AMPcP and Adenosine Standard

I. INTRODUCTION
LC-based analysis of metal sensitive analytes such as those containing phospho groups, uncharged amines, and deprotonated carboxylic acids can be challenging due to their interactions with metal components within a chromatographic separation. These interactions can lead to missed analytes, quantification errors, and wasted time. To support measurements requiring attenuation of metal surface interactions, Waters™ AMPcP and Adenosine Standards were commercialized to aid in verification of the functionality of ACQUITY™ Premier instrumentation. The AMPcP and Adenosine Standard is prepared as a stabilized and lyophilized form of adenosine 5′-(α,β-methylene)diphosphate and adenosine, and may be used to perform chromatographic functionality tests. Each vial of the standard contains AMPcP (3.400 µg), adenosine (2.140 µg).

II. RECOMMENDED RECONSTITUTION
It is recommended to dissolve the standard in 200 µL of 18.2 MΩ water while carefully aspirating or vortexing to mix. Use injection volumes between 1–20 µL for 2.1 mm I.D. columns.

III. STORAGE AND STABILITY
Upon arrival and prior to reconstitution, store the standard in its original packaging at -20 °C up until its marked expiration date. After reconstitution, the standard can be stored at 4–8 °C for seven days without concern of degradation.
### IV. EXAMPLE CHROMATOGRAPHIC CONDITIONS AND REPRESENTATIVE DATA

**LC system:** ACQUITY Premier  
**Column:** ACQUITY Premier HSS T3, 1.8 µm, 2.1 x 50 mm (p/n: 186009467)  
**Temp.:** 40 °C  
**Mobile phase A:** 10 mM ammonium acetate, pH 6.8 in 99.8:0.2 water/acetonitrile  
**Mobile phase B:** 8 mM ammonium acetate in 79.8:20.2 water/acetonitrile  
**Flow rate:** 0.5 mL/min  
**Sample temp.:** 20 °C  
**UV detection:** 260 nm  
**Seal wash:** 50:50 water:acetonitrile  
**Needle wash:** 50:50 water:acetonitrile  
**Reconstitution:** 200 µL 18.2 MΩ water  
**Injection volume:** 1 µL  

**Gradient:**

<table>
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<tr>
<th>Time (min)</th>
<th>Flow rate (mL/min)</th>
<th>%A</th>
<th>%B</th>
<th>Curve</th>
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<tbody>
<tr>
<td>0.00</td>
<td>0.5</td>
<td>95</td>
<td>5</td>
<td>Initial</td>
</tr>
<tr>
<td>0.20</td>
<td>0.5</td>
<td>95</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
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<td>5</td>
<td>95</td>
<td>6</td>
</tr>
<tr>
<td>0.90</td>
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<tr>
<td>1.00</td>
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<td>95</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>2.00</td>
<td>0.5</td>
<td>95</td>
<td>5</td>
<td>11</td>
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*Figure 1. Example of chromatographic result with AMPcP and Adenosine Standard.*
V. CAUTIONARY NOTE

Depending on the user’s application, these products may be classified as hazardous following their use and as such are intended to be used by professional laboratory personnel trained in the competent handling of such materials. Responsibility for the safe use and disposal of products rests entirely with the purchaser and user.

This product is research only and not for IVD use.

The Safety Data Sheet (SDS) for this product is available at www.waters.com/sds.

VI. ORDERING INFORMATION

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<tr>
<th>Description</th>
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<tr>
<td>AMPcP and Adenosine Standard</td>
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