

## CERTIFICATE OF ANALYSIS

Alcohol Countermeasure Systems  
Alcohol Reference Solution  
Lot No: 201411K

Expiry Date: November 25, 2016

This solution was analyzed using the direct injection gas-chromatographic procedure coupled with the internal standard technique commensurate with forensic alcohol methodology.

A screening (pre-mix) analysis of the distilled water used in the preparation of this solution indicated that there were no volatile impurities present.

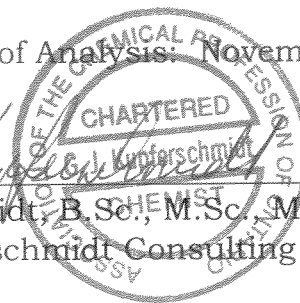
The target analytical concentration was 0.059 – 0.062 gram/dL (wt/vol) ethyl alcohol in aqueous solution with an equivalent vapour alcohol concentration of 0.049 - 0.051 gram/210L when used in a breath alcohol simulator heated to  $34 \pm 0.2^{\circ}\text{C}$ .

The solution was found to have an analytical concentration of 0.0609 gram/dL (wt/vol) ethyl alcohol in aqueous solution with an equivalent vapour alcohol concentration of 0.0504 g/210L when used in a breath alcohol simulator heated to  $34 \pm 0.2^{\circ}\text{C}$ .

The solution is manufactured from distilled/de-ionized water and absolute ethyl alcohol (USP Grade). This lot contains 1691 bottles (of 500 mL each) of Alcohol Reference Solution.

Date of Analysis: November 25, 2014

  
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# FORCON

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## STANDARD ALCOHOL SPECIFICATION SHEET(HP5890)

Lot #: 201411K Concentration: 50 mg/l

Date of Analysis: Nov 25/14 Calibration Mix: 80.23 mg/l

NIST: SRM 2893 Expiry Date: 30 April 2023 ISTD: n-ProH

Source: Fisher Lot 134155 Stock ISTD Concentration: 40.1 mg/dl

Stock ISTD Preparation Date: Oct 15/14

ISTD Dilution: 10 → 1000 ISTD Concentration 40.1 mg/dl

### Liquid Analysis

HP5890 GC; FID; 4'x1/8" OD; 5% Carbowax 1500 on Porapak Q 80/100 mesh;

### Temperatures

Column 110 °C Injector 200 °C Detector 250 °C

0.1 mL calibrator/sample plus 1.0 mL ISTD

2 microlitre injections

### SAMPLE RESULTS

### NOTES

#1	#2	#3
61.05	60.52	
61.07	61.15	

Average Value: 60.95

Predicted Simulator Value: 50.4

Date: Nov 25/14

Certified: G. Kupferschmidt