

# 2023년도 AIHA 국제학술대회 참가계획

## 1. 출장목적

- 미국산업위생협회(American Industrial Hygiene Association, AIHA)에서 주최하는 국제학술대회인 American Industrial Hygiene Conference & Exposition(AIHce EXP)에 참가하여 연구원에서 수행한 연구 결과를 발표하고 산업보건 관련 연구 동향 파악 및 직업환경 연구분야의 전문 교육을 이수하고자 함.

## 2. 출장근거

- 국제협력단-215(2023.1.27.) 「 ‘23년 국외출장(연수) 추진 계획 알림」

## 3. 출장개요

- 출 장 자 : 직업환경연구실 장미연 과장, 산업보건분석부 전현진 대리 (2명)
- 출장기간 : 2023. 5. 20.(토) ~ 5. 28.(일) [6박 9일]
- 출 장 지 : 피닉스, 미국 (Phoenix Convention Center)
- 주요수행사항
  - 직업환경연구실 사업 수행 결과에 대한 포스터 발표(첨부 1 참조)
    - Identification of hazardous chemical and production process in secondary battery industries in Republic of Korea
  - 산업위생 학술대회 세션 참석 등(5.22.~5.24.)
  - PDC 강좌
    - PDC 603 : Fundamentals of Toxicology for Industrial Hygienists (5.21. 13:00~17:00)
    - PDC 802 : Aerosol Sampling Methods Update (5.25. 8:00~17:00)

#### 4. 출장 일정

일 정	내 용	비 고
‘23. 5. 20(토)	○ 출국 인천 14:30 (토) 출발 → 피닉스 14:28 (토) 도착	로스엔젤레스 경유
‘23. 5. 21(일)	○PDC 603 - Fundamentals of Toxicology for Industrial Hygienistst	PDC 강좌 수강
‘23. 5. 22(월)	○ AIHce EXP 2023 프로그램 - C7: Quality Assurance Is For Sampling Too-Part 1 - D7: Quality Assurance Is For Sampling Too-Part 2	
‘23. 5. 23(화)	○ AIHce EXP 2023 프로그램 - I10: Hazard Evaluation Technique Selection ○ Expo 전시장 관람	
‘23. 5. 24(수)	○ Poster 발표 ○ AIHce EXP 2023 프로그램 - Research Roundup: Personal Monitoring Badges	포스터 발표
‘23. 5. 25(목)	○PDC 802 - Aerosol Sampling Methods Update	PDC 강좌 수강
‘23. 5. 26(금) - 5. 28(일)	○ 입국 피닉스 17:45 (금) 출발 → 인천 4:50 (일) 도착	로스엔젤레스 경유 기내 2박

※ 세부 프로그램은 미확정이므로 참여세션은 변경될 수 있음.

#### 5. 행정사항

- 출장자는 귀국 후 1개월 이내 국외출장보고서를 작성하여 보고
- 현재 보유 항공마일리지로 항공권 구매 및 좌석 승급 불가
- 출장결과보고서 제출 시 항공마일리지 신고서 제출

첨부    포스터 등록 내역.

## <첨부 1>

## 포스터 등록 내역

### Identification of Hazardous Chemical and Production Process in Secondary Battery Industries in the Republic of Korea

Abstract No:

1350

Abstract Type:

Professional Poster

Authors:

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Institutions:

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Presenter:

Miyeon Jang

Korea Occupational Safety and Health Agency (KOSHA)

Description:

Future industries are predicted an era in which many things move by secondary batteries. In the global trend of carbon neutrality and being eco-friendly, secondary battery market size has been rapidly growing in many countries.

In Republic of Korea, government and private organizations are providing full support to research and development of secondary batteries as a major foster industry. However, information on the processes and the handling chemicals are very insufficient in terms of industrial health, so it is needed to investigate the overall secondary battery industry.

Situation / Problem:

These industries which required high technical skills are difficult to identify their working environments and chemicals they are using due to trade secrets related to know-how. In addition, since these industries develop rapidly, it is difficult to confirm the past working environment after an occupational disease has occurred.

As the secondary battery industry emerges as a new hazardous risk industry, this study is being conducted to proactively respond to the protection of worker's health.

Methods:

In this year, we have been visited 30 companies in Republic of Korea and identified the process and chemicals used, and we plan to provide it as a poster at the conference.

Results / Conclusions:

The secondary battery industry can be classified into 4 categories depending on the type of process such as cathode, anode, electrolyte and separator. However, in this study, it was classified into 9 categories in consideration of chemicals handled which is lithium production, cathode, anode, electrolyte, separator, conductive material, binder, recycling and assembling.

The main mineral raw material of lithium-ion battery is lithium, cobalt, nickel, manganese, graphite, etc., and are mainly used in a powder form. Also acids, bases and various solvents are additionally used for electrical properties.

Based on this study, in future studies, we will conduct exposure evaluation and biological monitoring and provide data for the protection of workers in the secondary battery industry.

## Poster Session 4 - Professional

Wed, 5/24: 10:30 AM - 11:30 AM MST

Poster Session

Phoenix Convention Center

### Abstracts

- 1121 - Method Development for Inhalable Air and Surface Wipe Sampling for Bisphenol AF
- 1140 - Historical Asbestos Exposures in Mexico
- 1246 - Aerospace Standard 6228A Safety Requirements for Procurement, Maintenance, and Use of Handheld Powered Tools
- 1316 - Recognizing and Controlling Common Occupational Hazards Impacting LGBTQ+ Workers in the US
- 1321 - Historical Asbestos Exposures in Italy
- 1350 - Identification of Hazardous Chemical and Production Process in Secondary Battery Industries in the Republic of Korea
- 1381 - Determine the Impurities in Commercially Available Alcohol-Based Hand Sanitizers
- 1382 - Determinations of Organic UV Filters and Environmental Hormones in Indoor Dusts
- 1405 - Exposure to Titanium Dioxide in Cosmetics
- 1463 - Applications of IH Models to Estimate Potential Exposure of Trace Benzene in Spray Sunscreen

### Content Level

Introductory

Intermediate

Advanced

### Topics

Risk Assessment and Management

Sampling and Analysis

Standards, Regulations and Legal Issues

Total Worker Health®