

Alcohol Countermeasure Systems Corp 60 International Boulevard Toronto, Ontario M9W 6J2 CANADA

## CERTIFICATE OF ANALYSIS

Alcohol Countermeasure Systems Alcohol Reference Solution Lot No: 201601F

Expiry Date: January 26, 2018

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 0.0968-0.0992 gram/dL (wt/vol) ethyl alcohol in aqueous solution with an equivalent vapour alcohol concentration of 0.080-0.081 g/210L when used in a breath alcohol simulator heated to  $34\pm0.2^{\circ}\text{C}$ .

The solution was found to have an analytical concentration of 0.0977 gram/dL (wt/vol) ethyl alcohol in aqueous solution with an equivalent vapour alcohol concentration of 0.081 g/210L when used in a breath alcohol simulator heated to  $34 \pm 0.2$ °C.

The solution is manufactured from distilled/de-ionized water and absolute ethyl alcohol (USP Grade). This lot contains 2500 bottles (of 500 mL each) of Alcohol Reference Solution.

Date of Apalysis: January 26, 2016

G.J. Kupferschmidt, B.Sc., M.Sc., MCIC, C.Chem G. Kupferschmidt Consulting Services Ltd.