

McC Campbell Analytical Inc.

When Quality Counts

The Industry Leader Of Refrigeration Gas Testing

March 1, 2013

Refrigeration Gas Content Analysis by GC-MS

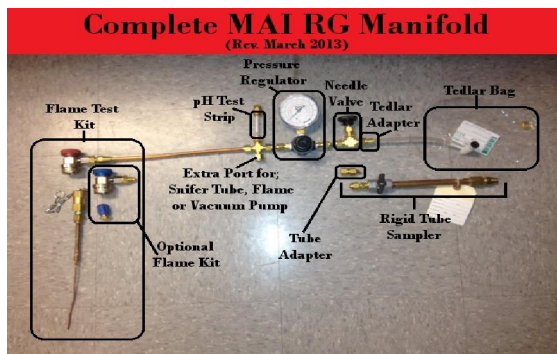
From late 2011 to present date, several deaths have occurred world-wide as a result of explosions of refrigerant container compressors. The general consensus is that a counterfeit refrigerant gas was used in place of the genuine R134a (Norflurane or tetrafluoroethane). MAI

was the first lab world-wide to have analyzed this dangerous counterfeit gas and remains today as one of only a very few worldwide to have done so. We developed safe extraction methods for sampling that are now being used throughout the industry. Our sampling

manifold is pictured below. We currently have manifolds for rent or sale. We have published a parts list on our website so individuals may assemble manifolds for themselves. This style of manifolds will work with both rigid sample tubes and sample bags. We currently provide GC-MS Refrigerant Gas Analysis to clients worldwide. It is our goal to provide the best analytical data possible at an affordable price. Please contact us for pricing at main@mcccampbell.com

Special points of interest:

- ◆ The first lab to analyze the truly dangerous refrigerant compressor gas and oil
- ◆ A research team actively working to develop safety protocol and performance standards
- ◆ Quantitative Identification of unknowns or mixtures of unknowns
- ◆ Developed industry standard % Area format for lab report
- ◆ Evaluation and certification of RG purity
- ◆ Supplier of 300 & 600 ppm by wt of chlorinated compound in R134a gas for field use in the halide flame test



MAI Awarded an ASHRAE Research Grant

Our highly skilled research team has been chosen to conduct stability testing of refrigerant systems that are contaminated with R40. The goal of this research is to investigate the reaction of R40 with typical refrigeration materials to better understand resulting chemi-

cal reactions and to develop safe contaminant limits. Additional benefits of this research will be increased safety in all servicing practices and system reliability of HVAC&R equipment. The research is scheduled to start April 1, 2013.



Toll Free: (877) 252-9262 Fax: (925) 252-9262

main@mcccampbell.com / www.mcccampbell.com