

Interactive comment on “Measurement of gas-phase ammonia and amines in air by collection onto an ion exchange resin and analysis by ion chromatography” by M. L. Dawson et al.

Anonymous Referee #1

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This manuscript presents an IC detection method to detect ammonia and low molecular weight amines. Two different extraction methods were used with the weak cation exchange resin: off-line and in-line extraction for higher and lower concentrations of ambient concentrations of base compounds. Calibrations from the standard gas tank experiments showed a good linear response at sub-ppm range of base compounds. Unlike previous IC measurements that could not separate trimethylamine and diethylamine, this new method were able to identify these two amines. Ambient measurements of amines and ammonia near the cattle pens in the early AM for short periods were reported and their concentrations were within the range of other measurements.

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Measuring atmospheric amines is important for understanding the effects of amines on aerosol formation and their health effects, but there are very limited detection methods for these base compounds. The method described here can provide a new detection approach for laboratory studies and atmospheric observations. This work is within the scope of AMT. I would like the authors to explain the reproducibility of the calibration curves (slopes) and detection limits.

Interactive comment on Atmos. Meas. Tech. Discuss., 7, 1573, 2014.

C56