

6PPD-Quinone and Tire Treadwear Chemicals: Preparing Laboratories for When the Rubber Meets the Road

PART 1 | Emerging Contaminants in Tire Treadwear: Exposure Pathways, Health Effects, and the 6PPD-Quinone Discovery

January 26, 2026 | 2:00 – 3:00 pm ET **Course # 000-602-26**

PART 2 | Detecting 6PPD-Quinone: Sampling Challenges and Analytical Approaches

January 28, 2026 | 2:00 – 3:00 pm ET **Course # 000-603-26**

DESCRIPTION

6PPD-quinone (6PPDQ), a chemical transformation product released from tire treadwear particles (TTPs), is emerging as a toxic contaminant in US waterways, causing acute harm to aquatic species and concern for potential human health effects. A 2020 study investigating unexplained coho salmon mortality in the Pacific Northwest implicated 6PPDQ, which has since been found in stormwater, surface water and sediment across multiple states. As attention grows around TTPs and related contaminants released from tires used in transportation, construction, playgrounds, and sports surfaces, laboratories need to be prepared to determine whether to implement testing in their jurisdiction and to understand the key sampling and analytical considerations involved.

Join this webinar series to learn about current TTP and 6PPDQ research on environmental occurrence, human and ecological health effects, biomonitoring exposure markers, sampling approaches and laboratory methods to help address these contaminants of emerging concern.

AUDIENCE

This webinar is intended for state, territorial and local public health and environmental laboratories and their partners, and anyone else interested in learning more about TTPs and 6PPDQ.

OBJECTIVES

After completing this webinar series the participant will be able to:

- Describe the sources, environmental occurrence, and ecological and health impacts of TTPs and 6PPDQ.
- Outline sampling approaches, laboratory methods, and quality considerations for detecting 6PPDQ and relevant TTP markers in environmental samples.

SERIES MODERATOR

- **Sin Urban**, PhD, division chief, Division of Environmental Sciences, Laboratories Administration, Maryland Department of Health

ENROLL FOR FREE

Enrollment for [Part 1](#) and [Part 2](#) is required to access the live webinars. If you need assistance with enrollment, send us an [email](#). To participate in this live webinar, log in to the [APHL Learning Center](#) (ALC) and follow [these instructions](#). If accessing the [APHL Learning Center](#) (ALC) for the first time, [create a free APHL account](#).

Level of Instruction:

- **BASIC:** Entry level; no prior knowledge of the subject is necessary.

ACCESSIBILITY

In compliance with the Americans with Disabilities Act, individuals seeking special accommodations must email a request to Emily Potter (emily.potter@aphl.org) prior to the live webinar. Closed captions will be available with the webinar recording.

LEARN MORE

For more information about this webinar, please email webinars@aphl.org.

PART 1 | Emerging Contaminants in Tire Treadwear: Exposure Pathways, Health Effects, and the 6PPD-Quinone Discovery

January 26, 2026 | 2:00 – 3:00 pm ET **Course # 000-602-26**

DESCRIPTION

This session summarizes emerging research on tire-associated contaminants, focusing on 6PPD-quinone (6PPDQ) and associated health effects across environmental and human exposure contexts. Speakers from the Environmental Protection Agency and the Washington State Department of Health will

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review biomonitoring and method development efforts and discuss how risk assessment, fate and transport contributed to its identification.

OBJECTIVES

After completing this webinar the participant will be able to:

- Characterize the current landscape of TTPs, including 6PPDQ, with respect to human health relevance, emerging biomonitoring data, and ongoing method development.
- Explain how prospective risk assessment, fate and transport, and aquatic toxicity contributed to the discovery and prioritization of 6PPDQ.

SPEAKERS

- **Mark Jankowski**, MSPH, PhD, senior toxicologist, Region 10, Laboratory Services and Applied Science Division, US EPA
- **Mallory Little**, MPH, toxicologist, Office of Environmental Public Health Sciences, Washington State Department of Health

- Evaluate established and emerging analytical approaches, including USEPA Draft Method 1634, for measuring 6PPDQ, considering mass spectrometry techniques, performance metrics, cost and scalability.

SPEAKERS

- **Erik Krogh**, PhD, P.Chem., co-director, Centre for Health and Environmental Mass Spectrometry, Department of Chemistry, Vancouver Island University
- **Barry V. Pepich**, PhD, laboratory director, Region 10, Laboratory Services and Applied Science Division, US EPA

PART 2 | Detecting 6PPD-Quinone: Sampling Challenges and Analytical Approaches

January 28, 2026 | 2:00 – 3:00 pm ET **Course # 000-603-26**

DESCRIPTION

This session presents strategies for detecting 6PPDQ in environmental samples. Speakers from EPA and Vancouver Island University will highlight sampling and analytical approaches, including USEPA Draft Method 1634 and mass spectrometry options, and demonstrate how trend analysis can inform laboratory planning and interpretation.

OBJECTIVES

After completing this webinar the participant will be able to:

- Identify key considerations for sampling 6PPDQ, including when, where and how to sample, and strategies to address high spatial and temporal variability.