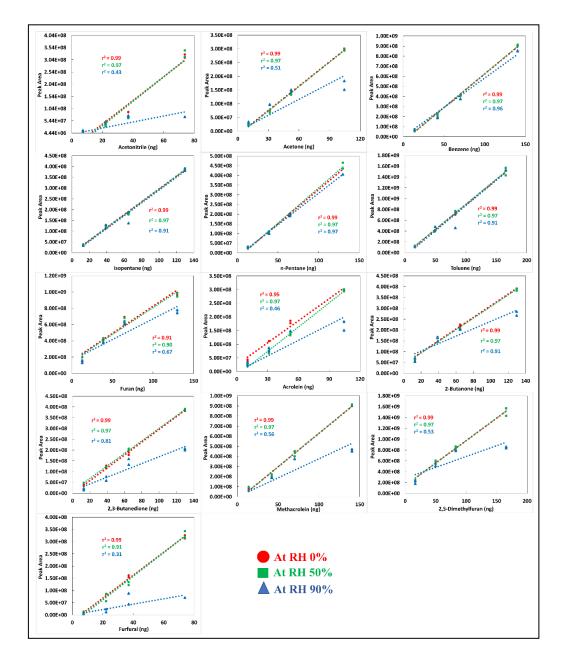
## Supplementary Materials for Optimization of a Method for the Detection of Biomass-burning Relevant VOCs in Urban Areas using Thermal Desorption Gas Chromatography Mass Spectrometry

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**Figure S1.** Linearity test for thirteen VOCs sampled using dual-bed Carboxen-Graphsphere TD tubes at different relative humidities.

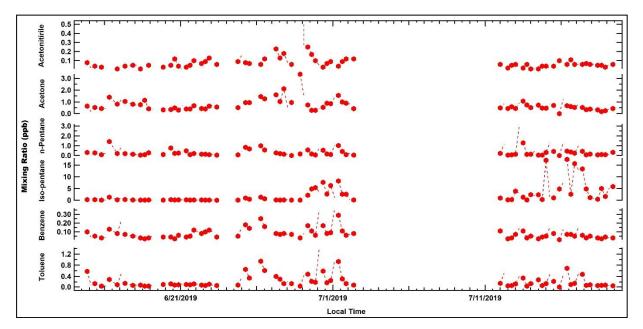
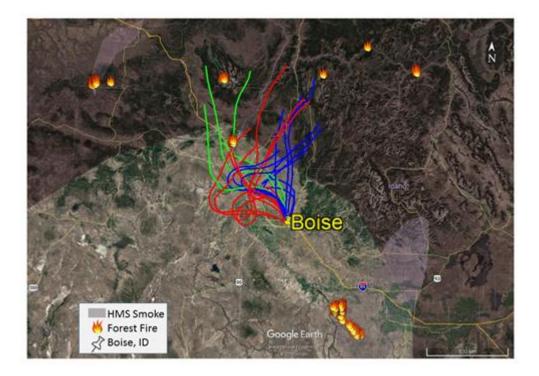


Figure S2. Time series of 6-hour averaged mixing ratios of VOCs measured at Spokane, Washington.



**Figure S3.** Earth image (obtained on 01/14/2020 09:00 AM PST) showing the 24-hour back trajectory ensemble of air masses that arrived at 07:00 LT in Boise, Idaho (47.6670° N, 117.4014° W) on 8 June 2019 along with fire and smoke detected on the same day by the Hazard Mapping System (HMS). Green, red and blue trajectories correspond to the air masses arriving at 100 m, 500 m and 1000 m above ground level, respectively.