THE REVIEW OF PHYSICAL CHEMISTRY

Founded in 1926

OF JAPAN

CONTENTS

Tadashi Makita and Toshiharu Takagi: The Thermal Diffusion in Binary Gaseous
Mixtures under Pressures, III. Hydrogen-Argon System 1
Tsunesuke Doi: Dimentional Analysis of Constant in Equation of Viscosity for
Rolling Ball Method 7
Tatsuya Ikegami: Studies on Explosion Reaction of Monovinyl Acetylene Gas.
I. Explosion Limits of Monovinyl Acetylene and Monovinyl Acetylene-Air
Mixture
Chicko Suzuki, Kiyoshi Kitamura, Keizo Suzuki and Jiro Osugi: Protein
Denaturation under High Pressure. Horse Serum Albmin
Chieko Suzuki, Keizo Suzuki, Kiyoshi Kitamura and Jiro Osugi: The Protein
Denaturation under High Pressure. Effect of pH and Some Substances on the
Pressure Denaturation of Ovalbumin Solution
Kinjiro Miyagawa and Keizo Suzuki: Pressure Inactivation of Enzyme. Some
Kinetic Aspects of Pressure Inactivation of Trypsin
Kinjiro Miyagawa and Keizo Suzuki: Pressure Inactivation of Enzyme. Some
Kinetic Aspects of Pressure Inactivation of Chymotrypsin
Hiroshi Nishiguchi, Yasuto Nakai, Kazuo Nakamura, Yasuo Deguchi and Hideo
Takagi: The Electron Spin Resonance Spectra of the Mononegative Ions of
o-, m-, and p-Therphenyl 57

THE REVIEW OF PHYSICAL CHEMISTRY OF JAPAN

(Butsuri-Kagaku no Shinpo)

President: Shinkichi Horiba, Professor Emeritus, M. J. A.

Members of Council:

Ko Hirasawa (Chief)

J. Osugi

Y. Kachi

K. Kodera

H. Takagi

R. Goto

H. Hatano

T. Yamamoto T. Fujinaga W. Jono R. Goto

S. Tanaka

E. Suito

Board of Editors:

I. Osugi (Chief)

Kyoto University

W. Jono (Associate) University of Kobe

R. Goto ("

) Kyoto University

E. Suito (

) Kyoto University

S. Shida

Tokyo Technical University

T. Kitagawa

Yokohama University

M. Tamura

Kvoto University

H. Matsuyama

Doshisha University

K. Suzuki

Ritsumeikan University

K. Hirota

S. Seki

University of Osaka

T. Ishino

University of Osaka

1. Isnino

University of Osaka

T. Imoto

Municipal University of Osaka

R. Fujishiro

Municipal University of Osaka

O. Toyama

Prefectural University of Osaka

S. Ono

Prefectural University of Osaka

K. Juna

Konan University

S. Tsuchihashi

University of Kobe

S. Hasegawa

Okayama University

T. Kume

Tokushima University

H. Togawa

Doshisha University

Secretary:

H. Teranishi.

K. Shimizu

M. Sato

H. Matsumiya



NISSO HI-CHLON

(Ingredient: Calcium Hypochlorite 70% min, granular)

- Caustic Soda
- Sodium Cyanide
- Sodium Hydrosulphite
- DDT, BHC (Technical)

Manufacturer & Exporter of Chemicals

NIPPON SODA CO., LTD.

Head Office : Otemachi, Tokyo, Japan Cable Address: "SODANIPPON" TOKYO



March 28, 1963

Communications to the Editor should be addressed to Board of Editors, The Physico-Chemical Society of Japan, College of Science, Kyoto University, Kyoto, Japan.

Business Correspondences should be addressed to: Secretary, The Physico-Chemical Society of Japan, College of Science, Kyoto University, Kyoto, Japan.

Purchase Order should be addressed to: Maruzen Co., Ltd., Nihonbashi, Chuo-ku, Tokyo, Japan.

Published by

THE PHYSICO-CHEMICAL SOCIETY OF JAPAN

(Nippon Butsuri-Kagaku Kenkyu Kai)

College of Science, Kyoto University, Kyoto, Japan

Printed by KAWAKITA INSATSU CO., Kyoto, Japan

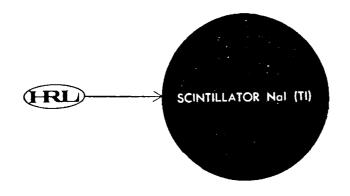
The Review of Physical Chemistry of Japan

Vol. 32, 1962 No. 1 & 2

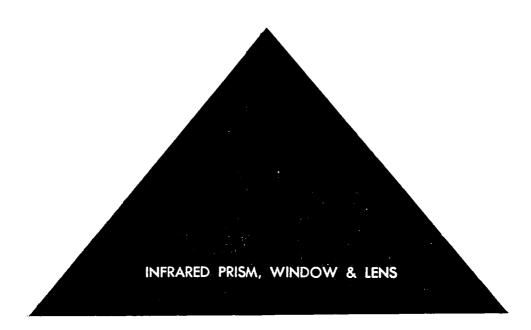
CONTENTS

Tadashi Makita and Toshiharu Takagi: The Thermal Diffusion in Binary
Gaseous Mixtures under Pressures, III. Hydrogen-Argon System
Tsunesuke Doi: Dimentional Analysis of Constant in Equation of Viscocity for
Rolling Ball Method
Tatsuya Ikegami: Studies on Explosion Reaction of Monovinyl Acetylene Gas.
I. Explosion Limits of Monovinyl Acetylene and Monovinyl Acetylene-Air
Mixture
Chieko Suzuki, Kiyoshi Kitamura, Keizo Suzuki and Jiro Osugi: Protein
Denaturation under High Pressure. Horse Serum Albmin
Chieko Suzuki, Keizo Suzuki, Kiyoshi Kitamura and Jiro Osugi: The
Protein Denaturation under High Pressure. Effect of pH and Some Substances on
the Pressure Denaturation of Ovalbumin Solution 3
Kinjiro Miyagawa and Keizo Suzuki: Pressure Inactivation of Enzyme. Some
Kinetic Aspects of Pressure Inactivation of Trypsin 4
Kinjiro Miyagawa and Keizo Suzuki: Pressure Inactivation of Enzyme. Some
Kinetic Aspects of Pressure Inactivation of Chymotrypsin 5
Hiroshi Nishiguchi, Yasuto Nakai, Kazuo Nakamura, Yasuo Deguchi and
Hideo Takagi: The Electron Spin Resonance Spectra of the Mononegative
Ions of o-, m-, and p-Therphenyl

Published by
THE PHYSICO-CHEMICAL SOCIETY OF JAPAN
College of Science, Kyoto University, Kyoto, Japan



SYNTHETIC OPTICAL CRYSTALS





HRL SCINTILLATOR Not (TI)

COMPLETE INFORMATION ON REQUEST, MAIL TO.....

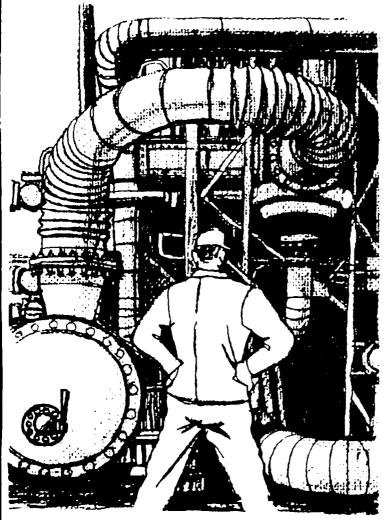
HORIBA INSTRUMENTS INC.

NAKASHINMICHI, SANJO, NAKAKYO, KYOTO, JAPAN.



HRL NaCI PRISM

TOWARD THE GOOD LIFE THROUGH CHEMISTRY !!



MAIN PRODUCTS

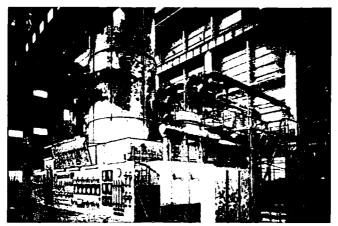
CHEMICAL FERTILIZER,
UREA, P.C.P. UREA,
AMMONIUM SULPHATE,
UREA COMPOUND FERTILIZER
YOGEN (Special product for
foliage feeding)

INDUSTRIAL CHEMICALS:
METHANOL, FORMALDEHYDE,
ACRYLONITRILE, SODIUM
TRIPOLYPHOSPHATE,
SODIUM CYANIDE
SYNTHETIC RESINS

& PLASTICS:
UREA, MELAMINE,
POLYESTER & STYRENEACRYLONITRILE COPOLYMER
(MOULDING MATERIAL,
ADHESIVE, COATING MATERIAL,
PAPER AND TEXTILE TREATMENT
& OTHERS)

TOYO KOATSU INDUSTRIES, INC.

Mitsui Daini Bekkan, Nihonbashi, Tokyo Cable Address: "TOATSUIND TOKYO" Oxygen Generating Plant



Chemica Dlants

Fertilizer Plant Cement Plant Oxygen Plant

Other Major Products:
Rolled Steel Products, Steel
Castings & Forgings, General
Industrial Machineries, Light
Metal Alloy Castings & Forgings, Titanium Products, Arc
Welding Electrodes, Small
Tools, Non Ferrous Metals &
Their Products, Sugar Cane
Milling Plant.

Oxygen Compressors







Fertilizer Plant in Pakistan

Capital

¥ 32,000,000,000

KOBE STEEL

KOBE, JAPAN Cable "KOBESTEEL KOBE" TOKYO OFFICE Cable "KOBESTEEL TOKYO"

NEW YORK OFFICE e- 80 Pine Street, New York 5, N.Y., U.S.A.

DÜSSELDORF OFFICE e- Düsseldorf Immermann Street 10, Germany

ASAHI CHEMICAL INDUSTRY CO., LTD.

Established in: June, 1931 Capital: 9,360,000,000

Board of Directors

Chairman:

Takenobu Kataoka

President: Vice-President: Kagayaki Miyazaki Toru Kariya

Senior Managing Directors: Kenzo Obata, Fukashi Hori, Masao Kubota Managing Directors: Kazumitsu Isobe, Hiroshi Sakurai, Goro Nakazawa, Yoshio

Sumite



Mr. K. Miyazaki, President

The company is now manufacturing Bemberg (cuprammonium rayon) viscose rayon, Cashimilon (an acrylic fibre) chemicals including Asahi-aji (a seasoning) and many types of explosives.

Since its organization about thirty years ago, Asahi Chemical Industry Company has developed by leaps and bounds into one of the leading chemicals manufacturing concerns in this country.

As regards textile products of Japan, fears are entertained in these years for their exportation as it may be influenced by Japan's liberalization of foreign trade and by American programs for the protection of dollars. However, the export of Bemberg and rayon of the company are developing favorably through opening of new market. The range of the use of Cashimilon is also increasing although the product has some weaknesses incidental to a new product. As for chemicals such as foodstuffs and gunpowders, the expansion and rationalization of their various facilities have produced good result and they are going strong at

present.

Export of Cashimilon, for which the company has made strenuous effort since several years ago, has become regular and full-scale, particularly with respect to its knit yarn to Australia. New Zealand and South Africa. In addition, export of Cashimilon in the form of raw cotton to Formosa, U.S.A., and W. Germany, and that of Cashimilon textiles to Europe and Middle and South America are on the increase.

As for chemicals, a new factory of Asahiaii using Zymotechnics with a capacity of 275 tons has been in full-scale production these years. Export of Asahiaji which was hitherto limited to South East Asia will be active, as it become possible to secure necessary volume for export by operation of new factory.

Gunpowder of the company continues in good request at home, chiefly from the constuction industry. In the sphere of export, the company dispatched engineers concerned to South East Asian countries, and thus expanded new markets there.

Head Office: 25-1 Dojima Hamadori 1-chome, Kita-ku, Osaka, Japan

Tokyo Office: 12-1 Yuraku-cho, Chiyoda-ku, Tokyo, Japan

Other Branch Offices: Nobeoka, Fuji, Fukuoka, Sapporo, Nagoya, Fukui, Kanazawa and New York

Plants: Nobeoka, Fuji, Kawasaki, Sakanoichi, Wakayama, Motoyama

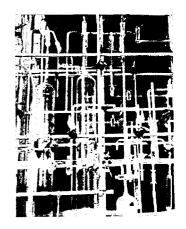
Laboratories: Tokyo (Technical Research Laboratory) and Takatsuki (Textile Research Laboratory)

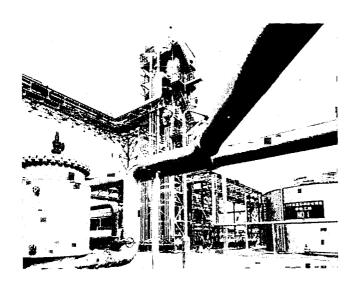
PRODUCTS FOR TODAY—— PRODUCTS FOR TOMORROW

KANEGAFUCHI now serves more than 100 industries varying from food to feed, tobacco to textiles, pharmaceuticals to plastics.

KANEGAFUCHI's variety of products include industrial chemicals, polymers, oil & fat products and fermentation products. Such diversified operation ranks KANEGAFUCHI a unique position in the industry.

KANEGAFUCHI's research activities which enabled successful achievement of today's products are continually producing a flow of new products to meet the challenge of tomorrow.





PRINCIPAL PRODUCTS:

- KANEVINYL (PVC & copolymer, PVC compound) KANEKALON (modacrylic fiber) Electric wires & cables
- Caustic soda, Hydrochloric acid, KANECHLOR (transformer oil, heat transfer medium), Butanol, Acetone,
- Bakery yeast, RNP special type yeast, BDF (animal feed additives)
- Margarine, Shortening oil, Soap, Glycerine

KANEGAFUCHI CHEMICAL INDUSTRY COMPANY, LTD.

14 2-Chome, Awazimachi, Higashi-ku, Osaka Cable address: CHEMIKANE