

Programs

【Special Symposium】

Monday, December 14, 2009, 14:30-17:40

Site Main Hall, November Hall, Kinki University

Subject Health Protection and Promotion in Indoor Environment

Chair Jiro Okumura (Kinki University School of Medicine)

- Program
1. Health Risks in Indoor Environment
Iwao Uchiyama
(Emeritus Professor of Kyoto University)
 2. Latest Topics on Study of Indoor Environmental Medicine
Yoshito Ikada
(Dept. of Indoor Environmental Medicine, Nara Medical University)
 3. Timber as a Material for Controlling Humidity and Contamination in Indoor Environment
Shuichi Kawai
(Research Institute for Sustainable Humanosphere, Kyoto University)
 4. Allergy and Indoor Environment
Hirohisa Takano
(Environmental Health Science Division,
National Institute for Environmental Sciences)
 5. Policies and Related Laws for Indoor Environmental Issues
Satoshi Yoshida
(Environmental Health Division, Ministry of Health, Labour and Welfare)

【NPO/Business Presentation】

Monday, December 14, 2009, 11:45-13:00

Site Small Hall, November Hall, Kinki University

Chair Kiyomi Fujita (Japan Healthy House Association)

Program

1. TOYAMA Co., LTD.
Highly Sensitive and Real time Detective TOF Mass Spectrometer of Multi Components
2. Industrial Hygiene Device Calibration, Inc.
Human Life and Environment Products
3. KONDOH INDUSTRIES LIMITED, Unipac CORPORATION
Development of Washable HVAC Medium Efficiency Filters

【Subcommittee Meeting】

Microorganisms

Tuesday, December 15, 2009, 16:30-18:30

- Site Main Hall, November Hall, Kinki University
- Subject The evaluation test method of air cleaners on removal performance of airborne microbes
- Organizer Keiko Abe (Institute of Environmental Biology)
- Chair Koichi Ikeda (Nihon University)
- Program
1. Introduction and outline
 - Keiko Abe (Institute of Environmental Biology)
 2. Selection of the test microbe
 - Keiko Abe (Institute of Environmental Biology)
 3. Structure of the test room, include leakage examinations and sterilization methods
 - Syunji Okuda (KITASATO Research Center of Environmental Science)
 4. Aerial ultrasound method for dispersion of microbe in the test room
 - Yuji Suyama (Tokyo Dental College), Tetsuro Otsuka (Nihon University)
 5. Sampling method of airborne microbes for performance assessment
 - U Yanagi (Tohoku Bunkagakuen University)
 6. Practical examples
 - Yuji Kawakami (FCG Research Institute, Inc.)

Chemicals

Tuesday, December 15, 2009, 16:30-18:30

- Site Small Hall, November Hall, Kinki University
- Subject Museum Chemistry
- Organizer Yoshika Sekine (School of Science, Tokai University)
- Chair Yoshika Sekine (School of Science, Tokai University)
- Program
1. Annual activity report
Yoshika Sekine
(School of Science, Tokai University)
 2. Air quality problem in museum
Toshitami Ro
(National Research Institute for Cultural Properties, Tokyo)
 3. Simple method for the measurement of indoor air quality of museum
Fumio Watanabe
(Gastec Corporation)
 4. Discussions

【Student Meeting】

Monday, December 14, 2009, 13:00-14:30

Site	Meeting Room, November Hall, Kinki University
Theme	Future development of Indoor Environmental Sciences
Organizers	Yoshika Sekine (Academic Committee of SIEJ, School of Science, Tokai University) Shiro Ikeda (Student member, Graduate School of Science, Tokai University) Yuuki Yamashita (Student member, Graduate school of Tohoku Bunka Gakuen University)

Student Meeting will be held in order to promote mutual friendship, information exchange and understanding on research details among student members of Society of Indoor Environment, Japan. All of the student members are welcome. Let us make casual talks in free discussion on a thesis of “Future development of Indoor Environmental Sciences”. This kind of meeting is a first challenge to our society.

Major contents	<ol style="list-style-type: none">1. Opening remarks by student organizer2. Self-introduction by participants3. Free discussion4. Concluding remarks
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* This is a luncheon style meeting. No registration is required in advance.

【Scientific Program】

Poster Session (Large Hall : December 14, 9:30~11:30)

Chair Daisuke Nakajima (9:30~10:30)

P-01 Relationship between indoor and outdoor concentration of airborne cedar pollens and particulate matters in a kindergarten in Isehara city. — The second report —

○Hideaki Matsuki¹⁾, Akiyoshi Yamaguchi¹⁾, Hitomi Sano¹⁾, Naomichi Yamamoto²⁾
1)Tokai University, School of Health Sciences, 2)Yale University

P-02 Survey on indoor microbes in a school building

○Susumu Sekiguchi¹⁾, Wakana Naganuma²⁾, Atsushi Sato³⁾, Nobuhisa Morooka¹⁾
1)Department of Food and Nutrition, Koriyama Women's University, 2)Furukawa Seiryō Hospital, 3)Department of Architecture, Oyama National College of Technology

P-03 Impact of tunnel winds on environmental assessment of airborne microorganisms in the railway station

○Tamami Kawasaki¹⁾, Takashi Kyotani¹⁾, Tomoyoshi Ushioji¹⁾, Hunjyun Lee²⁾, Toshio Hayakawa¹⁾
1)Environmental Biotechnology Laboratory, Railway Technical Research Institute, 2)Hygiene and Microbiology Research Center

P-04 Inhibitory effect for mold growth inside the room using a heat exchange ventilation system equipped with a dehumidification function

○Nobuhiko Yamashita¹⁾, Yukiko Matsumoto²⁾, Keiko Abe³⁾
1)Energy & Technology Laboratories, Osaka Gas Co., Ltd., 2)Gas Utilization Technology Dept., Residential Energy Business Unit, Osaka Gas Co., Ltd., 3)Institute of Environmental Biology

P-05 Pasteurization test of airborne fungi that uses two oxidation chlorine medicine

○Nobuo Yamamura¹⁾, Kazuhiro Hashimoto²⁾, Yuji Kawakami^{1,2)}
1)The society of preventive for indoor environment, Japan, 2)Laboratory of Environmental Science, FCG Research Institute, Inc.

P-06 The characteristics of asbestos distribution in public buildings

○Hyang Park¹⁾, Yoon-Hee Cho¹⁾, Jun-Sik Chung¹⁾, Yoon Shin Kim²⁾, Young-Man Roh²⁾, Hwa-Mi Park²⁾, Seong-Ki Jang³⁾, Ho-Ju Lim³⁾, Sung-Ho Choi³⁾
1)EnH Technology, Inc, 2)Institute of Environmental & Industrial Medicine, Hanyang University, 3)Air Quality Control Research Division, National Institute of Environmental Research

P-07 Indoor concentrations of chemicals in renovated university cafeteria

○Ayumi Onoue¹⁾, Yukio Akiyama¹⁾, Naoki Kunugita²⁾, Keiichi Arashidani¹⁾
1)School of Health Sciences, University of Occupational and Environmental Health, Japan, 2)National Institute of Public Health

P-08 Indoor air pollution of yakitori restaurant

○Chizue Kaku, Yukio Akiyama, Keiichi Arashidani
School of Health Sciences, University of Occupational and Environmental Health, Japan

- P-09 Indoor pollution by phthalic acid monoesters in house dust
○Hideto Jinno, Yoko Furukawa, Yukiko Ota, Toshiko Tanaka-Kagawa, Tetsuji Nishimura
Division of Environmental Chemistry, National Institute of Health Sciences
- P-10 Field survey on the phthalates in house dust and residential air
○Toshiko Tanaka-Kagawa, Yoko Furukawa, Yukiko Ota, Hideto Jinno, Tetsuji Nishimura
Division of Environmental Chemistry, National Institute of Health Sciences
- P-11 Influence of carbon dioxide concentration in air on the production and release of flavor components of herbs
○Takahiro Takayama¹, Yukiko Kado², Shiro Ikeda², Yoshika Sekine¹
1)School of Science, Tokai University, 2)Graduate School of Science, Tokai University
- P-12 Measurement of emission rate of plasticizers from PVC products for emission estimation of plastic additives
○Kiyotaka Tsunemi, Akemi Kawamoto
National Institute of Advanced Industrial Science and Technology
- P-13 Effect of gas generation by storage books on indoor air environment
○Toshitami Ro, Chie Sano
National Research Institute for Cultural Properties, Tokyo
- P-14 Development of an indoor air quality model based on Japanese life style
○Hiroya Shinozaki, Haruyuki Higashino
National Institute of Advanced Industrial Science and Technology
- P-15 Inspection of bactericidal effects by positively and negatively charged cluster ions in real life spaces
○Misaki Nakamura, Kazuo Nishikawa
SHARP Co. Ltd.
- P-16 Efficiency assessment of air cleaning system for chicken productivity in broiler house
○Yoon Shin Kim¹, Ki Youn Kim¹, Jin Won Jung², Mi Seok Oh², Jong Duk Kim³, Ka Young Yang³, Baek Youn⁴, Jung Ho Kim⁴, Jun Hyoun Kwon⁴, Jun Eui Chang⁴
1)Hanyang University, 2)EnH Technology, Inc, 3)Cheonan Yonam College, 4)Samsung Electronics
- P-17 Control efficiency of air cleaning system for biological pollutants in school classrooms
○Yoon Shin Kim¹, Jin Won Jung², Mi Seok Oh², Baek Youn³, Jung Ho Kim³, Rae Eun Park³
1)Hanyang University, Seoul, 2)EnH Technology, Inc, Seoul, 3)Samsung Electronics
- P-18 Development of filter materials using the immobilized enzymes and charcoals
○Yutaka Morikawa, Yuuki Shimakami, Tetsuya Kondo, Masako Ito
Aichi Industrial Technology Institute

Chair Tamami Kawasaki (10:30~11:30)

P-19 Improvement of a rapid method for enumeration of airborne bacterial number by fluorescent staining

○Saitou Satoshi
Takenaka Corporation

P-20 Allergen removal performance test in general houses with several kinds of high performance vacuum cleaners

○Yuji Kawakami¹⁾, Noriko Kohyama²⁾, Azumi Fukuda¹⁾, Kazuhiro Hashimoto¹⁾, Hiroshi Yasueda³⁾

1)Laboratory of Environmental Science, FCG Research Institute Inc, 2)Dyson K. K,
3)Clinical Research Center for Allergy and Rheumatology, National Hospital Organization, Sagamihara National Hospital

P-21 Studies on the inactivation performance of influenza virus by using the streamer discharger

○Yoshio Okamoto¹⁾, Kenkichi Kagawa¹⁾, Le thi Quynh Mai²⁾

1)DAIKIN Industries, Ltd., 2)National Institute of Hygiene and Epidemiology

P-22 The use of ultrasound energy propagated in wood

○Tetsurou Otsuka¹⁾, Kei Suzuki¹⁾, Yuuji Kawakami²⁾

1)College of Indust., Tech., Nihon University, 2)FCG Research Institute, Inc.

P-23 Bioassay based toxicity assessment of house dust collected from household vacuum cleaner

○Masafumi Oikawa¹⁾, Shiro Ikeda¹⁾, Takuya Nakabayashi²⁾, Yoshika Sekine¹⁾

1)Graduate School of Science, Tokai University, 2)Department of Chemistry, School of Science, Tokai University,

P-24 Measurement of the concentration of ozone generated from portable air cleaner

○Aya Onuki, Ikue Saito, Masayuki Kurita, Akio Ogata
Tokyo Metropolitan Institute of Public Health

P-25 Screening of flame retardants in textiles by DART-TOFMS

○Yoko Furukawa, Toshiko Tanaka-Kagawa, Yukiko Ota, Hideto Jinno, Tetsuji Nishimura

Division of Environmental Chemistry, National Institute of Health Sciences

P-26 High performance liquid chromatography of formaldehyde in indoor air using a miniature diffusion scrubber and acetylacetone reagent

○Yohei Hosoda¹⁾, Toshiro Matsumura¹⁾, Kenji Yoshikawa¹⁾, Yukitoki Morita¹⁾, Akio Sakuragawa¹⁾, Kunitoshi Matsunobu²⁾, Ai Nakamura²⁾

1)Nihon University, College of Science and Technology, 2)Gastec Corporation

P-27 Indoor air quality monitoring via IT network — Colorimetric monitoring of formaldehyde in indoor environment using image transmission of mobile phone —

○Risa Katori, Yoshika Sekine
Graduate School of Science, Tokai University

- P-28 A study on evaluation of air cleanliness through the remote environmental monitoring system in health care facilities
○Yuji Suyama¹, Satoru Takaku², Masanori Nashimoto³, Ken Itoh³, Hidetoshi Koshi³, Utena Tunosue³, Yoji Yamaguchi⁴, Taro Nakagawa⁵, Takashi Matukubo¹
1)Department of Epidemiology and Public Health Tokyo Dental College, 2)Saitama Prefectural University School of Health and Social Services, 3)General Implant Research Center, 4)Kankyo research Co.,Ltd., 5)Shinyei Technology Co., Ltd.
- P-29 The study on constant generation of low concentration formaldehyde gas with porous polyethylene (PE) filter
○Daisuke Oikawa , Youji Yamaguchi
Kankyo Research Co.,Ltd.
- P-30 Time dependence of metabolite concentrations in urine of chlorpyrifos injected rat
○Daisuke Nakajima¹, Ryo Kamata¹, Shinji Tsukahara², Kiyohiko Watanabe³, Takumi Takasuga³, Hidekazu Fujimaki¹, Fujio Shiraishi¹
1)Research Center of Environmental Risk, National Institute for Environmental Studies, 2)Faculty of Science, Saitama University, 3)Shimadzu techno-research Inc.
- P-31 Report on questionnaire for head lice and effect evaluation of comb
○Misao Shikama¹, Azumi Fukuda², Yuji Kawakami²
1)Industrial Hygiene Device Calibration Inc., 2)Laboratory of Environmental Science, FCG Research Institute Inc.
- P-32 Field study about relationship between formaldehyde concentrations and symptoms of residents according to house age
○Michiyo Azuma, Natsumi Sako, Maiko Nakatsuji
Kio University
- P-33 Effects of formaldehyde exposure on social stressed mice
○Lin Ling¹, Kazunari Kume², Hiroyuki Sakakibara¹, Asako Matsui¹, Akiharu Koyanagi¹, Shunsuke Yamazaki¹, Kayoko Shimoi¹
1)Graduate School of Nutritional and Environmental Sciences, University of Shizuoka, 2)Shizuoka Institute of Environment and Hygiene
- P-34 A study of the effect of exposure to formaldehyde at the high concentration (1) Kazunari Kume¹, Lin Ling², Hiroyuki Sakakibara², Takeshi Ohura², Takashi Amagai², Kayoko Shimoi²
1)Shizuoka Institute of Environment and Hygiene, 2)Graduate School of Nutritional and Environmental Sciences, University of Shizuoka
- P-35 Practice of education on the indoor environment — Special science course on the sick house syndrome by collaboration of high school and university —
○Ayumi Kawamura¹, Yoshika Sekine¹, Fukushima Akiyoshi², Tanii Akira²
1)Department of Chemistry, Graduate School of Science, Tokai University, 2)Tokai University Fuzoku Boyo Senior High school
- P-36 Comparing the benefit and risk caused by the use of DecaBDE as TV flame retardant
○Tomoya Inoue, Shigeki Masunaga, Satoshi Nakai, Hideo Ohtani
Graduate School of Environment and Information Sciences, Yokohama National University

Oral Session (Small Hall : December 14, 9:00~11:30)

【Health Survey • Epidemiology】

Chair Hiroshi Nitta (9:00~10:15)

- A-01 Remodeling the house and change in health condition of a patient with sick house syndrome and/or MCS
○Tamami Suzuki¹⁾, Yoshiko Bai¹⁾, Masao Inoue²⁾
1)Faculty of Health Science, Gumma PAZ College, 2)IAQ Research Associate
- A-02 Chemical sensitivity screening test in Japanese, English and Korean on website and its efficiency to prevent sick building syndrome
○Hiroko Nakaoka^{1),2)}, Emiko Todaka^{1),2)}, Masamichi Hanazato^{2),3)}, Chisato Mori^{1),2),4)}
1)Department of Bioenvironmental Medicine, Graduate School of Medicine, Chiba University, 2)Center for Environment, Health and Field Sciences, Chiba University, 3)Graduate School of Engineering, Chiba University, 4)Center for Environment, Health and Field Sciences, Chiba University
- A-03 Symptom prevalence of sick house syndrome in elementary school children in Sapporo
○Atsuko Araki, Motoyuki Yuasa, Ayako Kanazawa, Reiko Kishi
Hokkaido University Graduate School of Medicine, Department of Public Health Sciences
- A-04 Guidance case with recovery from bad health caused by wallpaper of bedroom and repair of it
○Hiroshi Hirose, Masami Okamoto, Mitsuo Kitamura, Motohiro Tsuji, Kazuo Nonomura
Group of Study on Prevention for Residential Diseases
- A-05 “Chemiless Town” which aims to prevent Sick-building Syndrome by improving the environment and “Chemiless Certificate”
○Emiko Todaka^{1),2)}, Hiroko Nakaoka^{1),2)}, Masamichi Hanazato³⁾, Chisato Mori^{1),2),4)}
1)Center for Environment, Health and Field Sciences, Chiba University, 2)Department of Bioenvironmental Medicine, Graduate School of Medicine, Chiba University, 3)Graduate School of Engineering, Chiba University, 4)Center for Preventive Medical Science, Chiba University

【Contamination Control, Environmental Design, Secondary Emission】

Chair Naoki Kagi (10:15~11:30)

- A-06 Complete removal of cigarette smoke utilizing thermally generated holes in oxide semiconductors at high temperatures
○Jin Mizuguchi, Hiroo Takahashi, Shigeru Suzuki
Graduate School of Engineering, Yokohama National University

A-07 Consideration on air ventilation of a car

○Kunihiko Ogasawara¹⁾, Makoto Kinoshita¹⁾, Tomoaki Iida¹⁾, Shuji Fujii²⁾

1)Environmental Control Center Co., Ltd., 2)Tokyo Institute of Technology

A-08 Experiment on reduction methods of air condition energy by semiconductor sensor on a building

○Yokogawa Yoshiaki¹⁾, Miyake Yasuo¹⁾, Nabeshima Yukihiro¹⁾, Katoh Junichi²⁾, Nakayama Masaki³⁾, Matsugu Tsuneyoshi³⁾

1)URBANEX Co.,Ltd. Technology Management Department, 2)OOSAKAGASU TOTAL FACILITIES Co.,Ltd. Building Management Department Keiji Management Center, 3)NEW COSMOS ELECTRIC CO., LTD.

A-09 An analysis of terpenes ozonolysis under coexisting with aldehydes

○Yusuke Ishizuka¹⁾, Miyuki Noguchi¹⁾, Atsushi Mizukoshi²⁾, Yukio Yanagisawa¹⁾

1)Graduate School of Frontier Sciences, The University of Tokyo, 2)Tokyo Metropolitan Industrial Technology Research Institute

A-10 A Study on the Changing Effects on Odorant Emission Rates Caused by Human Behaviors

Atsuo Nozaki¹⁾, ○Kiyoaki Honda¹⁾, Yasuhiro Hashimoto²⁾, Yasunori Narita³⁾

1)Graduate School of Health and Environment Sciences, Tohoku Bunka Gakuen University, 2)The Aino Institute of Health Science, 3)Life Science Research Laboratory Co., Ltd. (Indoor Environmental Technology Research Association)

Oral Session (Large Hall : December 15, 9:00~12:00, 13:00~16:15)

【Microbial Contamination】

Chair Keiko Abe (9:00~10:00)

B-01 Microbial contamination in an individual air conditioning system. part2. specification of the pollution source

○U Yanagi¹⁾, N. Kagi²⁾, S. Yoshizawa²⁾, S. Yamazaki²⁾, H. Saitou³⁾, K. Saitou³⁾, R. Kamakura³⁾, J. Sugiyama³⁾, K. Ikeda⁴⁾

1)Tohoku Bunka Gakuen University, 2)National Institute of Public Health, 3) Building Management Education Center, 4)Nihon University

B-02 Microbial contamination in an Individual air conditioning system. part2. Measurement of MVOC from humidifier

○N. Kagi¹⁾, U Yanagi²⁾, H. Saitou³⁾, K. Saitou³⁾, R. Kamakura³⁾, J. Sugiyama³⁾, K. Oomawari⁴⁾, S. Shimizu⁴⁾

1) National Institute of Public Health, 2) Tohoku Bunka Gakuen University, 3)BMEC, 4)JADCA

B-03 Field survey on indoor microorganism in twenty-four residences

○Naoya Ando¹⁾, Hiroshi Yoshino¹⁾, Rie Takaki¹⁾, Shin-ichi Tanabe²⁾, Kenichi Hasegawa³⁾, Motoya Hayashi⁴⁾

1)Department of Architecture & Building Science, Tohoku University, 2)Department of Architecture, Waseda University, 3)Akita Prefectural University, 4)Miyagi Gakuin Women's University

B-04 Sampling of airborne microorganisms in university

○Sumiyo Ishimatsu¹⁾, Kentaro Katafuchi^{1),2)}, Toru Ishidao¹⁾, Yukiko Fueta¹⁾, Hatsumi Taniguchi³⁾, Hajime Hori¹⁾

1)Department of Environmental Management, School of Health Sciences, University of Occupational and Environmental Health, Japan, 2)presence: Canon Inc., 3)Department of Microbiology, School of Medicine, University of Occupational and Environmental Health, Japan

【Volatile Organic Compounds, Environmental Tobacco Smoke】

Chair Ikue Saito (10:00~11:00)

B-05 Characterization of exposure to indoor airborne fungal biomass estimated from the ergosterol concentration by GC/MS using large volume-sample injection

○Katsuyoshi Asano¹⁾, Yoshiki Onji¹⁾, Munehiro Terada¹⁾, Haruo Takahashi²⁾, Daisuke Nakajima³⁾, Shiho Kageyama³⁾, Fujio Shiraishi³⁾, Sumio Goto⁴⁾

1)Nara Prefectural Institute for Hygiene and Environment, 2)Public Health Laboratory of Chiba Prefecture, 3)National Institute for Environmental Studies, 4)Azabu University

B-06 Continued study on VOC, mold and mites in sick-house syndrome

○Nobuo Hamada, Koh-Ichi Takakura

Osaka City Institute of Public Health and Environmental Sciences

B-07 Evaluation of personal exposure to environmental tobacco smoke in daily life — Outline of the study —

○Satoshi Nakai¹⁾, Yukio Yanagisawa²⁾

1)Graduate School of Environment and Information Sciences, Yokohama National University, 2)Graduate School of Frontier Sciences, University of Tokyo

B-08 Evaluation of personal exposure to environmental tobacco smoke in daily life — Measurement of carbon monoxide and particulate matter level —

○Hideaki Matsuki¹⁾, Hiromichi Yokoyama²⁾, Yoshiaki Ishizu³⁾

1)Tokai University, School of Health Sciences, 2)Kanagawa University of Human Services, 3)Hiroshima International University, Faculty of Engineering

Chair Hideto Jinno (11:00~12:00)

B-09 Evaluation of personal exposure to environmental tobacco smoke in daily life — Volatile organic compounds —

○Keiichi Arashidani¹⁾, Yukio Akiyama¹⁾, Yoshiaki Ishizu²⁾

1)School of Health Sciences, University of Occupational and Environmental Health, Japan, 2)Faculty of Engineering, Hiroshima International University

B-10 Evaluation of personal exposure to environmental tobacco smoke in daily life — Carbonyl compounds —

○Miyuki Noguchi¹⁾, Atsushi Mizukoshi²⁾, Takako Yamaki¹⁾, Yukio Yanagisawa¹⁾

1)The University of Tokyo, 2)Tokyo Metropolitan Industrial Technology Research Institute

B-11 Evaluation of personal exposure to environmental tobacco smoke in daily life — Measurement of nicotine and 3-ethenylpyridine —

○Yoshiaki Ishizu, Yoshiko Ishizu

Hiroshima International University

B-12 Evaluation of personal exposure to environmental tobacco smoke in daily life — Respirable suspended particles, solanesol, polycyclic aromatic hydrocarbons —

Kentaro Kurabayashi¹⁾, Takeshi Ohura¹⁾, OTakashi Amagai¹⁾, Satoshi Nakai²⁾

1) Graduate School of Nutritional and Environmental Sciences, University of Shizuoka, 2) Graduate School of Environment and Information Sciences, Yokohama National University

【VOC、House Dust】

Chair Keiichi Arashidani (13:00~14:00)

B-13 Detection of non-regulated compounds from a renovated house where sick house syndrome broke out

○Satoshi Kobayashi^{1),6)}, Shinji Takeuchi^{1),6)}, Hiroyuki Kojima¹⁾, Tetsuo Takahashi¹⁾, Kazuo Jin¹⁾, Hitoshi Miyazawa^{2),6)}, Yukihiro Yokoyama^{3),6)}, Tomio Maebayashi^{4),6)}, Kazuhiko Watanabe^{5),6)}

1)Hokkaido Institute of Public Health, 2)Nishi-Sapporo Dermatological Clinic, 3)S.E.T.Architectural Planning Office, 4)Aoyama Preserve Co.Ltd., 5)Watanabe Kazuhiko Pediatric Clinic, 6)Indoor Environment Investigation Society, Hokkaido

B-14 House dust contributes to lead exposure of Japanese children.

○Mai Takagi¹, Jun Yoshinaga¹, Atsushi Tanaka², Haruhiko Seyama², Ayumi Uematsu³, Masayuki Kaji⁴

1)Department of Environmental Studies, University of Tokyo, 2)National Institute for Environmental Studies, 3)Divison of Endocrinology and Metabolism, Shizuoka Children's Hospital, 4)Shizuoka Public Health Center

B-15 Survey of plasticizers and flame retardants in house dust collected from six areas in Japan

○Ikue Saito¹, Ayako Kanazawa², Atsuko Araki³, Kanehisa Morimoto⁴, Kunio Nakayama⁴, Eiji Shibata⁵, Masatoshi Tanaka⁶, Tomoko Takigawa⁷, Takesumi Yoshimura⁸, Hisao Chikara⁸, Masayuki Kurita¹, Akio Ogata¹ and Reiko Kishi³

1)Tokyo Metropolitan Institute of Public Health, 2)Asahikawa University, 3)Hokkaido University, 4)Osaka University, 5)Aichi Medical University, 6)Fukushima College, 7)Okayama University, 8)Fukuoka Institute of Health and Environmental Sciences

B-16 A study on the relationship between sick house syndrome and concentration of organic phosphate triesters in house dust

○Tomoya Takeda¹, Atsuko Araki¹, Ayako Kanazawa¹, Ikue Saito², Masayuki Kurita², Akio Ogata², Kanehisa Morimoto³, Kunio Nakayama³, Eiji Shibata⁴, Masatoshi Tanaka⁵, Tomoko Takigawa⁶, Takesumi Yoshimura⁷, Hisao Chikara⁷, Reiko Kishi¹

1)Hokkaido University Graduate School of Medicine, Department of Public Health Sciences, 2)Tokyo Metropolitan Institute of Public Health, 3)Osaka University Graduate School of Medicine, 4)Aichi Medical University School of Medicine, 5)Fukushima College, 6)Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences 7)Fukuoka Institute of Health and Environmental Sciences

【Field Survey on VOC and its Sources】

Chair Satoshi Kobayashi (14:00~15:00)

B-17 Research on emission source of VOCs and aldehydes in a newly built wooden house

○Ikue Saito¹, Aya Onuki¹, Shin-ichi Uehara², Hiroshi Seto³, Masayuki Kurita¹, Akio Ogata¹

1)Tokyo Metropolitan Institute of Public Health, 2)Japanese Consumers' Co-operative Union, 3)Tokyo Kebikyoin Foundation

B-18 Emissions of carbonyl compounds from food in a household refrigerator

○Shinichiro Murata¹, Yoshika Sekine¹, Anri Yajima², Michio Butsugan³

1)Graduate School of Science, Tokai University, 2)School of Science, Tokai University 3)Hitachi Chemical Techno Service Co., Ltd.

B-19 Adsorption/desorption characteristics of p-dichlorobenzene on the surface of indoor materials

○Naohide Shinohara

National Institute of Advanced Industrial Science and Technology (AIST)

B-20 Measurement method of VOCs emission rate from VOCs mixture-containing adhesives

○Shin-ichi Tanabe, Hoon Kim, Hisato Nakamura, Jun Koganezawa
Waseda University

Chair Shin-ichi Tanabe (15:00~16:15)

B-21 Emission rate measurement of styrene monomer from polystyrene beads

○Atsushi Iizuka¹⁾, Atsushi Mizukoshi²⁾, Kyoko Saito¹⁾, Takako Yamaki¹⁾, Miyuki Noguchi¹⁾, Yukio Yanagisawa¹⁾

1)Department of Environmental Systems, Graduate School of Frontier Sciences, The University of Tokyo, 2)Tokyo Metropolitan Industrial Technology Research Institute

B-22 Study on the Indoor Air Pollution in a Car (Part1) Measurement survey on indoor air environment (Outline of investigation and Air exchange)

Atsuo Nozaki¹⁾, ○Yutaka Fukuda¹⁾, Yuki Yamashita¹⁾, Yasuhiro Hashimoto²⁾, Yasunori Narita³⁾

1)Graduate School of Health and Environment Sciences, Tohoku Bunka Gakuen University, 2)The Aino Institute of Health Science, 3)Life Science Research Laboratory, Co., Ltd. (Indoor Environmental Technology Research Association)

B-23 Concentration changes of such as VOC in newly built or redecorated buildings for the past six years

○Natsuko Mine, Hiroshi Hirose, Yasuhiro Okao
HIYOSHI Corporation

B-24 Short and long-term changes of TVOC concentration in new residential housings

○Atsushi Mizukoshi¹⁾, Miyuki Noguchi²⁾, Hidetaka Yanagida²⁾, Yukio Yanagisawa²⁾

1)Tokyo Metropolitan Industrial Technology Research Institute, 2)The University of Tokyo

B-25 Development and application of measurement device for VOC emission rate using diffusive sampler

○Hiroshi Seto¹⁾, Ikue Saito²⁾, Morihiro Chiyoda¹⁾, Takahiro Shimizu¹⁾, Shingo Yanai¹⁾, Masamichi Hanazato^{3,4,5)}, Hiroko Nakaoka^{3,4,5)}, Emiko Todaka^{3,4,5)}, Chisato Mori^{3,4,5)}

1)Tokyo Kenbikyoin Foundation, 2)Tokyo Metropolitan Institute of Public Health, 3)Department of Environmental Medicine, Graduate School of Medicine, Chiba University, 4)Center for Environment, Health and Field Sciences, Chiba University, 5)NPO Chemiless-Town Association

Oral Session (Small Hall : December 15, 9:00~12:00, 13:00~16:15)

【Contamination Control】

Chair Toshiro Matsumura (9:00~10:00)

A-11 Development of the formaldehyde removal equipment

○Yasuhiro Maeda, Huaipeng Tang
SHINRYO CORPORATION

A-12 Research on vapor phase hydrogen peroxide decontamination system integrated into cleanroom air conditioning

○Yamaguchi Makoto, Isawa Kohichi, Tanaka Shoji, Shibuya Kastutoshi, Ono Tadashi, Mastuo Takashi
Shimizu Corporation

A-13 A study on the indoor air pollution by formic acid emitted from woods and its countermeasure techniques

Atsuo Nozaki¹⁾, ○Yasuhiro Hashimoto²⁾
1)Graduate school of Tohoku Bunka Gakuen University, 2)The Aino Institute of Health and Science

A-14 Influence of high intensity ultrasound to rat

○Tetsurou Otsuka¹⁾, Eitai Koeda¹⁾, Tsunehito Harunari²⁾, Tsutomu Tanikawa²⁾
1)Dept. of Electrical and Electronic Engineering, College of Industrial Technology, Nihon University, 2)Ikari Corporation

【Air Cleaning Devices】

Chair U Yanagi (10:00~11:00)

A-15 Studies on the development of new-type air cleaners (Part 1)

○Atsuo Nozaki¹⁾, Yusuke Ichijo¹⁾, Haruki Sakuraba²⁾
1)Graduate school of health and environment sciences, Tohoku bunka gakuen university, 2)Indoor Environmental Technology Research Association

A-16 Studies on the development of new-type air cleaner (Part2)

Atsuo Nozaki¹⁾, ○Haruki Sakuraba¹⁾, Yuske Ichijo²⁾
1)Graduate School of Health and Environment Sciences, Tohoku Bunka Gakuen University, 2)Indoor environmental technology research association

A-17 Studies on the gaseous contaminant and odorant removal performance of room air cleaner (Part 2)

Atsuo Nozaki¹⁾, ○Yusuke Ichijo¹⁾, Yasunori Narita²⁾
1)Graduate school of health and environment sciences, Tohoku Bunka Gakuen University, 2)Life Science Research Laboratory, Co., Ltd.

A-18 Inactivation influenza virus as the active and the passive method in the streamer discharge

○Kenkichi Kagawa¹, Yoshio Okamoto¹, Yasuhiro Nojima²

1)Daikin Industries, Ltd., 2) Kitasato Research Center of Environmental sciences

Chair Yuji Kawakami (11:00~12:00)

A-19 A study on the absorbed odor removal performance of a room air cleaner: The removal performance of the active type air cleaner

Atsuo Nozaki¹, ○Yasunori Narita²

1) Graduate School of Health and Environment Sciences, Tohoku Bunka Gakuen University, 2)Life Science Research Laboratory, Co., Ltd.

A-20 Studies on the odorant pollution and countermeasure technology in the toilet space (Part4) Removal performance of toilet for odorant

Atsuo Nozaki¹, ○Hisato Nishina¹, Kiyooki Honda², Yusuke Ichijo², Narita Yasunori³

1)Graduate School of Health and Environment Sciences, Tohoku Bunka Gakuen University, 2)Indoor Environmental Technology Research Association, 3)Life Science Research Laboratory, Co., Ltd.

A-21 Basic study of sterilization of airborne microbe by using atmospheric microplasma

○Kazuo Shimizu¹, Yuuki Komuro¹, Isao Matsushita², U Yanagi³

1)Shizuoka University, 2)Osaka Gas Co., LTD., 3)Tohoku Bunka Gakuen University

A-22 Evaluation on the germicidal effect of ID-UVGI system with mold sensors —

Preliminary test on the germicidal effect of UV with conventional mold sensors —

○Minsik Kim¹, Shinsuke Kato², Minki Sung¹, Jonghun Kim¹, U Yanagi³

1)Graduate Student, The University of Tokyo, 2)IIS, The University of Tokyo, 3)Tohoku Bunka Gakuen Univ.

【Field Survey on VOC and its Sources】

Chair Hiroshi Seto (13:00~14:15)

A-23 Evaluation of personal exposure to chemicals of cleanup worker of floor wax

○Kimi Kawabe¹, Yukio Akiyama¹, Keiichi Arashidani¹, Kanae Bekki², Naoki Kunugita³

1)School of Health Sciences, University of Occupational and Environmental Health, Japan, 2)Graduate School, Kanazawa University, 3)National Institute of Public Health

A-24 A Study on the Indoor Air Pollution in Cars (Part 2)

Atsuo Nozaki¹, ○Yuki Yamashita¹, Yutaka Fukuda¹, Yasuhiro Hashimoto², Yasunori Narita³

1)Graduate school of health and environment sciences, Tohoku bunka gakuen university, 2)The Aino Institute of Health and Science, 3)Life Science Research Laboratory corporation (Indoor Environmental Technology Research Association)

A-25 Studies on tests and evaluation methods on removal performance of indoor air pollutant for air fresheners (Part 1)

○Atsuo Nozaki¹⁾, ○Aya Kikkawa²⁾

1)Graduate School of Health and Environment Sciences, Tohoku Bunka Gakuen University, 2)The Aino Institute of Health Science

A-26 Measurement of chemical compounds emitted from living room furniture

○Yukio Aoki¹⁾, Yasushi Okada²⁾

1)Hyogo Prefectural Institute of Public Health and Consumer Science, 2)Hyogo Prefectural Institute of Environmental Sciences

A-27 Study on hazardous property of suspended particulate matter in indoor air — Field measurement of changes in size distribution by ventilation —

○Shiro Ikeda¹⁾, Masafumi Oikawa¹⁾, Takuya Nakabayashi²⁾, Yoshika Sekine²⁾

1)Graduate School of Science, Tokai University, 2)Department of Chemistry, School of Science, Tokai University

【Analytical Methods】

Chair Atsuo Nozaki (14:15~15:00)

A-28 Measurement of VOCs emitted from various of materials by headspace with chemical trap

○Kunihiro Hoshino¹⁾, Kouichi Tatsu²⁾, Takeshi Enomoto¹⁾, Takao Fukudome¹⁾, Jun Onodera¹⁾

1)JEOL.Ltd., 2)Isuzu Advanced Engineering Center,Ltd.,

A29 Study on measurement of semi volatile organic compounds using glass plate — Evaluation of solvent desorption —

○Kunihiro Hoshino¹⁾, Kouichi Tatsu²⁾, Shin-ichi Tanabe³⁾, Takashi Sone⁴⁾, Takahiro Iwasaki⁵⁾

1)JEOL Ltd., 2)Isuzu Advanced Engineering Center, Ltd., 3)Waseda University, 4)Espec Corp., 5)GL Sciences Inc.

A-30 Determination of acrolein in air using a silica cartridge impregnated with hydroquinone

○Shigehisa Uchiyama, Yohei Inaba, Naoki Kunugita
National Institute of Public Health

Chair Satoshi Nakai (15:00~16:00)

A-31 Research of Emission rate with small chamber method and toxicology test with incubation cell method of cresol soap

○Masao Inoue¹⁾, Tamami Suzuki²⁾, Yoshiko Bai²⁾

1)IAQ Research Associate, 2) Faculty of Health Science, Gumma PAZ College

A-32 Continuous generation of formic acid vapor with permeation tube method

○Reiji Aoyagi, Ai Nakamura, Fumio Watanabe, Kunitoshi Matsunobu
Gastec Corporation

A-33 Study of the measuring indoor air pollution with bio sensor (Part7) - Behavioral analysis on Medaka according to changes in concentrations of Dichlorvos in artificial seawater

○Jonghun Kim¹⁾, Shinsuke Kato²⁾, Janghoo Seo³⁾, Satoko Chino⁴⁾

1)Graduate Student, University of Tokyo, 2)Institute of Industrial Science, University of Tokyo, 3)Chosun University (Korea), 4)Yoshino Gypsum Co., Ltd.

A-34 Formaldehyde measurements in residential indoor air using a developed sensor element

○Yasuko Y. Maruo¹⁾, Takumi Yamada¹⁾, Jiro Nakamura¹⁾, Masahiro Uchiyama²⁾

1)NTT Energy and Environmental Laboratories, 2)National Institute of Environmental Studies