



Alcohol Countermeasure Systems Corp
60 International Boulevard
Toronto, Ontario M9W 6J2
CANADA
acs-corp.com

CERTIFICATE OF ANALYSIS

Alcohol Countermeasure Systems
Alcohol Reference Solution
Lot No: 201308G

Expiry Date: August 27, 2015

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 0.061 gram/dL (wt/vol) ethyl alcohol in aqueous solution with an equivalent vapour alcohol concentration of 0.050 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 1,392 bottles (of 500 mL each) of Alcohol Reference Solution.

Date of Analysis: August 27, 2013

A handwritten signature in black ink, appearing to read 'G.J. Kupferschmidt', written over a horizontal line.

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