

# Charlotte M. Marsh, M.S.

## Senior Toxicologist

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Ms. Marsh is a toxicologist specializing in product stewardship, risk assessment, and chemical regulatory compliance. At Gradient, she conducts hazard and risk evaluations for chemicals in industry and consumer products and has extensive experience evaluating ingredients in personal care products. Ms. Marsh is well-versed in chemical hazard assessment under the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), the GreenScreen® Method, and similar frameworks. Through her work, she has developed expertise in weight-of-evidence evaluation and incorporating new approach methodologies such as read-across and computational toxicology.

Before joining Gradient, Ms. Marsh earned her master's degree at Boston University School of Public Health, where she researched potential developmental effects of the flame retardant chemical triphenyl phosphate. She also spent time as a research assistant on the Nurses' Health Study, investigating occupational exposure to disinfectants and respiratory outcomes.

### Representative Projects

**Chemical Hazard Assessments:** Provided toxicological and ecological hazard assessment of chemicals for REACH compliance. Identified and classified potential hazards according to the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**Toxicity and Regulatory Substance Review:** For an anti-microbial substance under consideration for ban by the US Food and Drug Administration (FDA), performed a comprehensive review of the regulatory landscape, hazard and risk conclusions of international authoritative and regulatory agencies, available human health and ecotoxicity data, and compiled the information into a dossier for potential external submission to regulatory agencies.

**Chemical Hazard Assessments:** Performed chemical hazard assessments for several chemicals using Clean Production Action's GreenScreen® for Safer Chemicals method.

**Dermal Hazard Assessments:** Performed hazard assessments and quantitative risk assessments for the constituents of various consumer products designed to be in long-term contact with the skin. Identified potential chemicals of concern and established exposure levels intended to protect consumers from experiencing adverse skin reactions.

### Areas of Expertise

- Toxicology
- Product Safety
- GHS Hazard Assessment
- Human Health Risk Assessment

### Education

M.S., Environmental Health, Boston University School of Public Health

B.S., Biological Sciences, Virginia Polytechnic Institute & State University

### Selected Publications

Marsh, C., Frisard, M. 2012. "The Effects of AICAR on TNF- Induced C2C12 Skeletal Muscle Cells." Presented at the Virginia Tech Undergraduate Research Symposium, Blacksburg, VA.

