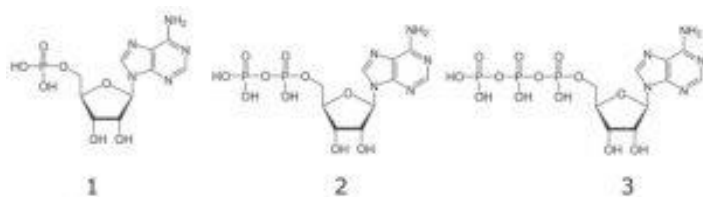
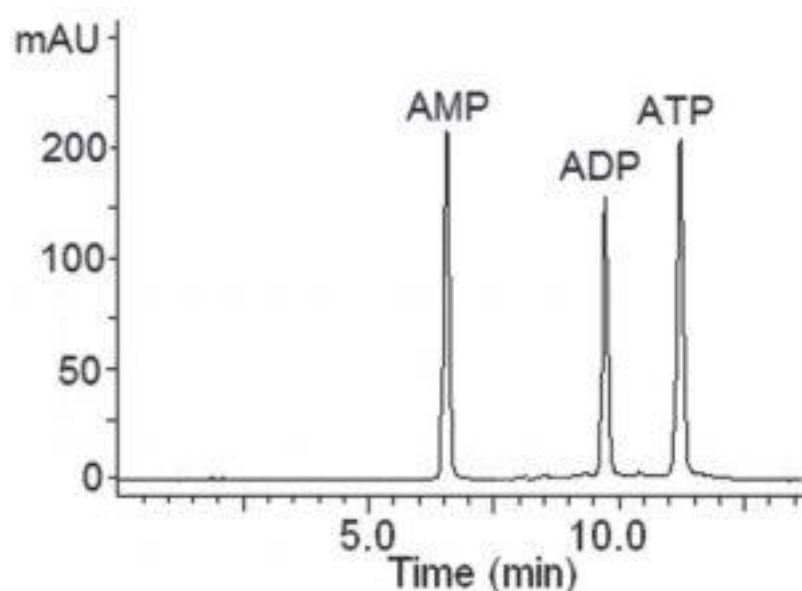


## Separation of Adenine Nucleotides - AppNote

### Separation of AMP, ADP, ATP by HPLC

The figure shows a separation of three energy nucleotides. All three are baseline separated in order of increasing polarity as is expected when ANP chromatography is used.

It is worth noting that the retention of nucleotides increased as the buffer concentration was increased (data not shown). 16.0mM concentration of the buffer in Solvents A and B was the maximum concentration still compatible with MS detection.



### Peaks:

1. AMP – Adenosine 5'-monophosphate
2. ADP – Adenosine 5'-diphosphate
3. ATP – Adenosine 5'-triphosphate

### Method Conditions

**Column:** Cogent UDA™, 4μm, 100Å

**Catalog No.:** [40031-05P-2](#)

**Dimensions:** 2.1 x 50mm

**Mobile Phase:**

A: DI Water / 16.0mM Ammonium Formate

B: 90% Acetonitrile / 10% DI Water / 16.0mM Ammonium Formate

**Gradient:**

| Time (minutes) | %B |
|----------------|----|
| 0              | 95 |
| 0.5            | 95 |
| 10             | 70 |
| 15             | 30 |
| 20             | 30 |
| 20.1           | 95 |

**Temperature:** 25°C

**Post Time:** 3 minutes

**Injection vol.:** 1 µL

**Flow rate:** 0.4mL / minute

**Detection:** UV @ 254nm

**Sample Preparation:** Stock Solution: 1mg / mL solutions in DI Water. Samples were diluted 1:10 into 50% Acetonitrile / 50% DI Water mixture. Before injection, samples were filtered through a 0.45µm Nylon Syringe Filter (MicroSolv Tech Corp.).

**t<sub>0</sub>:** 0.7 minutes

**Note:** The ratio of the Adenine Nucleotides (Adenosine ATP/ADP/AMP) is measured to indicate cell energy status or cell apoptosis/death, or ischemia in a tissue.



**Attachment**

**No 259 Separation of Adenine Nucleotides pdf** [Download File](#)

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**MicroSolv Technology Corporation**

9158 Industrial Blvd. NE, Leland, NC 28451

Tel: (732) 380-8900

Fax: (910) 769-9435

Email: [customers@mtc-usa.com](mailto:customers@mtc-usa.com)

Website: [www.mtc-usa.com](http://www.mtc-usa.com)