Supplementary Materials

Airborne concentrations of volatile organic compounds (VOCs) in hair salons primarily serving women of color

Lucy K. Kavi¹, Yuan Shao^{2,3}, Gurumurthy Ramachandran², Lydia M. Louis², Walkiria Pool⁴, Katrina Randolph⁵, Stephen Thomas^{6,7}, Ana M. Rule², Lesliam Quirós-Alcalá²

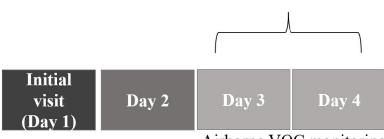
¹Department of Global, Environmental and Occupational Health, University of Maryland, College Park, MD 20742, USA.
²Department of Environmental Health & Engineering, Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD 21205, USA.
³School of Public Health, University of Illinois at Chicago, Chicago, IL 60612, USA.
⁴Centro de Apoyo Familiar, Hyattsville, MD 20737, USA.
⁵Tre Shadez Hair Studio, Capitol Heights, MD 20743, USA.
⁶School of Public Health, University of Maryland, College Park, MD 20742, USA.
⁷Maryland Center for Health Equity, University of Maryland, College Park, MD 20742, USA.

Correspondence to: Dr. Lesliam Quirós-Alcalá, Department of Environmental Health & Engineering, Bloomberg School of Public Health, Johns Hopkins University, 615 N. Wolfe Street, Baltimore, MD 21205, USA. E-mail: lalcala1@jhu.edu

Study Design

Day 3 & 4:

• Airborne VOC and indoor air quality monitoring

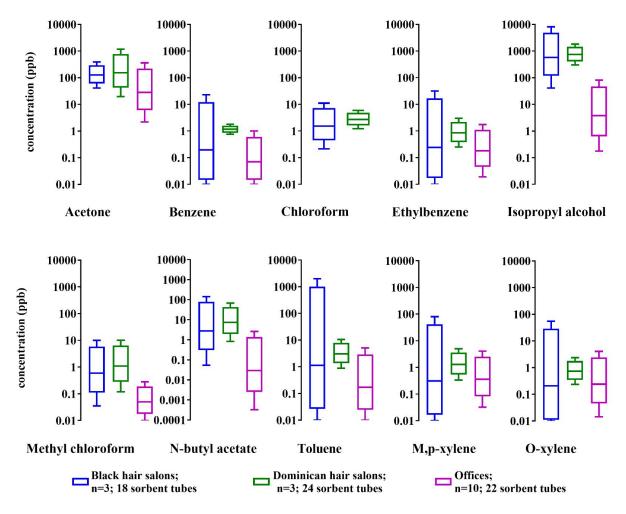


Airborne VOC monitoring

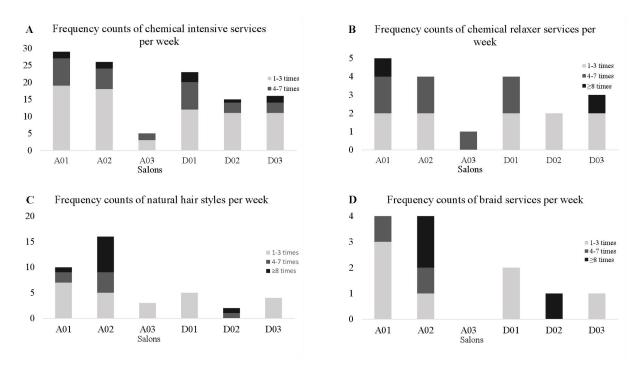
Day 1

- Determined optimal location of air monitors
- Walk-thru facility inspection
- Administered brief questionnaire to hair salon owners
- Day 2
- Conducted other activities unrelated to Airborne VOC monitoring

Supplementary Figure 1. Air monitoring study design. Day 2 occurred in the same week as the initial visit (day 1) but not always on the day after the initial visit.



Supplementary Figure 2. Distribution of 8-hour TWA concentrations for frequently detected VOCs across salons and office spaces in ppb^a. ^aChloroform was undetected in offices. TWA: Time-weighted average; n: number of salon.



Supplementary Figure 3. Frequency of salon services per typical work week based on the hair salon worker survey responses for each salon. Chemical intensive services include chemical relaxer, permanent waves, bleaching, Brazilian keratin treatment, extensions with glue, semi-permanent and permanent color services. Natural hairstyles include braids, twists, locs and afro hairstyles.