Missouri State Highway Patrol

Calibration Certification for the

Guth Laboratories 34C Simulator

The individual wet-bath simulator listed herein has been verified operating within specified parameters, in accordance with the MoDHSS State Public Health Laboratory Breath Alcohol Program's "Testing Requirements for the Recalibration of Simulators".

Simulator Inventory Number: F20943 **Simulator Serial Number:** G6820

Initial Low Temperature Reading:	N/A	*Data marked N/A at left indicates the simulator required no heater temperature adjustments. Refer to final readings.*
Initial High Temperature Reading:	N/A	
Final Low Temperature Reading:	+34.025℃	
Final High Temperature Reading:	+34.064℃	**Simulator Thermometer Reading:** +34.050℃
Temperature Variance:	0.039℃	**Correction (Bias):** -0.010℃

Note: A combined measurment uncertainty of ±0.04℃ applies to final readings.

Thermal validation was performed using 500mL of aqueous solution and allowed to stabilize to a target operating temperature of +34.00 degrees Celsius, ±0.2 degree Celsius. The instrument used to confirm thermal performance has been calibrated against standards traceable to the National Institute of Standards and Technology (NIST), as indicated below.

NIST Traceable Thermometer: Ertco-Eutechnics 4400 Digital Thermometer

- **Serial Number:** 307715
- **Calibrated By:** Alpha Technics, 17151 Gillette Avenue, Irvine, CA 92614-5602
  - **Certification Number:** 307715073113
  - **Certification Date:** 07/31/2013
  - **Expires:** 07/28/2014

Other Control Data

- **AC Line Voltage:** 120.8 VAC
- **Ambient Room Temp:** +23.6℃

Certification Performed at: GHQ Radio Shop

Certification Date: 02/14/2014

- **Certification Number:** 416846981
- **Expires:** 02/14/2015

Type II/Technician: Chief Tech. D. D. Carver, C41