



AutoGC Evaluation

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Outline

- Overview of Evaluation Plan
- Participants in Laboratory Evaluation
- Summary of Laboratory Results
- Planned Participants in Field Evaluation
- Training Opportunities



Overview of Evaluation Plan

- A two phase evaluation is planned
 - A laboratory phase - completed in April
 - A field phase - expected to start this fall
- For the laboratory evaluation the autoGCs were tested with controlled gasses to evaluate performance (precision, bias, impact of temperature and humidity) and operation of the autoGC
- For the field evaluation the autoGCs will be installed in a mobile lab for evaluation at up to four field locations
 - Currently planning on RTP, Los Angeles, Baton Rouge, and New York
 - Will run in RTP over winter and begin “tour” in spring of 2015





Laboratory Phase Participants



Baseline and CDS Analytical

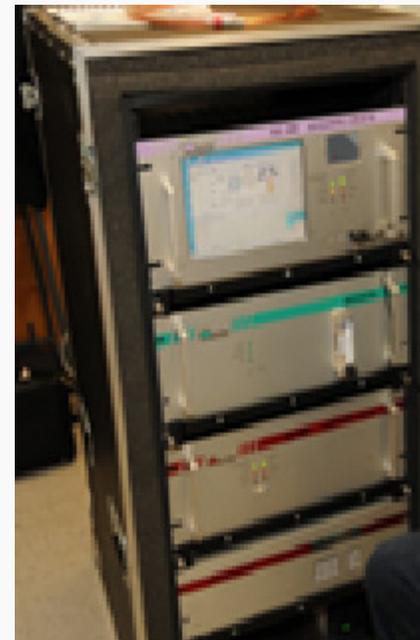
- Duel GC/FID Detector coupled with CDS auto-sampler
- Medium sized rack-mounted system
- Relative cost: \$\$





Chromatotech

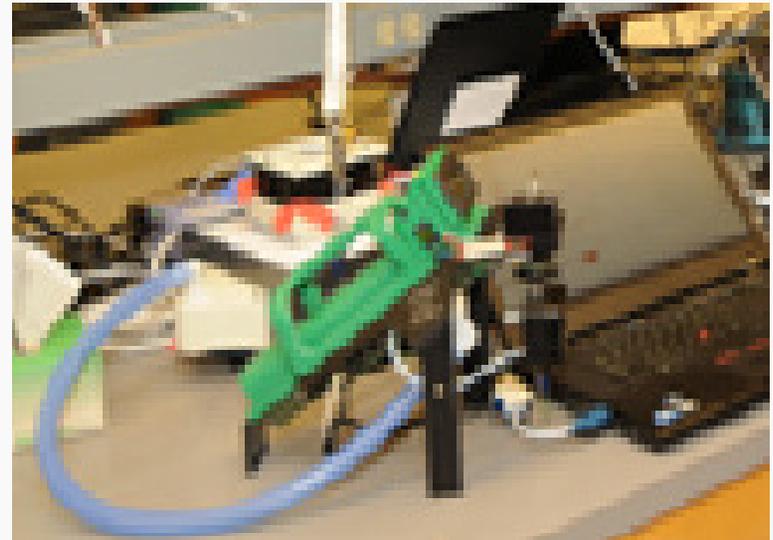
- Medium sized rack-mountable autoGC
- Integrated sampler
- Dual column GC/FID
- Relative cost: \$\$\$





Defiant Technologies

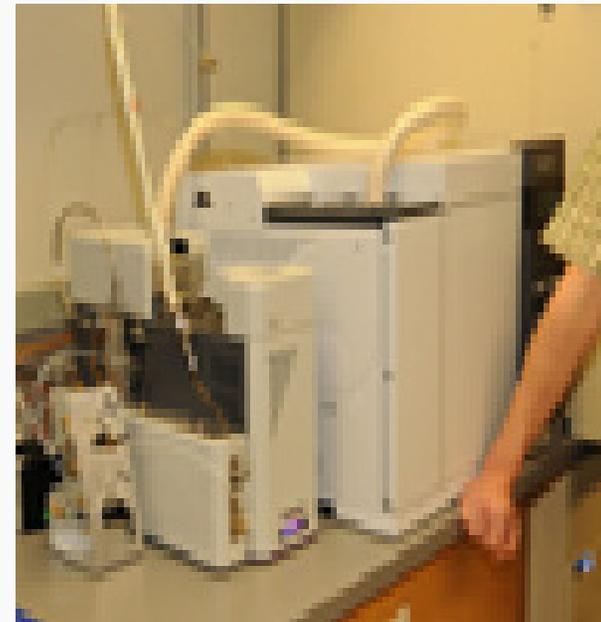
- Very small autoGC
- Integrated sampler
- GC/PID
- Relative cost: \$





Markes International and Agilent

- Agilent GC/FID coupled with a Markes auto-sampler
- Lab-style autoGC
- Relative cost: \$\$\$





PerkinElmer

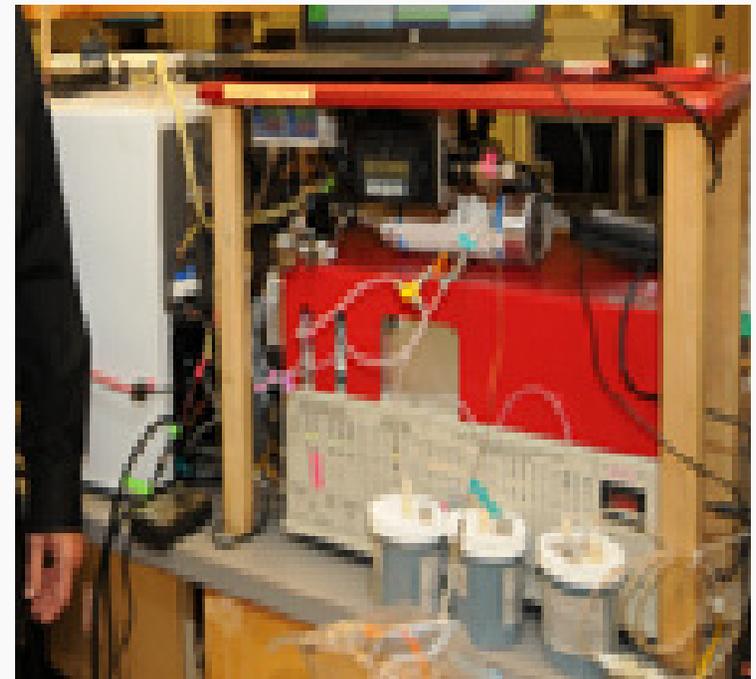
- Laboratory style autoGC
- Duel GC/FID
- Auto-sampler also made by PerkinElmer
- Relative cost: \$\$\$





SRI Instruments

- Medium sized autoGC
- Integrated sampler
- GC/FID
- Relative cost: \$





Synspec

- Medium sized rack-mountable autoGC
- Integrated sampler
- Dual detector capability (FID/PID)
- Relative cost: \$\$\$





Thermo Fisher and Markes International

- Laboratory-style autoGC
- Thermo GC/MS coupled with Markes auto-sampler
- Relative Cost: \$\$\$





Results of Laboratory Phase

- The lab testing was conducted in April 2014
- The study went very well with a few minor “hiccups”





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The EPA has determined that that it is not appropriate to report a formal ranking of the participating autoGCs based on the results from the laboratory evaluation due to the short term nature of the laboratory autoGC evaluation and the limits of the data generated.



AutoGCs Moving on to Field Phase

- Six autoGCs will be evaluated in the field phase
 - Agilent/Markes
 - Baseline/CDS
 - Chromatotech
 - PerkinElmer
 - Synspec
 - Thermo Fisher/Markes





Timing

- Plan to get lab equipped in RTP in late October
- Will run at RTP until early spring 2015
- Hope to finish testing by October 2015





Training Opportunities

- We plan to hold autoGC training at each of the four field study locations (RTP, LA, NY, and CA)
- We will be holding a number of online trainings for the new VOCDData in the coming months
- Keep an eye out for announcements on our listserv

