



## Product Information Certificate

**AEB2030**

**CAFFEINE**

**LOT# 181333**

(Uncertainty by purity)

<b>Carbon = 49.48%</b>	<b>± 0.49</b>
<b>Hydrogen = 5.19%</b>	<b>± 0.05</b>
<b>Nitrogen = 28.85%</b>	<b>± 0.29</b>
<b>Oxygen = 16.48%</b>	<b>± 0.16</b>

**(Melting point range 233-237°C) (Purity by HPLC 99-100%)**

**F.W. 194.2**

### Notes:

This Organic Analytical Standard (OAS) consists of high purity Caffeine for use as a routine working micro analytical standard. Refer to your instrument manufacturer's recommendation and/or standard test method for additional uncertainty capabilities. This high purity (99%+) Caffeine (C<sub>8</sub>H<sub>10</sub>N<sub>4</sub>O<sub>2</sub>) is intended for use as a calibration and or QC check for micro or macro analysis of C, H, N, and O by high temperature combustion or pyrolysis and utilizing TC or IR detection. This may be used for other valid test methods along with proper validation.

This bottle contains 1g to be used per your test method. This is a reference material (RM) and is established by its purity and empirical stoichiometry in accordance with recommendations of the Analytical Chemistry Section of the International Union of Pure and Applied Chemistry. Keep sealed and store under normal laboratory conditions. The above values represent the stoichiometric values of pure caffeine.

Remedies for any claimed defect in this product will be limited to product replacement or refund of the purchase price. In no event shall Alpha Resources be liable for incidental or consequential damages.

Certificate date: August 30, 2022

EXPIRATION DATE:

THIS RM IS VALID FOR TWO YEARS FROM THE DATE OF OPENING

Kent Dyer

Chief Chemist, Alpha Resources LLC