**Development of a Standard Testing Method for Vehicle Cabin Air Quality Index**

Heejung Jung1, Liem Pham1, Kent Johnson1, Nick Molden2, Sam Boyle2

1University of California Riverside

2Emissions Analytics

The impact of air pollution on human health is a major concern and various anthropogenic sources of particulate exposure are under investigation to better understand their contributions to adverse health effects. Travel in vehicles represents a primary source of human exposure to particulate matter. A recent report estimated that for Los Angeles residents, 33-45% of exposure to ultrafine particles occurs while traveling in vehicles. Commuters on highways may be at particular risk, since particulate levels are demonstrably higher on highways. People living in urban areas are keen to reduce their exposure to particulate matter while riding a vehicle but there is a lack of information to make intelligent choices.

This study aims to develop a Cabin Air Quality Index to assess vehicle’s ability to maintain clean cabin air quality similar to MPG for fuel economy. The study developed both static and dynamic test methods, which characterize and quantify vehicle cabin air quality from consumer’s perspective.

Emissions Analytics has tested a wide range of late year model year passenger cars to determine their cabin air quality index and plans to disseminate vehicle cabin air quality index to consumers and auto manufacturers.

The presentation will include details of the test method, results, and their implications.