ATP Metabolites

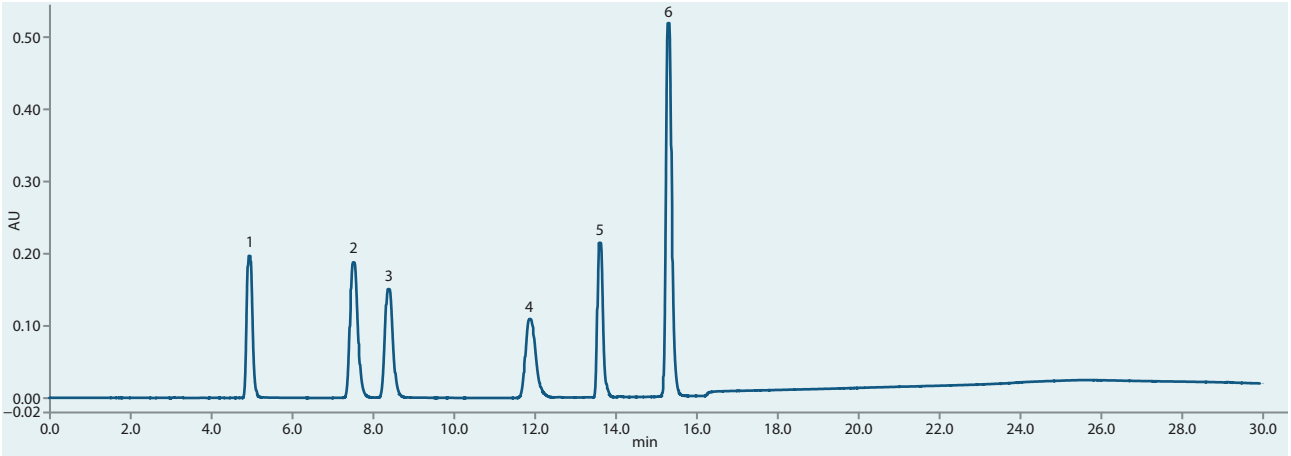
Introduction

This application note has been developed by the Institute of Organic Chemistry and Biochemistry, the group of synthesis of radiolabeled compounds. It shows separation of nucleosides, and nucleoside phosphates that are analysed in different applications, e.g. purine metabolism, biosynthesis, genetic code and clinical studies.

ÚOCHB AV ČR
IOCB PRAGUE

Substance:
IMP (Inosine monophosphate) CAS number 131-99-7
AMP (Adenosine monophosphate), CAS number 61-19-8
Inosine, CAS number 58-63-9
ADP (Adenosine diphosphate), CAS number 58-64-0
ATP (Adenosine triphosphate), CAS number 56-65-5
ADO (Adenosine), CAS number 58-61-7

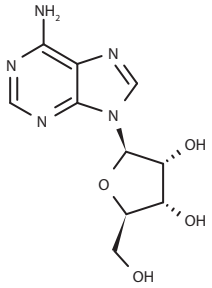
Formula:
5'-Inosinic acid
5'-Adenylic acid
Inosine
Adenosine 5'-(trihydrogen diphosphate)
Adenosine 5'-(tetrahydrogen triphosphate)
Adenosine



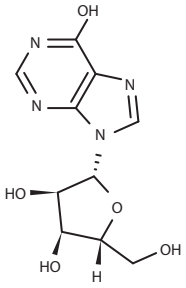
Standard mixture on ARION® Plus C18 column

ATP METABOLITES

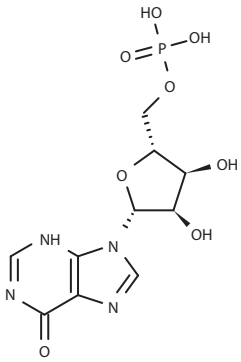
Column	ARION® Plus C18, 5.0 µm
Dimensions	250 mm × 4.6 mm
Part number	ARI-5720-LM46
Mobile phase	A: Water + 2M TEAB (5%) B: Water : Acetonitrile (50 : 50 v/v) + 2M TEAB (5%)
Gradient elution	**Time** **A (%)** **B (%)** 0 96 4 5 96 4 30 50 50
Flow rate	1.0 ml/min
Temperature	25 °C
Detection	PDA 2998 @254 nm
LC system	Waters Alliance e2695 (Empower 3 Pro)
Injection volume	6 µl
Analytes	**1. IMP** **2. AMP** **3. Inosine** **4. ADP** **5. ATP** **6. ADO**



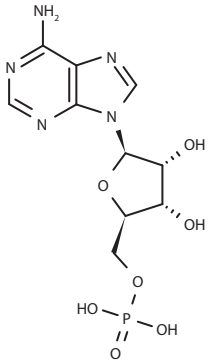
ADO



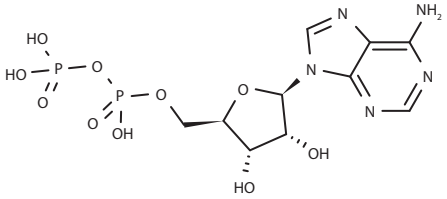
Inosine



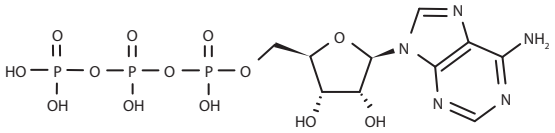
IMP



AMP



ADP



ATP