Proposed Infrared Breath Alcohol Instrument Comparison Study

This Document is to describe the process that the Vermont Department of Health Laboratory will compare Breath Alcohol test instruments to identify the Replacement for the BAC Datamaster(s) in use within the State of Vermont.

The instruments comparison will be measured in three ways, Analytical Performance, Functionality and Maintenance and Repair.

Analytical Performance will be accomplished by Comparing the Average Standard Deviation of the Accuracy and Precision check run on five different days on each instrument on four concentrations of simulator solution. The four concentrations of simulator solution will be approximately 0.02% Etoh, 0.05% Etoh, 0.10% Etoh and 0.40%. Etoh. The lot number of each solution will be the same for each instrument. In addition, each instrument will have five tests each of 3 different Interference solutions, Mouth Alcohol, Toluene in H2O and Approximately 0.02% Acetone in 0.10% Etoh in 99.88% Water.

Functionality will be accomplished by inviting 10 area Police Officers to the Vermont Department of Health Laboratory to evaluate the instruments on ease of use, while processing a mock subject.

Maintenance and Repair will be observations made by the Vermont Department of Health Laboratory, Alcohol Program Staff.

The conclusion of this study will be Vermont Department of Health Laboratory, Alcohol Program Staffs Recommendation of what type of instrument to purchase to replace the aging BAC DataMaster fleet.