

2024 Kanagawa prefectural government program for overseas technical trainees

神奈川県海外技術研修員 2024

Srirungruang Palsiri from Thailand / パルシリ スリルンルアン (タイ)

11 月 November

専門研修先の関東学院大学での研修が 11 月から始まりました。研究室では、摂取と息を吸い込むことによる吸入の両方を通じて人間の健康に影響を与える可能性があるマイクロプラスチックに焦点を当てて学んでいます。使い捨てカップやプラスチック製のケトル、プラスチック製のティーバッグ、飲料水に含まれるマイクロプラスチックに関する多くの研究文献を読み、結論を出し教授とチームメンバーに発表するように課題を出されています。さらに、ナイルレッド染色や蛍光技術など、水道水中のマイクロプラスチックを検出するための基本的な実験室のトレーニングを受け、多くの知識と経験を得ることができています。数々の高度な水質実験室技術が私の研究に適用され、タイと日本の人々に役立つことを願っています。今後の研修も最善を尽くしたいと思います。

I have trained at Kanto Gakuin University, focusing on microplastic, which can affect human health through both consuming and inhalation. Many research journals regarding microplastic in disposable cups, plastic kettles, plastic teabags and drinking water have been assigned to conclude and present to professor and team members. In addition, basic laboratory to detect microplastic in tap water such as Nile Red Staining and Fluorescence technique has been trained. I have gain knowledge and experience a lot. Many advance water quality laboratory techniques will be applied to my research, being benefit to Japanese and Thai people. I will do my best.




図 1. 関東学院大学 理工学部理工学科 マイクロプラスチック検出研究室にて

Figure 1 : Microplastic Detection Laboratory at Kanto Gakuin University

Human Consumption of Microplastics

KIERAN D. COX, GARTH A. COVERNTON, HAILEY L. DAVIES, JOHN F. DOWER,
FRANCIS JUANES, AND SARAH E. DUDAS

- DEPARTMENT OF BIOLOGY, UNIVERSITY OF VICTORIA, VICTORIA, BRITISH COLUMBIA V8P 5C2 CANADA
- HAKAI INSTITUTE, CALVERT ISLAND, BRITISH COLUMBIA V0P 1H0 CANADA
- FISHERIES AND OCEANS CANADA, PACIFIC BIOLOGICAL STATION, NANAIMO, BRITISH COLUMBIA V9T 6N7 CANADA



Release of **Microplastics** from **Disposable cups** in daily use.



Huafu Chen, Lihong Xu*, Kunl Yu,
Fang Wei, Ming Zhang
Department of Environmental Engineering, China Jiliang University, Hangzhou 310019, China

The influence of drinking water constituents on the level of microplastic release from plastic kettles



Yunhong Shi, Dunzhu Li, Liwen Xiao, Emmet D. Sheerin,
Daragh Mullarkey, Luming Yang, Xue Bai e.a., Igor V. Shvets, John J. Boland, Jing Jing Wang.

- AMBER Research Centre and Centre for Research on Adaptive Nanostructures and Nanodevices (CRANN), Trinity College Dublin, Dublin, Ireland
- Department of Civil, Structural and Environmental Engineering, Trinity College Dublin, Dublin, Ireland
- Trinity Hall, Trinity College Dublin, Dublin, Ireland
- School of Chemistry, Trinity College Dublin, Dublin, Ireland
- School of Physics, Trinity College Dublin, Dublin, Ireland

Plastic Teabags Release Billions of Microparticles and Nanoparticles into "Tea"



Laura M. Hernandez, Elvis Genbo Xu, Hans C. E. Larsson, Rui Tahara, Vimal B. Maxisuria, and Nathalie Tutenkji.

- Department of Chemical Engineering, McGill University, Montreal, Quebec H3A 0C5, Canada.
- Redpath Museum, McGill University, Montreal, Quebec H3A 0C4, Canada.

Identification and quantification of microplastics using Nile Red staining



- Won Joon Shim, Young Kyoung Song, Sang Hee Hong, Mi Jang
- Oil and POPs Research Laboratory, Korea Institute of Ocean Science and Technology, 41 Jangmok-1-gil, Geoje 53201, Republic of Korea
- Department of Marine Environmental Sciences, Korea University of Science and Technology, Gajeong-ro, Daejeon 34113, Republic of Korea

Advances in analysis of microplastics in drinking water treatment plants. Fluorescence techniques using iDye Pink



Pablo Alonso-Vazquez, María-Jos e Lujan-Facundo, Beatriz Cuartas-Urbe,
Amparo Bee-Pi a, Jos e-Luis Alonso-Molina, Jos e-Antonio Mendoza-Roca
Instituto de Seguridad Industrial, Radiológica y Medioambiental, Universitat Politècnica de València, Camino de Vera s/n, Valencia 46022, Spain
Instituto de Ingeniería del Agua y Medio Ambiente, Universitat Politècnica de València, Camino de Vera s/n, Valencia 46022, Spain

図 2. 研究文献を読んだ後に自分なりにまとめた結果

Figure 2 : My conclusion of research journals.