistry	Extended indication
	NS75A (NDA Dec. '00) (Cetorelix)	Injection	Anti-hormone drug (Infertility)	Joint dev. with Shionogi, Kayaku Zentaris Zentaris (Germany)	LHRH (Hormone that stimulates secretion of pituitary gonadotropin) antagonist
	DDP-H (NDA Mar. '02) (Cisplatin)	Injection (Hepatic arterial infusion)	Anti-cancer drug (Hepatic cancer)	Joint dev. with Bristol Pharmaceuticals NCI (USA)	Extended indications (New dosage form, new route of administration)
	SPANIDIN (NDA Feb. '03) (Gusperimus hydrochloride)	Injection	Immunosuppressant (Wegener's granulomatosis)	Own development Institute of Microbial Chemistry	Developed overseas. Early Phase II study completed in Germany. Currently awaiting approval. Designated as an orphan drug (Mar. 2001) by the EMEA.
P III	SL-1100 (Estradiol)	Gel preparation	Estrogen (Climacteric disorder)	Joint dev. with Shiseido Besins International (France)	First estradiol gel preparation in Japan. Approved in 54 countries.
P II	NK211 (Nogitecan)	Injection	Anti-cancer drug (Ovarian cancer)	Own development GSK	Extended indication
	NK911 (Micelle doxorubicin hydrochloride)	Injection	Anti-cancer drug (Solid cancers)	Own development Tokyo Women's Medical University	Macromolecular micelle anti-cancer drug. Development consigned by Japan Science and Technology Corp.
	NS75A (Cetorelix)	Injection	Anti-hormone drug (Hysteromyoma)	Joint dev. with Shionogi, Kayaku Zentaris Zentaris (Germany)	LHRH (Hormone that stimulates secretion of pituitary gonadotropin) antagonist
PC	NS75B (Cetorelix)	Injection	Anti-hormone drug (Prostatic hypertrophy)	Joint dev. with Shionogi, Kayaku Zentaris Zentaris (Germany)	LHRH (Hormone that stimulates secretion of pituitary gonadotropin) antagonist
	NK105 (Micelle paclitaxel)	Injection	Anti-cancer drug (Solid cancers)	Own development Joint dev. with NanoCarrier	Macromolecular micelle anti-cancer drug.
	NK314	Injection	Anti-cancer drug (Solid cancers)	Own development Own development	Derived from natural substances. Topoisomerase I, II effects + α .

Fine Chemical Business

Concentrating resources in the information and automotive safety product fields, for rapid development and marketing of new products using a “fusion of research.”



Masao Komaki
Managing Director
Director of Fine Chemicals Group

Improving profit-earning capacity with new products and new business areas

Despite harsh conditions for the Fine Chemicals Group, a bright future began to make itself visible during FY 2003.

In the information field, one of our group's main strengths, a market recovery was finally seen during the last half of the year. However, in the field of automotive safety products, which we expect to develop into our main field in the future, we faced a continued bitter struggle as we were dragged down by strong demand for lower prices from automotive parts manufacturers. For our inflator business, we have at long last completed our tripartite global system. In the future, we will strengthen our sales expansion efforts in the U.S. market, and work to increase our market share in Japan and overseas.

Demand has grown rapidly for the non-halogen grade epoxy resins used for encapsulation of semiconductors, a product for which we hold the top market share in Japan. Our business producing colors for color inkjet printers is also growing steadily. We have made a good start as well with new products related to liquid crystal displays, optics, and data storage. In particular, rapid growth is expected in the future for materials related to DVD disks, as the use of DVD recording devices becomes more common.

Overseas, operations began in the autumn of 2003 in the city of Wuxi, China, at both our plant under construction for production of PCB resist ink materials (Kayaku Chemical Wuxi Co.,Ltd.: KCW), and at the plant of our consolidated subsidiary Polatechno Co.,Ltd. for production of polarizing films (Wuxi Polatechno Optics Co.,Ltd.: WPLC).

In FY 2004 we are planning to accelerate the launch of new products from these plants in Japan and overseas, strengthening our profit system.

Concentrating on the information and automotive safety product fields

In the fine chemicals business, we will continue to concentrate our resources in the automotive safety product field and information field, which we have determined to be growth areas for the future.

The information field is finally back on a path to recovery. We are expecting high growth in the future, corresponding with the expected growth of a range of digital appliances, and particularly due to the planned introduction of digital televisions in 2005. In addition, with the current deflationary economy, our group has enacted plans to improve cost competitiveness in order to secure a superior competitive position. We will continue to persevere with these plans in the future.

We expect that these plans will deliver greater effects in FY 2004.

"Fusion of research" that spans our whole organization

Our group has succeeded in bringing about a fusion of the numerous technologies in its possession. It has divided its R&D efforts into short/mid-range themes and long-range themes, and has established a clear system of responsibility for each, with the former being tied directly to business, and the latter intended to establish a technology base. Centering on our long-range themes, we are also actively pursuing joint research with universities and a variety of other public research institutions.

Using this system, we are making solid progress in development of downstream products – basic materials, composite materials, processed materials, and assembly parts and components, while at the same time maintaining close links with our customers.

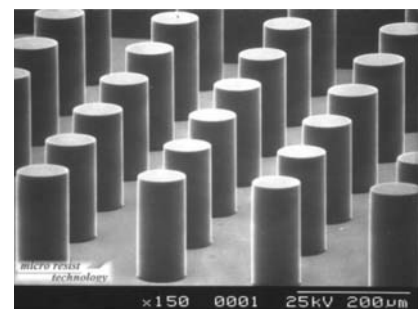
In the future, we will proceed with commercialization of products including next-generation squibs that make use of the applied semiconductor technology that we are developing for practical use, new resins such as polyimide and polyamide resins, and a wide range of functional films.

[Functional Products Business]

Entry into the field of photo resists for micro-machine manufacture

The resin technology we have developed through the production of epoxy resins used for semiconductor encapsulation allows us to consistently maintain our position at the top of the industry. In April 2002, Nippon Kayaku concluded a technical tie-up with the U.S. venture company MicroChem Corp. (MCC, Massachusetts, USA), and entered into the field of photosensitive resins (photo resists used for manufacturing micro-machines) which are used for production of inkjet printer nozzles and other micro-molded parts. In December 2002, MCC, Tomem Corporation, and Nippon Kayaku founded Kayaku MicroChem Corporation (Tokyo, Japan), a joint venture company, and began import and sale of MCC products. The purpose of this collaboration is to pioneer new demand among Japanese and Asian electronics manufacturers and jointly develop sophisticated new products by applying MCC's specialized technology for photosensitive resins and Nippon Kayaku's technology for high-purity special epoxies.

In particular, the SU-8 series of chemically amplified thick UV negative resist is ideally suited for fine three-dimensional processing. The SU-8 series is used for miniaturized products such as printer ink nozzles, micro-machine motor parts, magnetic head dies, and biochips. Its properties are different from the photosensitive resins used for semiconductors and circuit patterns, and is most noted for its ability to form three-dimensional shapes on a scale of several tens to hundreds of micrometers. Focusing on the new micro-machine technology market, Nippon Kayaku will develop and market resist products unlike any before.



SU-8 series ideally suited for fine three-dimensional processing

Increased production of pigment dispersion photoresists

Cell phones and digital cameras contain light-sensitive elements (such as a charge-coupled devices, or CCDs) mounted on a silicon PCB, and a color filter formed on each element. In the spring of 2003, Nippon Kayaku strengthened its facilities for manufacturing pigment dispersion photoresists for color filters, aimed at meeting demand in the digital camera, camera-equipped cell phone, and related markets, all of which have shown remarkable growth in recent years.

These resists, which utilize acrylic resins, are used on color filters in the patterning process for the red-green-blue (RGB) primary colors. Our resists feature superior spectral characteristics and high resolution, which have led to increasing demand for them as mass production of CCDs expands. In the future, we will continue to develop and market photoresists for the next generation of CCDs.

Entry into the UV-curing sealant market

The market for UV-curing sealant which can be used with increasingly larger LCD displays has much potential for development in the mid- and long-range, with more demand expected as companies change to UV-curing type from heat-curing type. We successfully entered the UV-curing sealant market in February 2003, when we installed new equipment at the Asa Plant (Asa-gun, Yamaguchi Prefecture) for production of sealant for LCDs based on acrylate resin and cured by UV radiation.

This sealant is used in the production stage to fill the gap between the liquid crystal and substrate layer. Compared with existing epoxy-based sealants that are cured by heat, this resin is cured when exposed to UV radiation, and can greatly shorten the LCD production process. UV-curing sealants which can be used with the larger 50-inch and 60-inch LCD displays can help streamline production lines, and we have fielded numerous inquiries from manufacturers who plan to introduce this newer resin in the future.

Expanded post-processing of polarizing films in China (Polatechno Co., Ltd.)

Polatechno will expand its annual production capacity for post-processing of polarizing films in China to 300,000 units by 2004. Polatechno, a consolidated subsidiary of Nippon Kayaku, is an optical film manufacturer established as a joint venture between our company and Arisawa Manufacturing Co., Ltd. It has maintained the top position as a maker of dye-type polarizing films for LCD projectors, vehicle-mounted displays, and other products. The production process for polarizing films used in LCD displays is divided into pre-processing, in which the original film is produced, and post-processing of the film for an LCD display or projector. Post-processing involves cutting the film, laminating it onto other materials, and inspection.

Companies are actively relocating this post-processing,



Plant of WPLC (China), a subsidiary of Polatechno, under construction

which is highly labor-intensive, to countries in the Asian region. Accordingly, in 2001 Polatechno relocated facilities for cutting, laminating, and inspection to Zhuhai near Hong Kong, and began construction of a 100,000-unit production system in autumn 2003. Even greater demand for our primary products, polarizing films for LCD projectors and vehicle-mounted displays, is expected. We will work to improve our local mobility by reinforcing our supply system both in Japan and overseas, while working to strengthen our cost competitiveness.

[Inflator Business]

Strengthened production of MGG and squibs in the U.S. and Europe

We are strengthening our production system in Japan, the U.S., and Europe – our three bases – for production of micro gas generators (MGG) and squibs (igniters) used in seatbelt pretensioners as well as inflators.

To promote our inflator business worldwide, Nippon Kayaku established Indet Safety Systems a.s. (ISS) (Czech Republic) in 1999 and LifeSparc Inc. (LS) (USA) in 2000. Together with our Himeji Plant (Himeji, Hyogo Prefecture), which manufactures automotive safety products in Japan, we have successfully established a tripartite production system. In the future, by strengthening our U.S. and Europe production systems, we aim to achieve a 30% share of the global market for both MGG and squibs in FY 2005. Currently, sales of products for the automotive industry account for slightly less than 10% of the total sales in the Fine Chemicals Group; however, it is forecast that this figure will rise to approximately 17% in 2004.



LifeSparc Inc., USA

Development of SCB squibs for commercialization

Nippon Kayaku is currently engaged in development aimed at commercialization of squibs (igniters) for next-generation airbag inflators that incorporate semiconductor technology. Using a semiconductor bridge (SCB) to ignite the squib makes it possible to achieve both low-energy ignition and high-speed operation.

Advances in the collision safety systems used to protect occupants in the event of a car crash result in more complex wiring and increased vehicle weight. For this reason, automobile manufacturers are working to develop lightweight high-precision bus wiring systems. Because these systems involve the effective operation of safety devices in response to a range of collision patterns, a network similar to a computer LAN is constructed inside the vehicle, and network communication is used to control ignition of the squibs. These bus system squibs, also known as "smart squibs," must conduct communications and at the same time be able to ignite using a small amount of energy contained in a component of the signal. For

this reason, the use of SCB is essential. SCB squibs, compared to conventional glass-sealed squib, plastic-sealed squib, and others that use nichrome wires, use only 1/25th of the electrical energy that conventional squibs require for ignition. Moreover, the reaction speed of SCB squibs is 10 times faster. Because of these and other advantages, SCB squibs are a key component of next-generation airbags.

Three years ago, Nippon Kayaku acquired a U.S. company that held patents relating to the use of SCB for squib ignition, and has since been working on commercialization of this technology. Samples of SCB squibs will be delivered to automobile manufacturers and airbag manufacturers starting in the winter of 2003, and we are continuing with development towards the goal of making SCB squibs the standard for smart squibs by 2008. By planning for early compatibility with the new bus wiring systems that are expected to expand rapidly in the future, we are constructing a superior position in the SCB squib field.

Inflator and Micro Gas Generator

◆ Inflator Mechanism

An inflator is a device, incorporated in safety airbags, that generates gas to instantly inflate the bag when a vehicle collision occurs.

[Operating mechanism]

- (1) A sensor detects the collision, and sends a signal to the inflator.
- (2) The squib inside the inflator operates, igniting a gas-generating agent. The generated gas enters the airbag, instantly inflating it.

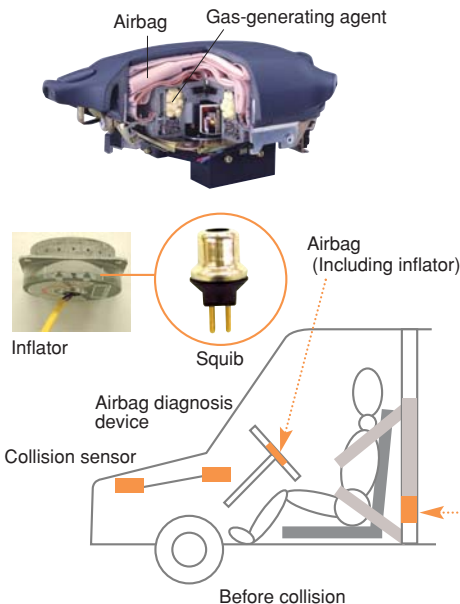
◆ Micro Gas Generator Mechanism

The micro gas generator for seatbelt pretensioner generates gas for the pretensioner device, which winds up the seatbelt and instantly restrains the occupant's body when a vehicle collision occurs.

[Operating mechanism]

- (1) A sensor detects the collision, and sends electric current to the micro gas generator.
- (2) The squib inside the micro gas generator ignites the gas generating agent. The generated gas pressure becomes the dynamic force that winds up the seatbelt.

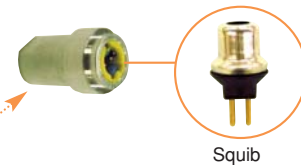
Cross-section of steering wheel



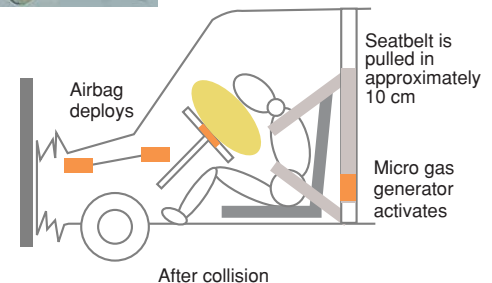
Seatbelt pretensioner (Including micro gas generator)



Micro gas generator



Squib



Agro & Specialty Chemical Business

Moving swiftly to launch new market-oriented products, based on a fusion of intellectual assets.



Hajime Yoshitake
Managing Director
Director of Agro & Specialty Chemicals Group

Stabilization of existing businesses

The agrochemical business situation has suffered from reduced use of agrochemicals, reduced cultivated acreage, and soaring development costs. In addition, at the World Trade Organization's new multilateral trade negotiations, there has been difficulty reaching a 2003 agreement on standards for agrochemicals.

Under these conditions, the Agrochemicals Division was actively involved in contracted production of active ingredients and final products, overseas production of active ingredients, construction of IPM (Integrated Pest Management) systems, and strengthening our overseas operations.

On the other hand, the increasing number of companies engaged in specialty chemical business resulted in fierce price competition. The Specialty Chemicals Division is proceeding with comprehensive profitability improvements, through development of active pharmaceutical ingredients (API) (including generic), contracted manufacture of API, consigned overseas production of API, improvements to the competitiveness of our functional intermediates, efforts to distinguish ourselves from the competition, and combinations of new and existing products.

Expansion of peripheral business through a fusion of our technologies and intellectual assets

When this group was launched, the goals were 20.0 billion yen in non-consolidated net sales (FY 2006) and 28.0 billion yen in consolidated net sales. To reach this, our agrochemical business is focused primarily on enlargement of our business base. We are actively involved in license-in and marketing chemicals from other companies, as well as contracted production of agrochemical intermediates.

In addition, through active collaboration with companies, government, and universities, we are promoting the development of new pharmaceutical technologies, nanotechnology, biological pesticides, and other products that incorporate new technologies.

The Specialty Chemicals Division is actively proceeding with a fusion of intellectual assets. These aggressive efforts include production of API using both fermentation microbial transformation and organic synthesis technologies, contracted production of high-potency active ingredient for anti-cancer drugs and other pharmaceuticals using advanced synthesis technology, and development of electronic materials and other sophisticated intermediates.

Creation of next-generation business areas

The most important feature of this group is development utilizing advanced specialized technologies in areas from general-use chemical products to advanced chemical synthesis. It is also distinguished by its application of the synergistic effects achieved by full utilization of the intellectual assets accumulated in a broad range of fields including fermentation technology and chemical synthesis.

In the agrochemical field, we are proceeding with the development of genetic technology by genome-oriented pesticide discovery and viral pesticides, and with the development of micro- and nano-chemical technology by utilizing the technology of fine granule chitosan fermentation and micro-chemical processes. Specialty Chemicals Division research and development is based on collaborations with universities, companies, and research institutions across Japan, involving high-efficiency production, dangerous reactions, enzymatic reactions, high-efficiency fermentation, and fine particle production technology. It includes the development of specific products that will form the technological base for the next generation, such as polymer materials (resins and films), and materials for fuel cells.

[Agrochemical Business]

Genome-oriented pesticides discovery

In cooperation with the National Institute of Agrobiological Sciences, Nippon Kayaku has begun development of agrochemicals utilizing the genetic information of destructive insect pests. We intend to market these pesticides in FY 2011 as "genome-oriented pesticides." Genetic drugs are already widespread in pharmaceutical development, and there is much potential for their use in agrochemical development as well. Our group has begun constructing a system for genetic pesticides, and began dispatching researchers to government research institutions in FY 2003. Based on the biological mechanisms we have discovered in the agrochemicals previously developed by our company, we intend to focus our development targets to efficiently apply our work with genome-oriented pesticides discovery to the development of next-generation agrochemicals. The development of genome-oriented pesticides discovery involves learning the three-dimensional structures and functions of the proteins generated by the genes in the subject insect, and then creating substances which inhibit or accelerate these functions. These substances are then made into the active ingredients, of the pesticide.

For example, the DNA of the rice pest *Nilaparvata lugens*, which originated in China, and the soybean pest *Spodoptera litura* are similar to the DNA of the silkworm, 80% of which has already been mapped. Therefore it is possible to identify the target genes by comparison with silkworm DNA. Genome-oriented pesticides discovery are highly effective against destructive insect pests, and the insects are unlikely to develop an immunity to this type of pesticide. Because of these advantages, there is much promise for genome-oriented pesticides discovery in terms of new large-scale agrochemical production.

FY 2003 sales for our agrochemicals business were 11.2 billion yen, and we are aggressively working towards a target of approximately 15.0 billion in FY 2005.

[Specialty Chemical Business]

NEDO Program for Generating Innovative Materials Industries Participation in "micro analysis and production systems project"

The Research Association of Micro Chemical Process Technology, of which Nippon Kayaku is a member, was selected to conduct the "micro analysis and production systems project." This Japan-based project is related to the Program for Generating Innovative Materials Industries conducted by the New Energy and Industrial Technology Development Organization (NEDO). The project involves R&D into micro chemical process technology involving agents ranging in size from a few micrometers to a few hundred micrometers. These systems, utilizing phenomena that occur in the microscopic world, are receiving much attention as a high-efficiency, energy-saving, environmentally-friendly process for chemical synthesis.

Micro-chemical processes are broadly divided into micro-chemical plant technology and microchip technology. The estab-

lishment of micro-chemical plant technology allows chemical reactions that are more efficient and faster, and which require fewer resources and less energy. This technology represents a fundamental change in the process from conventional R&D to industrial production. With microchip technology, chemical operations are integrated on a microchip for development of chips for analysis and synthesis, and of new detection methods. It is expected that application of this technology to ultra high-speed analysis and diagnosis systems will generate a large life sciences market.

We are also conducting modeling and simulations for the purpose of systematizing these technologies and facilitating their application to general use. Trial calculations show that this innovative and environmentally-friendly technology will create a new market of approximately 800 billion yen in 2010.

Reinforcement of facilities for production of high-potency active ingredients – Expanding contract manufacturing of API

In autumn 2003 Nippon Kayaku expanded its contract manufacturing business, utilizing technology for production of high-potency active ingredients gained through many years as a manufacturer of anti-cancer drugs. Combining original synthesis and bioscience technologies, we are working to meet the demand for integrated production covering API, intermediates, and final pharmaceuticals. In particular, we are working to differentiate ourselves from the competition in the production of anti-cancer drugs and other high-potency active ingredients.

The production of anti-cancer drugs naturally requires GMP (Good Manufacturing Practices – standards related to manufacturing control and quality control of pharmaceuticals). In addition, because the drugs are more active than other pharmaceuticals and require advanced hazard protection measures, control of the production process requires an advanced level of technology and experience. We possess production equipment for anti-cancer drugs, one of our primary products, which can be used to produce chemically hazardous drugs. In 2003, additional multi-purpose production equipment for chemically hazardous drugs was installed at the Takasaki Plant (Gunma Prefecture), completing a system for contract manufacturing of anti-cancer drugs and other high-potency active ingredients.

We also possess particular expertise in optical resolution technology for chemical synthesis, and have accumulated a broad range of refining technologies for fermentation, which allow efficient production of products derived from microorganisms while eliminating impurities. Microorganism processes are also essential in the production of some high-potency active ingredients. For this reason, we are planning to add fermentation equipment for high-potency active ingredient production.

At the Takasaki Plant, we have for many years engaged in integrated production of anti-cancer drugs that pass FDA standards, and have constructed a complete GMP system covering all stages from base chemicals to the final pharmaceuticals.

Environmental and Health Management



For the more than 86 years since our founding in 1916, Nippon Kayaku has dedicated itself to upholding a basic principle in our operations. This basic principle is our determination to be a “company that continues to contribute to humanity through products and technology for preserving life and health, and for supporting fulfilling lives.”

By fusing the intellectual assets we have acquired through our broad range of business activities, we are aiming to create new products and further contribute to society.

In particular, we are working for a fusion of intellectual assets in the field of environment, safety, and health, and are involved in strengthening our environment and safety management throughout the company. Notifications concerning amounts of chemical substances released into the environment became legally mandated beginning in 2002. However Nippon Kayaku, with our base of fine chemicals, has long recognized that the release of chemical substances is the greatest environmental burden involved in our business. As a key part of our “responsible care” activities, measures have been enacted to reduce the amounts of chemical substances released.

In addition, we are making plans that give full consideration to reducing amounts of industrial waste and greenhouse gas emissions.



Responsible Care is the commitment by companies that manufacture or handle chemical substances to improving environmental, health, and safety measures in all processes involving chemical substances, from development, production, sales, and consumption to waste disposal. Since its inception in Canada in 1985, Responsible Care has spread around the world and is currently practiced in 40 countries.

Environmental, Health, and Safety Management

We strive to ensure good environment, health and safety based on a policy created by the Environment, Safety, Quality Assurance Management Committee, which is headed by the president as chairman. Our environmental, health, and safety activities are examined by a diagnosis team of experts, and the results are reported to the Environment, Safety, and Quality Assurance Management Committee. Safety audits are used for risk management to prevent accidents, including accidents during distribution, in all cases when new products are developed or manufactured, when new equipment is designed or installed, when changes are made to work procedures or equipment, and when the materials being used are changed.

Understanding of environmental protection costs

Costs associated with environmental protection have been publicly announced, beginning from FY 2001. These costs consist of costs for pollution prevention, including air pollution prevention (administrative cost: 178.2 million yen) and water pollution prevention (370.3 million yen); global environment costs such as energy conservation (60.1 million yen); resource environment costs such as disposal of waste materials and consignment expenses (682.9 million yen); and costs for monitoring of environmental burdens, such as exhaust gas analysis, wastewater analysis, groundwater analysis, and noise measurement (101.8 million yen). The total of these administrative costs, at 1.673 billion yen, was calculated based on the Environmental Accounting Guidelines (2002 edition) published by the Ministry of the Environment.

ISO 14001 certification received at all six domestic plants

In order to more efficiently promote “responsible care,” Nippon Kayaku has worked to acquire certification of our diverse efforts under the ISO 14001 international environmental management standards. Certification of all six of our plants was completed in January 2001. As one part of our ISO 14001 environmental protection activities, we are actively engaged in environmental protection activities that involve all of our employees, and are systematically training internal auditors.

Development of environmentally-friendly products

Nippon Kayaku is actively pursuing the development of environmentally-conscious products designed for protection of the environment. We are aiming to contribute to society through a broad range of products and technology that protect health and support lifestyles. These include biological pesticides that control pests using their natural enemies, photo-curing resins that are widely used in many industries as clean environmentally-friendly resins for the prevention of sick house syndrome and other problems, new environmentally-friendly epoxy resins, and dyes that are safe for people and the environment.



Japan's first biological pesticide, CUCUMERIS

Installation of energy-saving boilers

In September 2003, we scrapped the large water-tube boilers at our Fukuyama Plant, and installed a total of seven once-through boilers (4T/H x 24.5 MPa). These boilers feature a boiler efficiency of 92% (3% higher than the previous boilers). As a means of further saving energy, four of these seven boilers generate electricity using a steam turbine generator (Max. 650 kW). These boilers have been approved by the Japanese Ministry of Economy, Trade and Industry under the Electric Utility Industry Law.

In addition, the type of fuel has been changed from heavy fuel oil type C to heavy fuel oil type A. This, combined with the use of low-NOx boilers utilizing boiler exhaust gas recirculation, has reduced emissions of the pollutants NOx, SOx, and soot by approximately 50%.



High-efficiency once-through boilers

Construction of a biological decolorizing facility

Nippon Kayaku Group has installed a biological decolorizing facility at Nippon Kayaku Tokyo Co., Ltd., which produces dyes for fabrics and paper, colors for inkjet printers, and components of resins for CCDs. This decolorizing facility, for which a patent is pending, reduces the degree of coloration in the production wastewater that is released into the sewers, and has successfully reduced the amount of coloration to approximately half of the previous level. Temperature control for this biological decolorizing facility uses the coolant water from the cogeneration (gas engine generator) facility, and the exhaust gas from the facility is used in the boilers. This raises the thermal efficiency from 40% (for power generation alone) to 80%.



Patent pending decolorizing facility

Publication of Environmental Reports

In March 2000, Nippon Kayaku published, and has since updated, the company's Environmental Report. This important document summarizes our “responsible care” activities, centered on environment, health, and safety. The report is presented on the Nippon Kayaku home page in Japanese and English.

The next Environmental Report is scheduled to be published in November 2003.



Board of Directors/ Auditors

(as of October 1, 2003)



Koichiro Shimada
President
(Representative Director)



Haruo Inose
Senior Managing Director
(Representative Director,
Director of Pharmaceuticals Group)



Hidetoshi Kitazawa
Managing Director
(Director of Strategic
Corporate Planning Office)



Shinichi Ikenaga
Managing Director
(Director of Business Support
Center)



Hajime Yoshitake
Managing Director
(Director of Agro & Specialty
Chemicals Group)



Masao Komaki
Managing Director
(Director of Fine Chemicals
Group)

Koichi Chiba
Director
(General Manager of West Japan Branch)

Kunio Nishii, Dr.
Director
(General Manager of Takasaki Plant)

Koichi Takase
Director
(President, Representative Director of
Polatechno Co., Ltd.)

Akira Mandai
Director
(General Manager of Pharmaceuticals
Marketing Division, Pharmaceuticals
Group)

Yoshiaki Fukushima
Director
(General Manager of Color Chemicals
Division, Fine Chemicals Group)

Katsuhiko Matsunaga
Director
(General Manager of Personnel Division,
Business Support Center)

Keizo Shimomiya
Director
(General Manager of Functional Products
Division, Fine Chemicals Group)

Tasuku Oshima
Standing Auditor

Kunio Fujimori
Auditor

Toshiro Kawaguchi
Auditor

Yukichi Ozawa
Auditor

Consolidated Five-Year Summary

Nippon Kayaku Co., Ltd. and Consolidated Subsidiaries
Years Ended May 31

	2003	2002	2001	2000	1999
Results for the year (millions of yen)					
Net sales.....	¥123,431	¥119,435	¥121,002	¥121,302	¥121,483
Cost of sales.....	79,002	74,745	72,775	73,525	75,068
Selling, general and administrative expenses	34,730	35,305	34,950	33,705	34,267
Operating income	9,697	9,384	13,277	14,071	12,147
Income before income taxes and minority interests ..	7,643	7,309	10,675	10,132	12,057
Net income.....	2,780	2,630	4,903	4,807	6,714
Amounts per share (yen)					
Net income.....	¥ 14.92	¥ 14.42	¥ 26.87	¥ 26.34	¥ 36.79
Cash dividend applicable to the year.....	11.00	11.00	11.00	11.00	11.00
Shareholders' equity	527.93	527.61	516.97	496.90	476.65
Year-end financial position (millions of yen)					
Current assets.....	¥ 99,223	¥ 96,099	¥ 99,845	¥ 97,554	¥ 94,283
Current liabilities	42,065	37,346	39,872	37,042	37,750
Working capital	57,158	58,753	59,973	60,512	56,533
Property, plant and equipment.....	58,009	58,683	57,183	57,490	45,712
Total assets	179,117	176,836	179,882	174,613	170,678
Total shareholders' equity	96,204	96,248	94,331	90,666	86,989
Year-end statistics					
Number of shares outstanding (thousands)	182,503	182,503	182,503	182,503	182,503
Number of shareholders.....	20,367	21,010	27,168	29,742	27,582
Number of employees	3,679	3,552	3,639	3,164	—
Financial ratios					
Current ratio (times)	2.4	2.5	2.5	2.6	2.5
Equity ratio (%)	53.7	54.4	52.4	51.9	51.0
ROE (%).....	2.9	2.8	5.3	5.3	7.7
ROA (%)	1.6	1.5	2.7	2.8	3.9
Net sales by business segment (millions of yen)					
Pharmaceutical business	¥ 35,111	¥ 37,421	¥ 36,845	¥ 49,335	¥ 54,427
Fine chemical business	63,637	57,005	60,747	68,404	65,655
Inflators	6,334	6,000	5,063	4,802	3,308
Catalysis	2,103	1,388	1,503	811	1,134
Functional products	35,396	27,693	32,365	27,163	24,031
Color chemicals	12,865	13,778	14,526	14,187	13,393
Agro & fine chemicals	—	—	—	14,896	17,262
Explosives	6,937	8,144	7,290	6,543	6,524
Agro & specialty chemical business	21,248	21,618	19,958	—	—
Agrochemicals	11,560	11,042	9,044	—	—
Specialty chemicals	9,688	10,576	10,914	—	—
Other businesses	3,434	3,388	3,450	3,562	1,400

* In June 2001 the Pharmaceuticals Group, Specialty Chemicals Division and the Fine Chemicals Group, Agro & Fine Chemicals Division were reorganized to become the Agro & Specialty Chemicals Group, Agrochemicals Division and Specialty Chemicals Division.

* Sales data by business segment for FY 2001 was calculated after reorganization of the business into three groups.

* The number of shareholders for FY 2002 and FY 2003 is the number of round lot shareholders. (For FY 2001 and earlier, the number of shareholders included odd-lot shareholders.)

Consolidated Financial Review

Business Performance

Sales

Although there were some bright signs during the first half of the year, Japan's economic situation in FY 2003 continued to be difficult, with concerns over the future of the global economy, a languishing stock market, the continuing deflationary cycle, and sluggish personal spending and private capital investment.

Amidst these economic conditions, net sales in the fiscal year ended May 31, 2003 were 123.431 billion yen, an increase of 3.996 billion yen (3.3%) over the previous year. For the entire Group, net sales were 131% for those of the parent company alone.

Sales of the pharmaceutical business amounted to 35.111 billion yen, a decrease of 2.310 billion yen (6.2%) compared to the previous fiscal year, and operating income was 6.052 billion yen, a decrease of 1.914 billion yen (24.0%) compared to the previous fiscal year.

Sales of the fine chemical business were 63.637 billion yen, an increase of 6.631 billion yen (11.6%) compared to the previous fiscal year, and operating income was 5.901 billion yen, an increase of 1.612 billion yen (37.6%) compared to the previous fiscal year.

Sales of the agro & specialty chemical business were 21.248 billion yen, a decrease of 370 million yen (1.7%) compared to the previous fiscal year, and operating income was 1.005 billion yen, a decrease of 238 million yen (19.2%) compared to the previous fiscal year.

Sales of other businesses were 3.434 billion yen, an increase of 45 million yen (1.3%) compared to the previous fiscal year, and operating income was 1.237 billion yen, an increase of 199 million yen (19.2%) compared to the previous fiscal year.

Cost of Sales

Cost of sales was 79.002 billion yen, an increase of 4.257 billion yen (5.7%) compared to the previous fiscal year, and the percentage distribution with respect to net sales was 64.0%. Sales and general administrative expenses totaled 34.730 billion yen, a decrease of 575 million yen (1.6%) from the previous fiscal year.

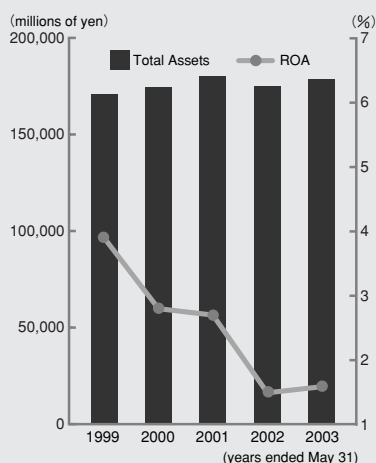
Operating Income, Income before Income Taxes and Minority Interests

Operating income was 9.697 billion yen, an increase of 313 million yen (3.3%) from the previous fiscal year. The ratio of operating income to net sales was 7.9%. Interest and dividend income decreased to 222 million yen by 57 million yen (20.4%) from the previous fiscal year. Other expenses were 1.809 billion yen, a decrease of 52 million yen (2.8%). As a result, income before income taxes increased by 334 million yen (4.6%) to 7.643 billion yen. Minority interests were 714 million yen.

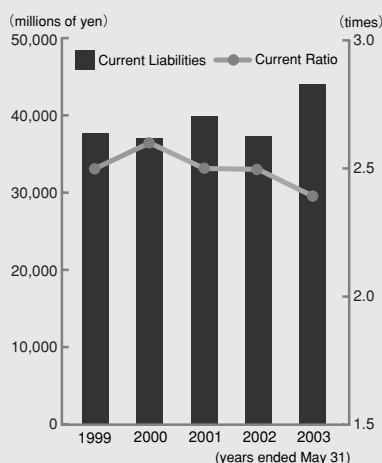
Net Income

Net income was 2.780 billion yen, an increase of 149 million yen (5.7%) from the previous fiscal year, and 124% of that of the parent company alone. The ratio of net income to net sales went up to 2.3% by 0.1 percentage points from the previous fiscal year. Net income per share was 14.92 yen.

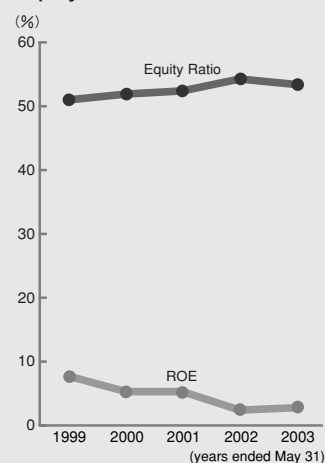
Total Assets/ROA



Current Liabilities/Current Ratio



Equity Ratio/ROE



Financial Conditions

Current Assets

Cash and cash equivalents totaled 25.631 billion yen, a decrease of 311 million yen (1.2%) from the previous fiscal year. There was a total of 1.191 billion yen in time deposits, an increase of 890 million yen (295.7%). Marketable securities totaled 1.0 billion yen, a decrease of 2.501 billion yen (71.4%). Receivables amounted to 44.588 billion yen, an increase of 2.394 billion yen (5.7%). Inventories were 22.787 billion yen, an increase of 1.901 billion yen (9.1%), and deferred income taxes were 1.605 billion yen, an increase of 332 million yen (26.1%) compared to the previous fiscal year. Other current assets increased by 420 million yen (21.1%) to 2.42 billion yen. As a result, total current assets were 99.223 billion yen, an increase of 3.123 billion yen (3.3%) from the previous fiscal year.

Property, Plants, and Equipment; Investments and Other Assets

The value of property, plants, and equipment totaled 58.009 billion yen, a decrease of 674 million yen (1.1%) from the previous fiscal year. Accumulated depreciation was 114.232 billion yen. The total value of investments and other assets was 21.884 billion yen, a decrease of 170 million yen (0.8%) from the previous fiscal year.

Liabilities

The current portion of long-term debt decreased, however, payables-trade and accrued income taxes resulted in an increase in current liabilities of 4.719 billion yen (12.6%) from the previous fiscal year, to a total of 42.065 billion yen. On the other hand, the total of non-current liabilities was 35.169 billion yen, a decrease of 2.914 billion yen (7.7%), primarily due to reduction in long-term debt.

Shareholders' Equity

Shareholders' equity was 96.204 billion yen, and the equity ratio was 53.7%.

Cash Flows

Cash Flows from Operating Activities

Although notes and accounts receivable increased due to factors including an increase in notes and accounts payable and a decrease in payments for income taxes, net cash from operating activities was 12.224 billion yen, an increase of 3.269 billion yen (36.5%) compared to the previous fiscal year.

Cash Flows from Investment Activities

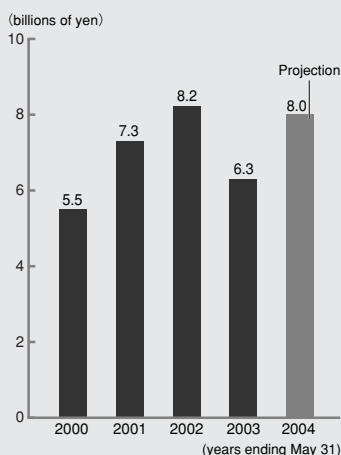
Due to factors including an increase in income from sale of marketable securities, and a decrease in expenditures for purchase of investment securities, the net cash expended in investment activities was 6.696 billion yen, a decrease of 1.248 billion yen (15.7%) compared to the previous fiscal year.

Cash Flows from Financing Activities

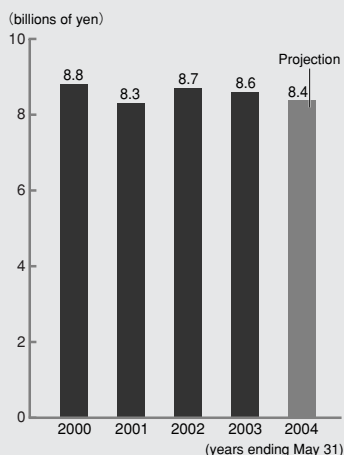
Due to factors including expenditures for bond redemption, net cash expended in financing activities was 5.807 billion yen, an increase of 2.862 million yen (97.2%) compared to the previous fiscal year.

As a result of the above, cash and cash equivalents at year's end decreased from the previous fiscal year by 311 million yen (1.2%) to 25.631 billion yen.

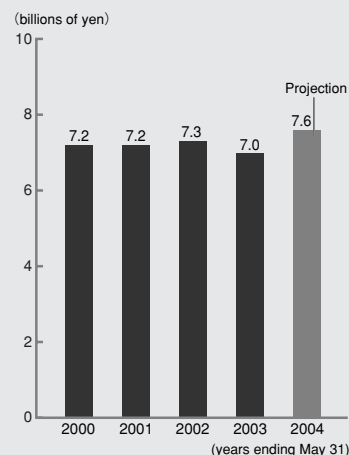
Plant & Equipment Investment



Research & Development Expenditures



Depreciation Expense



Consolidated Balance Sheets

Nippon Kayaku Co., Ltd. and Consolidated Subsidiaries
As of May 31, 2003 and 2002

	Millions of yen		Thousands of U.S. dollars (Note 2)
	2003	2002	2003
Assets			
Current assets:			
Cash and cash equivalents (Note 4)	¥ 25,631	¥ 25,942	\$ 216,661
Time deposits (Note 6)	1,191	301	10,067
Marketable securities (Note 4).....	1,000	3,501	8,453
Receivables (Note 6):			
Trade	44,666	42,332	377,565
Less allowance for doubtful receivables.....	(78)	(138)	(659)
Inventories (Note 3).....	22,787	20,886	192,620
Deferred income taxes (Note 7).....	1,605	1,273	13,567
Other current assets	2,420	1,999	20,456
Total current assets	99,223	96,099	838,740
Property, plant and equipment (Notes 5 and 6):.....	172,241	169,470	1,455,967
Less accumulated depreciation.....	(114,232)	(110,786)	(965,612)
Property, plant and equipment, net	58,009	58,683	490,355
Investments and other assets:			
Investment securities (Notes 4 and 6).....	13,446	14,606	113,660
Deferred income taxes (Note 7).....	1,880	1,366	15,891
Other assets	6,557	6,081	55,426
Total investments and other assets	21,884	22,054	184,987
Total assets	¥179,117	¥176,836	\$1,514,091

	Millions of yen		Thousands of U.S. dollars (Note 2)
	2003	2002	2003
Liabilities and shareholders' equity			
Current liabilities:			
Short-term bank loans (Note 6)	¥ 3,595	¥ 3,279	\$ 30,388
Current portion of long-term debt (Note 6)	2,565	4,497	21,682
Payables:			
Trade (Note 6)	19,909	15,409	168,292
Unconsolidated subsidiaries and affiliates	965	815	8,157
Construction	2,003	1,929	16,931
Other	4,864	5,851	41,115
Accrued expenses	4,307	4,237	36,407
Accrued income taxes (Note 7)	3,328	754	28,131
Other current liabilities	524	571	4,429
Total current liabilities	42,065	37,346	355,579
Non-current liabilities:			
Long-term debt, less current portion (Note 6)	7,814	10,170	66,052
Retirement benefits (Note 8)	6,919	7,479	58,486
Other non-current liabilities (Note 6)	19,626	19,600	165,900
Deferred income taxes (Note 7)	808	833	6,830
Total non-current liabilities	35,169	38,084	297,286
Minority interests	5,676	5,157	47,979
Contingent liabilities (Note 10)			
Shareholders' equity (Notes 11 and 15):			
Common stock:			
Authorized – 700,000,000 shares			
Issued – 182,503,570 shares in 2003 and 2002	14,932	14,932	126,221
Additional paid-in capital	17,257	17,257	145,874
Retained earnings	63,111	62,402	533,482
Translation adjustments	422	590	3,567
Unrealized holding gains on other securities	659	1,107	5,570
Less treasury stock, at cost	(178)	(42)	(1,504)
Total shareholders' equity	96,204	96,248	813,220
Total liabilities and shareholders' equity	¥179,117	¥176,836	\$1,514,091

See accompanying notes to consolidated financial statements.

Consolidated Statements of Income and Retained Earnings

Nippon Kayaku Co., Ltd. and Consolidated Subsidiaries
Years Ended May 31, 2003 and 2002

	Millions of yen		Thousands of U.S. dollars (Note 2)
	2003	2002	2003
Net sales	¥123,431	¥119,435	\$1,043,372
Cost of sales	79,002	74,745	667,810
Gross profit.....	44,428	44,690	375,553
Selling, general and administrative expenses	34,730	35,305	293,575
Operating income.....	9,697	9,384	81,969
Other income (expenses):			
Interest and dividend income	222	279	1,876
Interest expense	(466)	(492)	(3,939)
Other, net.....	(1,809)	(1,861)	(15,291)
	(2,053)	(2,074)	(17,354)
Income before income taxes and minority interests	7,643	7,309	64,606
Income taxes (Note 7):			
Current.....	4,666	4,087	39,442
Deferred.....	(518)	147	(4,378)
Minority interests.....	714	444	6,035
Net income	2,780	2,630	23,499
Retained earnings at beginning of year	62,402	61,841	527,489
Bonuses to directors	(64)	(63)	(540)
Cash dividends paid	(2,006)	(2,007)	(16,956)
Retained earnings at end of year	¥ 63,111	¥ 62,402	\$ 533,482

See accompanying notes to consolidated financial statements.

Consolidated Statements of Cash Flows

Nippon Kayaku Co., Ltd. and Consolidated Subsidiaries
Years Ended May 31, 2003 and 2002

	Millions of yen		Thousands of U.S. dollars (Note 2)
	2003	2002	2003
Cash flows from operating activities			
Income before income taxes and minority interests	¥ 7,643	¥ 7,309	\$ 64,606
Adjustments to reconcile income before income taxes and minority interests to net cash provided by operating activities:			
Depreciation and amortization.....	7,011	7,250	59,264
Increase (decrease) in reserves	(275)	(1,355)	(2,324)
Interest and dividend income	(222)	(279)	(1,876)
Interest expense.....	466	492	3,939
Equity in earnings of affiliates.....	(210)	(306)	(1,775)
Loss (gain) on disposal of property, plant and equipment, net.....	606	(94)	5,122
Loss (gain) on sales of investment securities, net.....	(70)	760	(591)
Loss on revaluation of investment securities	719	1,107	6,077
Changes in operating assets and liabilities:			
Notes and accounts receivable - trade.....	(2,374)	(654)	(20,067)
Inventories	(1,932)	1,391	(16,331)
Notes and accounts payable - trade.....	4,647	(2,209)	39,281
Payables - other.....	(923)	1,322	(7,802)
Other	(703)	1,591	(5,942)
Subtotal	14,382	16,326	121,572
Interest and dividends received.....	343	454	2,899
Interest paid.....	(409)	(495)	(3,457)
Income taxes paid	(2,092)	(7,330)	(17,683)
Net cash provided by operating activities	12,224	8,954	103,330
Cash flows from investing activities			
Proceeds from maturity of time deposits, net	(893)	2,893	(7,548)
Proceeds from sales of marketable securities, net	2,501	(2,172)	21,141
Purchase of property, plant and equipment	(6,508)	(8,585)	(55,012)
Proceeds from sales of property, plant and equipment	48	601	405
Acquisition of goodwill and other intangible assets	(1,099)	(1,206)	(9,289)
Proceeds from sales of investment securities, net.....	(121)	492	(1,022)
Other	(624)	32	(5,274)
Net cash used in investing activities	(6,696)	(7,944)	(56,601)
Cash flows from financing activities			
Net increase short-term debt.....	530	230	4,480
Proceeds from long-term debt.....	745	2,707	6,297
Repayment of long-term debt	(1,832)	(3,965)	(15,486)
Redemption of corporate bond	(3,000)	-	(25,359)
Proceeds from payment by minority shareholders	-	165	-
Cash dividends paid	(2,006)	(2,001)	(16,956)
Other	(244)	(80)	(2,062)
Net cash used in financing activities	(5,807)	(2,945)	(49,087)
Effect of exchange rate changes on cash and cash equivalents	(31)	50	(262)
Decrease in cash and cash equivalents	(311)	(1,883)	(2,628)
Cash and cash equivalents at beginning of year	25,942	27,826	219,289
Cash and cash equivalents at end of year	¥25,631	¥25,942	\$216,661

See accompanying notes to consolidated financial statements.

Notes to Consolidated Financial Statements

Nippon Kayaku Co., Ltd. and Consolidated Subsidiaries
May 31, 2003 and 2002

I. Basis of Consolidated Financial Statements

a. Basis of Preparation

The books and records of Nippon Kayaku Co., Ltd. (the "Company") and its consolidated domestic subsidiaries are maintained in the manner and form required or permitted under the Commercial Code of Japan and Japanese accounting practices. The books and records of overseas consolidated subsidiaries are maintained in conformity with the accounting principles and relevant legal requirements of their countries of domicile.

The accompanying consolidated financial statements have been compiled from the consolidated financial statements prepared by the Company as required under the Securities and Exchange Law of Japan, and in conformity with accounting principles and practices generally accepted in Japan, which may differ in some material respects from accounting principles and practices generally accepted in countries and jurisdictions other than Japan.

In addition, the notes to the consolidated financial statements include information which is not required under accounting principles generally accepted in Japan but is presented herein as additional information.

As permitted by the Securities and Exchange Law of Japan, amounts of less than one million yen have been omitted. As a result, the totals shown in the accompanying financial statements (both in yen and in dollars) do not necessarily agree with the sums of the individual amounts.

Certain amounts previously reported have been reclassified to conform to the current year's classifications.

b. Basis of Consolidation

The accompanying consolidated financial statements include the accounts of the Company and its significant subsidiaries controlled directly or indirectly by the Company (the "Companies"). Investment in companies over which the Company exercises significant influence in terms of their operating and financial policies have been included in the consolidated financial statements on an equity basis.

All significant intercompany balances and transactions have been eliminated in consolidation.

Investments in unconsolidated subsidiaries and affiliates not accounted for by the equity method are generally stated at cost.

The differences at the dates of acquisition between the cost and underlying net equity of the consolidated subsidiaries and companies accounted for by the equity method are being amortized by the straight-line method over a period of five years.

c. Foreign Currency Translation

The revenue and expense accounts of the foreign subsidiaries are translated at the average exchange rates prevailing during the year.

The accounts of foreign consolidated subsidiaries, except for the components of shareholders' equity, are translated into yen at the rates of exchange in effect at the balance sheet date. The components of shareholders' equity are translated at their historical exchange rates. Translation differences arising from the translation of the financial statements of the foreign consolidated subsidiaries are presented as translation adjustments.

Monetary assets and liabilities denominated in foreign currencies of the Company and its domestic consolidated subsidiaries are translated into yen at the current rates except for those hedged by forward foreign exchange contracts, which are translated at the contracted rates.

Gains and losses arising from exchange differences are credited or charged to income in the year in which they are incurred.

d. Cash Equivalents

The Company considers all highly liquid investments with a maturity of three months or less when purchased to be cash equivalents.

e. Securities

Securities are classified into three categories: trading, held-to-maturity or other securities. Trading securities are carried at fair value and held-to-maturity securities are carried at amortized cost. Marketable securities classified as other securities are carried at fair value with changes in unrealized holding gain or loss, net of the applicable income taxes, included directly in shareholders' equity. Non-marketable securities classified as other securities are carried at cost. Cost of securities sold is determined by the moving average method.

f. Inventories

Inventories are stated at cost determined principally by the average method.

g. Property, Plant and Equipment

Property, plant and equipment is stated at cost except that the cost of certain assets has been reduced by certain capital gains in accordance with the Corporation Tax Law of Japan.

Depreciation is mainly computed on the declining-balance method, except that the straight-line method is applied to buildings which were acquired after April 1, 1998 based on the estimated useful lives of the respective assets.

h. Leases

Finance lease transactions are primarily accounted for as operating leases except that lease agreements which stipulate transfer of ownership of the leased assets to the lessee are accounted for as finance leases.

i. Retirement Benefits

The Company and its domestic consolidated subsidiaries have defined benefit plans, i.e., welfare pension fund plans, tax-qualified pension plans and lump-sum payment plans, covering substantially all employees who are entitled to lump-sum or annuity payments, the amounts of which are determined by reference to their basic rates of pay, length of service, and the conditions under which termination occurs. Certain foreign subsidiaries have defined contribution plans.

Accrued employees' retirement benefits are provided mainly at an amount calculated based on the retirement benefit obligation and the fair value of the pension plan assets at the balance sheet dates, as adjusted for unrecognized actuarial gain or loss, and unrecognized past service cost. The retirement benefit obligation is attributed to each period by the straight-line method over the estimated years of service of the eligible employees. Actuarial gain and loss are amortized in the year following the year in which the gain or loss is recognized primarily by the straight-line method over periods of 10 years which are shorter than the average remaining years of service of the eligible employees.

Directors and statutory auditors of the Company and its domestic consolidated subsidiaries are customarily entitled to lump-sum retirement payments under their respective unfunded retirement plan subject to the stockholders' approval. Provision for the retirement benefits for those officers has been made at estimated amount.

j. Derivative Financial Instruments

The Company has entered into derivative transactions in order to manage certain risks arising from adverse fluctuations in foreign currency exchange rates. Derivatives are carried at fair value with changes in unrealized gain or loss charged or credited to operations. Receivables and payables hedged by qualified derivatives are translated at the corresponding foreign exchange contract rates.

k. Treasury Stock and Reduction of Legal Reserves

Effective April 1, 2002, the Company and its consolidated subsidiaries adopted a new accounting standard for treasury stock and reduction of legal reserves. The effect of the adoption of this new standard was immaterial.

2. U.S. Dollar Amounts

The translation of yen amounts into U.S. dollar amounts is included solely for the convenience of readers outside Japan. The rate of ¥118.30 = U.S.\$1, the approximate rate of exchange on May 31, 2003, has been used. The inclusion of such amounts is not intended to imply that the yen amounts have been or could be readily converted, realized or settled in U.S. dollars at that or any other rate.

3. Inventories

Inventories at May 31, 2003 and 2002 consisted of the following:

	Millions of yen		Thousands of U.S. dollars
	2003	2002	2003
Merchandise	¥ 3,659	¥ 3,341	\$ 30,929
Finished products.....	9,218	7,861	77,920
Semi-finished products and work in process	5,218	6,163	44,108
Raw materials and supplies	4,690	3,520	39,644
	<u>¥22,787</u>	<u>¥20,886</u>	<u>\$192,620</u>

4. Marketable and Investment Securities

Information regarding marketable securities classified as other securities as of May 31, 2003 is as follows:

Marketable other securities

	May 31, 2003					
	Millions of yen			Thousands of U.S. dollars		
	Acquisition cost	Carrying value	Unrealized gain (loss)	Acquisition cost	Carrying value	Unrealized gain (loss)
Securities whose carrying value exceeds their acquisition cost :						
Stock.....	¥2,024	¥3,669	¥1,645	\$17,109	\$31,014	\$13,905
Debt securities.....	8	13	4	67	109	33
Other.....	2,559	2,564	5	21,631	21,673	42
Subtotal.....	4,592	6,247	1,655	38,816	52,806	13,989
Securities whose acquisition cost exceeds their carrying value:						
Stock.....	1,536	1,105	(431)	12,983	9,340	(3,643)
Debt securities.....	-	-	-	-	-	-
Other.....	1,637	1,481	(156)	13,837	12,519	(1,318)
Subtotal.....	3,173	2,586	(587)	26,821	21,859	(4,961)
Total.....	¥7,766	¥8,833	¥1,067	\$65,646	\$74,666	\$ 9,019

	May 31, 2002		
	Millions of yen		
	Acquisition cost	Carrying value	Unrealized gain (loss)
Securities whose carrying value exceeds their acquisition cost :			
Stock.....	¥3,555	¥ 5,718	¥2,162
Debt securities.....	11	16	5
Other.....	2,786	2,803	16
Subtotal.....	6,354	8,538	2,184
Securities whose acquisition cost exceeds their carrying value:			
Stock.....	725	474	(251)
Debt securities.....	-	-	-
Other.....	1,409	1,320	(88)
Subtotal.....	2,134	1,795	(339)
Total.....	¥8,488	¥10,334	¥1,845

Sales of securities classified as other securities amounted to ¥97 million (\$819 thousand) as of May 31, 2003 with the aggregate gain of ¥70 million (\$591 thousand) for the year ended May 31, 2003.

5. Depreciation

Depreciation for property, plant and equipment were ¥6,613 million (\$55,900 thousand) and ¥6,740 million for the years ended May 31, 2003 and 2002, respectively.

6. Short-Term Bank Loans and Long-Term Debt

Short-term bank loans are unsecured and are generally represented by 60-day notes. The weighted average interest rates for the years ended May 31, 2003 and 2002 were approximately 2.13% and 1.82%, respectively.

The interest rates applicable to the long-term borrowings (except for current portion) at May 31, 2003 and 2002 average approximately 3.79% and 3.60%, respectively.

Long-term debt at May 31, 2003 and 2002 consisted of the following:

	Millions of yen		Thousands of U.S. dollars
	2003	2002	2003
Bonds without collateral:			
1.95% bonds due 2003	¥ -	¥ 3,000	\$ -
2.47% bonds due 2005	3,000	3,000	25,359
Collateralized loans from banks, insurance companies, government agencies and other financial institutions, due through 2030	3,139	3,869	26,534
Loans without collateral	4,240	4,798	35,841
	10,380	14,667	87,743
Less current portion	(2,565)	(4,497)	(21,682)
	<u>¥7,814</u>	<u>¥10,170</u>	<u>\$66,052</u>

The aggregate annual maturities of long-term debt subsequent to May 31, 2003 are as follows:

	Millions of yen	Thousands of U.S. dollars
Year ending May 31,		
2004	¥ 2,565	\$21,682
2005	4,135	34,953
2006	926	7,827
2007 and thereafter	2,752	23,262
	<u>¥10,380</u>	<u>\$87,743</u>

Assets pledged as collateral for long-term debt, other non-current liabilities and payables-trade at May 31, 2003 are summarized as follows:

	Millions of yen	Thousands of U.S. dollars
Time deposits	¥ 116	\$ 980
Receivables	157	1,327
Investment securities	216	1,825
Property, plant and equipment, at net book value	14,046	118,732
	<u>¥14,536</u>	<u>\$122,874</u>

7. Income Taxes

The Company and its domestic consolidated subsidiaries are subject to a number of taxes based on income which, in the aggregate, resulted in statutory tax rates of 41.88% in 2003 and 2002. Income taxes of the foreign consolidated subsidiaries are based generally on the tax rates applicable in their countries of incorporation.

The effective tax rate reflected in the accompanying consolidated statement of income for the year ended May 31, 2003 and 2002 differed from the statutory tax rate for the following reasons:

	2003	2002
Statutory tax rate	41.88%	41.88%
Effect of:		
Expenses not deductible for income tax purposes	3.00	1.94
Inhabitants' tax based on individuals	1.28	1.23
Amortization of consolidation adjustments	0.63	0.68
Effect of sales of investment in affiliates accounted for by the equity method	-	11.25
Loss in consolidated subsidiaries	7.41	-
Effect of change in tax rate	0.96	-
Other, net	(0.89)	0.96
Effective tax rate	<u>54.27%</u>	<u>57.94%</u>

7. Income Taxes (continued)

The significant components of deferred tax assets and liabilities as of May 31, 2003 and 2002 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2003	2002	2003
Deferred tax assets:			
Accrued retirement benefits	¥2,549	¥2,456	\$21,546
Accrued bonuses	963	902	8,140
Write down on investment securities	48	138	405
Accrued enterprise tax	293	58	2,476
Allowance for sales rebate	136	75	1,149
Tax loss carried forward	892	–	7,540
Other	879	887	7,430
Total deferred tax assets	5,763	4,518	48,715
Valuation allowance	(917)	(46)	(7,751)
	4,846	4,471	40,963
Deferred tax liabilities:			
Adjustment of acquisition costs of fixed assets	(856)	(937)	(7,235)
Unrealized holding gains on other securities	(508)	(775)	(4,294)
Adjustments for book value relating to land of consolidated subsidiaries	(706)	(706)	(5,967)
Other	(98)	(247)	(828)
Total deferred tax liabilities	(2,169)	(2,666)	(18,334)
Net deferred tax assets	¥2,677	¥1,805	\$22,628

New legislation was enacted in March 2003 which will change the aggregate statutory tax rate from 41.88% to 40.69% effective the fiscal year beginning after May 31, 2004. The effect of this tax rate change was to decrease net deferred assets by ¥57 million (\$482 thousand) at May 31, 2003, to increase income taxes-deferred by ¥73 million (\$617 thousand) for the year ended May 31, 2003 and to increase unrealized holding gains of other securities by ¥15 million (\$127 thousand) at May 31, 2003.

8. Retirement Benefit Plans

The following table sets forth the funded and accrued status of the plans, and the amounts recognized in the consolidated balance sheet as of May 31, 2003 and 2002 for the Company's and the consolidated subsidiaries' defined benefit plans:

	Millions of yen		Thousands of U.S. dollars
	2003	2002	2003
Retirement benefit obligation	¥(21,647)	¥(22,087)	\$(182,983)
Plan assets at fair value	10,010	12,099	84,615
Unfunded retirement benefit obligation	(11,637)	(9,988)	(98,368)
Unrecognized actuarial gain or loss	6,030	3,629	50,972
Net retirement benefit obligation	(5,606)	(6,359)	(47,387)
Prepaid pension cost	691	595	5,841
Accrued retirement benefits	¥ (6,297)	¥ (6,954)	\$ (53,229)

The components of retirement benefit expenses for the year ended May 31, 2003 and 2002 are outlined as follows:

	Millions of yen		Thousands of U.S. dollars
	2003	2002	2003
Service cost	¥1,499	¥1,460	\$12,671
Interest cost	668	682	5,646
Expected return on plan assets	(224)	(220)	(1,893)
Amortization of actuarial gain or loss	362	251	3,060
Total	¥2,306	¥2,173	\$19,492

The assumptions used in accounting for the above plans were as follows:

	May 31,	
	2003	2002
Discount rates	2.5% – 3.1%	2.5% – 3.1%
Expected return on plan assets	2.5% – 3.1%	3.0% – 3.1%

Accrued retirement benefits include ¥622 million (\$5,257 thousand) for directors and statutory auditors of the Company and its domestic consolidated subsidiaries at May 31, 2003.

9. Research and Development Expenses

Research and development expenses amounted to ¥8,551 million (\$72,282 thousand) and ¥8,722 million for the years ended May 31, 2003 and 2002, respectively.

10. Contingent Liabilities

Contingent liabilities at May 31, 2003 were as follows:

	Millions of yen	Thousands of U.S. dollars
Notes receivable discounted	¥4,192	\$35,435
Debtor's acceptance discounted.....	16	135
Guarantees of loan of employees	2,390	20,202

11. Amounts per Share

In accordance with a new accounting standard for earnings per share which became effective April 1, 2002, net income per share is computed based on the net income available for distribution to shareholders of common stock and the weighted average number of shares of common stock outstanding during each year. Net assets per share is computed based on net assets available for distribution to the shareholders and the number of shares of common stock outstanding at each year end.

Net income per share for the year ended May 31, 2002 has been recomputed based on this new accounting standard and is restated.

	Yen		U.S. dollars
	2003	2002	2003
For the years ended May 31:			
Net income:			
Primary	¥ 14.92	¥ 14.42	\$0.12
Cash dividends	11.00	11.00	0.09
At May 31:			
Net assets	527.93	527.61	4.46

12. Derivatives

- (1) The Companies utilize forward foreign exchange contracts solely in order to hedge against the risk of fluctuations in foreign currency exchange rates and to stabilize their future cash flows relating to debts denominated in foreign currencies relating to their operations.
- (2) The Companies have entered into derivative transactions solely in order to hedge against certain risks in compliance with their internal policies. The Companies have not and do not utilize derivatives for speculative trading purposes.
- (3) The Companies are exposed to the risk of credit loss in the event of nonperformance by the counterparties to these derivative transactions, but consider the risk of any such loss to be minimal because the Companies enter into derivative transactions only with financial institutions which have high credit ratings.
- (4) The Companies enter into, monitor and manage their derivative positions based on their own internal policies.

13. Leases

Lease payments relating to finance lease transactions accounted for as operating leases amounted to ¥447 million (\$3,778 thousand) and ¥475 million for the years ended May 31, 2003 and 2002, respectively.

Future minimum lease payments (including the interest portion) subsequent to May 31, 2003 relating to finance lease transactions accounted for as operating leases are summarized as follows:

	Millions of yen	Thousands of U.S. dollars
<u>Year ending May 31,</u>		
2004	¥ 396	\$3,347
2005 and thereafter	700	5,917
	¥1,097	\$9,273

Lease income relating to finance leases accounted for as operating leases amounted to ¥51 million (\$431 thousand) and ¥51 million for the years ended May 31, 2003 and 2002, respectively.

14. Segment Information

The Companies operate principally in four industry segments: pharmaceuticals, fine chemicals, agro & specialty chemicals and other businesses. The fine chemical business involves the production and sales of inflators, functional products, dyestuffs, explosives and catalysts, and other sophisticated chemical products. Other business comprise a driving school and real estate leasing business.

Industry segment information for the Companies as of or for the years ended May 31, 2003 and 2002 is summarized as follows:

2003							
Millions of yen							
Pharmaceutical business	Fine chemical business	Agro & specialty chemical business	Other businesses	Total	Eliminations	Consolidated	
I. Sales and operating income:							
Sales to third parties.....	¥35,111	¥63,637	¥21,248	¥ 3,434	¥123,431	–	¥123,431
Intersegment.....	–	74	2,114	11	2,199	¥ (2,199)	–
Total	35,111	63,711	23,362	3,445	125,630	(2,199)	123,431
Operating expenses	29,058	57,810	22,356	2,207	111,433	2,300	113,733
Operating income.....	¥ 6,052	¥ 5,901	¥ 1,005	¥ 1,237	¥ 14,197	¥ (4,499)	¥ 9,697
II. Asset depreciation and capital expenditures:							
Total assets.....	¥31,381	¥72,267	¥23,953	¥19,031	¥146,634	¥32,482	¥179,117
Depreciation and amortization	1,060	3,746	1,145	905	6,858	152	7,011
Capital expenditures.....	830	4,977	855	338	7,001	777	7,779

2003							
Thousands of U.S. dollars							
Pharmaceutical business	Fine chemical business	Agro & specialty chemical business	Other businesses	Total	Eliminations	Consolidated	
I. Sales and operating income:							
Sales to third parties.....	\$296,796	\$537,928	\$179,611	\$ 29,027	\$1,043,372	–	\$1,043,372
Intersegment.....	–	625	17,869	92	18,588	\$(18,588)	–
Total	296,796	538,554	197,480	29,120	1,061,961	(18,588)	1,043,372
Operating expenses	245,629	488,672	188,977	18,655	941,952	19,442	961,394
Operating income.....	\$ 51,158	\$ 49,881	\$ 8,495	\$ 10,456	\$ 120,008	\$(38,030)	\$ 81,969
II. Asset depreciation and capital expenditures:							
Total assets.....	\$265,266	\$610,879	\$202,476	\$160,870	\$1,239,509	\$291,479	\$1,514,091
Depreciation and amortization	8,960	31,665	9,678	7,650	57,971	1,284	59,264
Capital expenditures.....	7,016	42,071	7,227	2,857	59,180	6,568	65,756

2002							
Millions of yen							
Pharmaceutical business	Fine chemical business	Agro & specialty chemical business	Other businesses	Total	Eliminations	Consolidated	
I. Sales and operating income:							
Sales to third parties.....	¥37,421	¥57,005	¥21,618	¥ 3,388	¥119,435	–	¥119,435
Intersegment.....	–	37	2,408	8	2,455	¥ (2,455)	–
Total	37,421	57,043	24,027	3,397	121,890	(2,455)	119,435
Operating expenses	29,454	52,754	22,783	2,359	107,351	2,699	110,051
Operating income.....	¥ 7,967	¥ 4,288	¥ 1,244	¥ 1,038	¥ 14,538	¥ (5,154)	¥ 9,384
II. Asset depreciation and capital expenditures:							
Total assets.....	¥30,411	¥67,503	¥24,745	¥19,606	¥142,266	¥34,570	¥176,836
Depreciation and amortization	1,087	3,666	1,303	1,008	7,066	183	7,250
Capital expenditures.....	1,387	6,087	1,453	27	8,956	399	9,356

Overseas sales, which include export sales of the Company and its consolidated subsidiaries, totaled ¥20,175 million (\$170,540 thousand) and ¥17,233 million, or 16.3% and 14.4% of the consolidated net sales for the years ended May 31, 2003 and 2002, respectively.

15. Subsequent Event

The following appropriations of retained earnings of the Company were approved at a meeting of the shareholders held on August 28, 2003:

	Millions of yen	Thousands of U.S. dollars
2002 year-end cash dividends (¥5.50 = \$0.046 per share)	¥1,001	\$8,461
Bonuses to directors.....	45	380

Report of Independent Auditors



Certified Public Accountants

Hibiya Kokusai Bldg., 2-2-3, Uchisaiwai-cho
Chiyoda-ku, TOKYO 100-0011 JAPAN
C.P.O.Box 1196, Tokyo 100-8641
Phone: +81-3-3503-1100
Fax: +81-3-3503-1197

The Board of Directors
Nippon Kayaku Co., Ltd.

We have audited the accompanying consolidated balance sheets of Nippon Kayaku Co., Ltd. and consolidated subsidiaries as of May 31, 2003 and 2002, and the related consolidated statements of income and retained earnings, and cash flows for the years then ended, all expressed in yen. These financial statements are the responsibility of the Company's management. Our responsibility is to independently express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards, procedures and practices generally accepted and applied in Japan. Those standards, procedures and practices require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Nippon Kayaku Co., Ltd. and consolidated subsidiaries at May 31, 2003 and 2002, and the consolidated results of their operations and their cash flows for the years then ended in conformity with accounting principles and practices generally accepted in Japan.

The U.S. dollar amounts in the accompanying consolidated financial statements with respect to the year ended May 31, 2003 are presented solely for convenience. Our audit also included the translation of yen amounts into U.S. dollar amounts and, in our opinion, such translation has been made on the basis described in Note 2 to the consolidated financial statements.

August 28, 2003

A handwritten signature in cursive script that reads "Shin Nihon & Co." is positioned to the right of the date.

See Note 1 to the consolidated financial statements which explains the basis of preparation of the consolidated financial statements of Nippon Kayaku Co., Ltd. and consolidated subsidiaries under Japanese accounting principles and practices.

- 1916** Started as Nippon Kayaku Manufacturing Co., Ltd., the first manufacturer of explosives in Japan.
Teikoku Dyes Manufacturing Co., Ltd. was established the same year.
- 1931** Yamakawa Pharmaceutical Co., Ltd. was established and launched aspirin the next year. ①
- 1943** Merger of Teikoku Dyes Manufacturing Co., Ltd. and Yamakawa Pharmaceutical Co., Ltd. by Nippon Kayaku Manufacturing Co., Ltd.
- 1945** Corporate name changed to Nippon Kayaku Co., Ltd.
- 1948** Started manufacture of penicillin. ②
- 1956** Technical tie-up with Geigy AG, Switzerland and the production of diazinon, an insecticide, started. ③
- 1963** Received the Deming Prize. ④
- 1969** Bleomycin (anti-cancer drug) was launched. ⑤
Started production of epoxy resins.
- 1970** Established a joint venture, Kayaku Nooly Co., Ltd. with AKZO B.V., a Dutch company. (The corporate name of the joint venture was later changed to Kayaku AKZO corporation.)
- 1971** Completion of new plant in Takasaki to manufacture pharmaceuticals.
- 1982** Opening of New York office with residing staff. (It became a U.S. corporation later.)
- 1983** Businesses were centered on the Pharmaceuticals Group and Fine Chemicals Group.
- 1986** 70th anniversary of the founding; a new corporate symbol was designed.
- 1988** Opening of Düsseldorf office with residing staff. (Later relocated to Frankfurt and became a German corporation.)
- 1991** Polatechno Co., Ltd., a joint venture of functional films, was established.
- 1993** Opening of Shanghai office with residing staff.
- 1994** Supply of airbag inflators was started.
- 1995** Nippon Kayaku Food Techno Co., Ltd., a subsidiary company in food business, was established.
Zhaoyuan Advanced Chemical Co., Ltd., a joint venture in China, was established.
- 1996** Wuxi Advanced Chemical Co., Ltd., a joint venture in China, was established. (The corporate name was later changed to Wuxi Advanced Kayaku Chemical Co., Ltd.)
- 1998** Restructuring of the Fine Chemicals Group (divided into six divisions).
- 1999** Capital investment in Indet Safety Systems a.s.
- 2000** Separation of Tokyo plant and Fukuyama plant from Nippon Kayaku to establish Nippon Kayaku Tokyo Co., Ltd. and Nippon Kayaku Fukuyama Co., Ltd.
Lifesparc Inc. was established.
- 2001** The Agro & Fine Chemicals Division and Specialty Chemicals Division were reorganized to become the Agro & Specialty Chemicals Group (creating a three-group system).
- 2002** Kayaku Chemical Wuxi Co., Ltd., our subsidiary engaged in the functional materials business, was established in China.



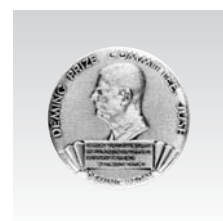
①



②



③



④



⑤

Group Companies

The Nippon Kayaku Group comprises Nippon Kayaku Co., Ltd., subsidiary companies, and affiliated companies. The outline of the placement of each company in the relevant business is as shown below (as of October 1, 2003).

Pharmaceuticals Group (9 companies)

- Nippon Kayaku Medinet Co., Ltd.
Provision and gathering of pharmaceutical information on contract
- NAC Co., Ltd.
- Gunnan Sangyo Co., Ltd.
- Euro Nippon Kayaku GmbH
- Taiwan Nippon Kayaku Co., Ltd.
- Nippon Kayaku America, Inc.
- Jinkaiken Co., Ltd.
- ◆ Kayaku Zentaris Co., Ltd.

- Nippon Kayaku Medical Care Co., Ltd.

Fine Chemicals Group (29 companies)

- Kouwa Sangyo Co., Ltd.
Contracted work for Asa plant
- Nippon Kayaku Tokyo Co., Ltd.
Undertaking of manufacturing of dyes, pigments, etc.
- Nippon Kayaku Fukuyama Co., Ltd.
Undertaking of manufacturing of synthetic resins, dyes, pigments, etc.
- Tomusu Co., Ltd.
- Minoshima Sangyo Co., Ltd.
- ◆ Toyotomi Kogyo Co., Ltd.

- N·S·Color Techno Co., Ltd.
Marketing of dyes and chemical products
- Kayafloc Co., Ltd.
Marketing of high molecule flocculant, etc.
- Naigai Nilkka Co., Ltd.
Marketing of chemical products, etc.
- ◆ Shinwa Sangyo Co., Ltd.
- ◆ Tomen Kayaku Chemicals Trading (Shanghai) Co., Ltd.

- Kayatech Co., Ltd.
Marketing of explosives for industrial use, evaluation and testing of danger
- ◆ Nippon Shoji Co., Ltd.

- Polatechno Co., Ltd.
Manufacturing and marketing of materials for liquid crystal display

- Hokuyou Kayaku Co., Ltd.
Manufacturing and marketing of explosives for industrial use
- Indet Safety Systems a.s.
Manufacturing and marketing of squibs
- Zhaoyuan Advanced Chemical Co., Ltd.
Manufacturing and marketing of fluorescent dyes
- Wuxi Advanced Kayaku Chemical Co., Ltd.
Manufacturing and marketing of water soluble dye, disperse dye
- Kayaku Chemical Wuxi Co., Ltd.
- ◆ Kayaku Sartomer Co., Ltd.

- Nippon Kayaku Colors Co., Ltd.
Marketing of dyes and chemical products, etc.

- LifeSparc Inc.
Manufacturing and marketing of squibs and MGGs
- Kayaku Microchem Co., Ltd.
- NKNM Ltd.
- Dejima Tech B.V.
- Dejima Optical Films B.V.
- ▲ Kayaku AKZO Corporation
Manufacturing and marketing of organic peroxide, etc.
- ◆ Shikoku ANFO Inc.
- ◆ Polatechno (Hong Kong) Co., Ltd.

Nippon Kayaku Co., Ltd.

Other Businesses (7 companies)

- Wako Toshi Kaihatsu Co., Ltd.
Real estate management and rental
- ◆ Tokos Co., Ltd.

- Nishiminato Driving School Co., Ltd.
Driving school administration
- Okiura Golf Center

- NIKOS Co., Ltd.
- Nippon Kayaku Real Estate Co., Ltd.
- Nippon Kayaku Wasser Co., Ltd.

Agro & Specialty Chemicals Group (9 companies)

- Naigai Nikka Co., Ltd.
Marketing of chemical products, etc.

- Nippon Kayaku Food Techno Co., Ltd.
Manufacturing and marketing of food, preservatives for food quality, and food additives

- Techno-green Co., Ltd.
- Gunnan Sangyo Co., Ltd.

- Nippon Kayaku Fukuyama Co., Ltd.
Undertaking of manufacturing of synthetic resins, dyes, pigments, etc.

- ▲ Sanko Kagaku Kogyo Co., Ltd.
Manufacturing and marketing of chemical products, agrochemicals, security products, etc.
- ◆ Dalian Advanced Chemical Co., Ltd.
- ◆ Itabashi Chemical Ind. Co., Ltd.

- ◆ P.T. Petrokimia Kayaku

● Consolidated subsidiaries ■ Non-consolidated subsidiaries
▲ Affiliated company (applied equity method) ◆ Affiliated company (not applied equity method)

Business Name	Nippon Kayaku Co., Ltd.
Representative	Koichiro Shimada, President
Foundation	June 5, 1916
Capital	14.932 billion yen (as of 31 May, 2003)
Head Office Address	Tokyo Fujimi Bldg., 11-2, Fujimi 1 chome, Chiyoda-ku, TOKYO 102-8172 JAPAN Tel +81-3-3237-5044 (Public Relations & Investor Relations Div.) [URL] http://www.nipponkayaku.co.jp/
Number of Employees	1,892 (as of May 31, 2003)
Banks of Accounts	Bank of Tokyo Mitsubishi, Mizuho Bank, Jyo Bank

■ Head Office and Domestic Offices

Head Office	Tokyo Fujimi Bldg., 11-2, Fujimi 1 chome, Chiyoda-ku, TOKYO 102-8172 JAPAN
Domestic Offices	
East Japan Branch	Tokyo Fujimi Bldg., 11-2, Fujimi 1 chome, Chiyoda-ku, TOKYO 102-8172 JAPAN
West Japan Branch	Kowa Awashin Bldg., 3-7, Awaji 3 chome, Chuo-ku, Osaka-shi, OSAKA 541-0047 JAPAN

■ Business Support Centers

Sapporo Office	Dunlop SK Bldg., 4-16, Ohdorinishi 10 chome, Chuo-ku, Sapporo-shi, HOKKAIDO 060-0042 JAPAN
Nagoya Office	Taiko Creacion Bldg., 19-11, Kikui 2 chome, Nishi-ku, Nagoya-shi, AICHI 451-0044 JAPAN
Fukuoka Office	Nishitetsugion Bldg., 1-1, Gokushomachi, Hakata-ku, Fukuoka-shi, FUKUOKA 812-0037 JAPAN

■ Major Products

Pharmaceuticals Division	Anti-cancer agents, neurological agents, circulatory system agents, digestive system agents, metabolic agents, antibiotics, anti-inflammatory analgesic agents, diagnostics
Inflators Division	Airbag inflators, micro gas generators for seatbelt pretensioners
Catalysts Division	Catalysts for the production of acrylic acid and methacrylic acid, plant licensing business
Functional Products Division	Special epoxy resins, epoxy resin curers, combustion retardants for synthetic resins, UV-curing type resins, acrylic polymers, high molecule flocculant, optical films
Color Chemicals Division	Disperse dyes, cationic dyes, acidic dyes, reactive dyes, direct dyes, sulphur dyes, fluorescent dyes, dye supplements, dye blenders, special dyes for non-textile applications, colors for color inkjet printers
Explosives Division	Industrial explosives, black powder, electric detonators, concrete crushers, hazard evaluation, pyrotechnics
Agrochemicals Division	Insecticides, herbicides, fungicides, acaricide, biological pesticides, soil disinfectant, animal repellents
Specialty Chemicals Division	Pharmaceutical intermediates, food additives, veterinary pharmaceuticals, animal feedstuffs and feedstuff additives, fine chemicals intermediates

■ Plants

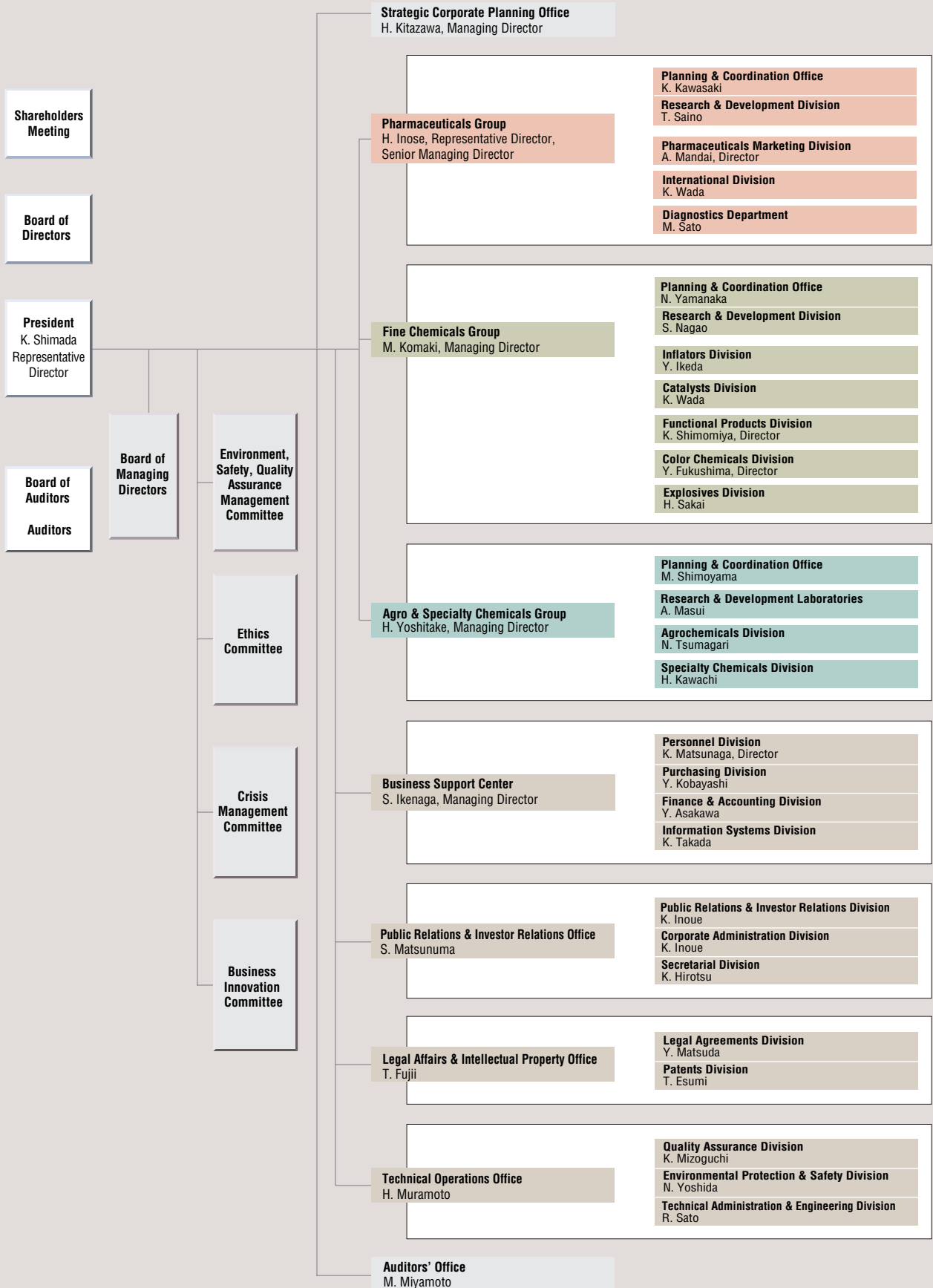
Takasaki Plant	239, Iwahanamachi, Takasaki-shi, GUNMA 370-1208 JAPAN
Tokyo Plant	31-12, Shimo 3 chome, Kita-ku, TOKYO 115-8588 JAPAN
Fukuyama Plant	126, Minookicho, Fukuyama-shi, HIROSHIMA 721-8567 JAPAN
Kashima Plant	6, Sunayama, Hasakimachi, Kashima-gun, IBARAKI 314-0255 JAPAN
Asa Plant	2300, Sanyocho, Asa-gun, YAMAGUCHI 757-8686 JAPAN
Himeji Plant	3903-39, Toyotomi, Toyotomicho, Himeji-shi, HYOGO 679-2123 JAPAN

■ Laboratories

Research & Development Division (Pharmaceuticals Group)	31-12, Shimo 3 chome, Kita-ku, TOKYO 115-8588 JAPAN
Inflators Technical Center	3903-39, Toyotomi, Toyotomicho, Himeji-shi HYOGO 679-2123 JAPAN
Catalysts Research Center	2300, Sanyocho, Asa-gun, YAMAGUCHI 757-8686 JAPAN
Functional Chemicals Research Laboratories	26-8, Shimo 3 chome, Kita-ku, TOKYO 115-0042 JAPAN
Explosives Research Laboratories	2300, Sanyocho, Asa-gun, YAMAGUCHI 757-8686 JAPAN
Research & Development Laboratories (Agro & Specialty Chemicals Group)	225-1, Koshikiya, Ageo-shi, SAITAMA 362-0064 JAPAN

Organization

(as of October 1, 2003)





Our company logo

This logo symbolizes Nippon Kayaku's company policies.
The space at the center represents the cosmos, world and expanses of the Earth.
The two soaring ellipses represent creativity and courage and the
two circles are the confidence between Nippon Kayaku, which
aspires to extraterrestrial space, and the public.



Head Office: Tokyo Fujimi Bldg., 11-2, Fujimi 1 chome, Chiyoda-ku, TOKYO 102-8172 JAPAN
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