Yoonjung Seo

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EDUCATION

Columbia University, Fu Foundation School of Engineering and Applied Science, New York, NY
Master of Science in Earth Resources Engineering, Feb. 2014

University of California, Irvine, School of Social Ecology/School of Biological Sciences, Irvine, CA
Bachelor of Science in Applied Ecology, Dec. 2003

WORK EXPERIENCE

Columbia University, WTERT, Earth Engineering Center
Research Associate for Sustainable Waste Management (Jan. 2011 - Present)

- Examined the management of municipal solid waste (MSW) in the Republic of Korea
- Investigated the status of waste-to-energy (WTE) and the potential for improvement in the Republic of Korea
- Contributed to the formation of WTERT-Korea

International Medication Systems, Limited, South El Monte, CA
Microbiologist (Feb. 2004 – May. 2008)

- Performed Bacterial Endotoxin testing for water for injection, medications, raw materials, transfer devices/vial injectors and stability samples; experienced in both Kinetic Turbidimetric method and Gel clot method for the bacterial endotoxin testing
- Collaborated with validation engineers on Bacterial Endotoxin Challenge test for determining bacterial endotoxin levels of vials and stoppers after depyrogenation and washing processes

- Determined the degree of inhibition or enhancement of the bacterial endotoxin test performing Inhibition/Enhancement test for medications, raw materials and devices
- Carried out Biological Indicator Testing in order to assure the sterilization process of medical devices; trained for aseptic test area gowning
- Analyzed test results, generated reports, reviewed and presented to management
- Actively involved in problem solving, investigating any test failure and revising SOPs (Standard Operating Procedure)
- Familiar to cGMP (Current Good Manufacturing Practice) and GLP (Good Laboratory Practice) regulations
- Authorized to handle controlled substances such as Morphine Sulfate

University of California, Irvine, CA
Marine Biotechnology Research Assistant (Mar. 2003 – Aug. 2003)

- Assisted in Mono Lake project to understand the ecology of bacterial and viral interaction in aquatic environment
- Isolated and characterized Bacteriophage from Mono Lake water samples via plaque assay
- Prepared for slides with SYBR green and counted physical number of virus using fluorescent microscopy
- Performed Pulsed- Field Gel Electrophoresis to separate DNA of virus

Health Priorities Research Group, University of California, Irvine, CA
Research Intern (Sep. 2002 – Mar. 2003)

- Retrieved information for Cost-effectiveness of heart disease prevention and control, and tobacco policy
- Analyzed data collected and generated documentations

SKILLS

Laboratory: LAL (Limulus Amebocyte Lysate) Gel Clot testing method and Kinetic Turbidimetric assay for bacterial endotoxin testing, Aseptic test area gowning, Microscopy, Plaque assay, Spectrophotometer, Gel- Electrophoresis / Pulsed-Field Gel Electrophoresis
Computer Systems and Applications: ArcGIS, SimaPro, MS Office Suite
Languages: English (advanced) and Korean (Native language)

PUBLCATIONS

1. Yoonjung, S. (2013), Current MSW Management and Waste-to-Energy Status in the Republic of Korea, WTERT Thesis Publication, Earth Engineering Center, Columbia University, New York, USA.

2. Efstratios, K., Yoonjung, S. (2011), The Global WTERT Council and WTE in the Republic of Korea. International Solid Waste Association (ISWA) 2011 World Congress, Daegu, Korea, October 17-20, 2011.

3. Jang-Soo, L., Sung-Jin, C., Ki-Bae, L., Yong-Chil, S., Yoonjung, S., Nickolas, J.T. (2011), Projection of Waste Generation Rates and Assessment of Applicability of Waste-to-Energy Technologies in Korea. International Solid Waste Association (ISWA) 2011 World Congress, Daegu, Korea, October 17-20, 2011.