



## Analysis of Allantoin

### Introduction

Allantoin has anti-inflammatory effect as well as cellular activator action and therefore is widely used for pharmaceutical products and cosmetics.

Allantoin is a highly hydrophilic substance, and thus utilizing a column for the hydrophilic interaction chromatography (HILIC), commercial eyedrops was measured as reported in this note.



Jasco PU-2080 Plus pump

Keywords: Allantoin, HILIC, EyeDrops, UV Detection, anti-inflammatory

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## Experimental

### Equipment

Eluent Pump:	PU-2080
Degasser:	DG-2080-53
Column Oven:	CO-20605 $\mu$ L)
Autosampler:	AS-2057
Detector:	UV-2075

### Conditions

Column:	FinepakSILNH2-5 (4.6 mmI.D.x 250 mmL, 5 $\mu$ m)
Eluent:	Acetonitrile/Water(80/20)
Eluent Flow Rate:	1.0 mL/min
Column Temperature:	40 $^{\circ}$ C
Wavelength:	210 nm
Injection Volume:	10 $\mu$ L
Standard Sample:	Allantoin 5 $\mu$ g/mL in eluent

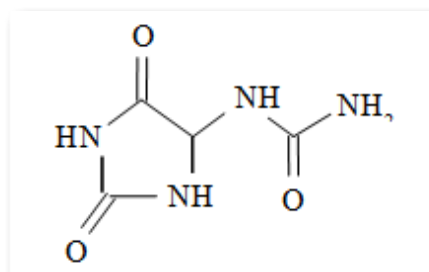
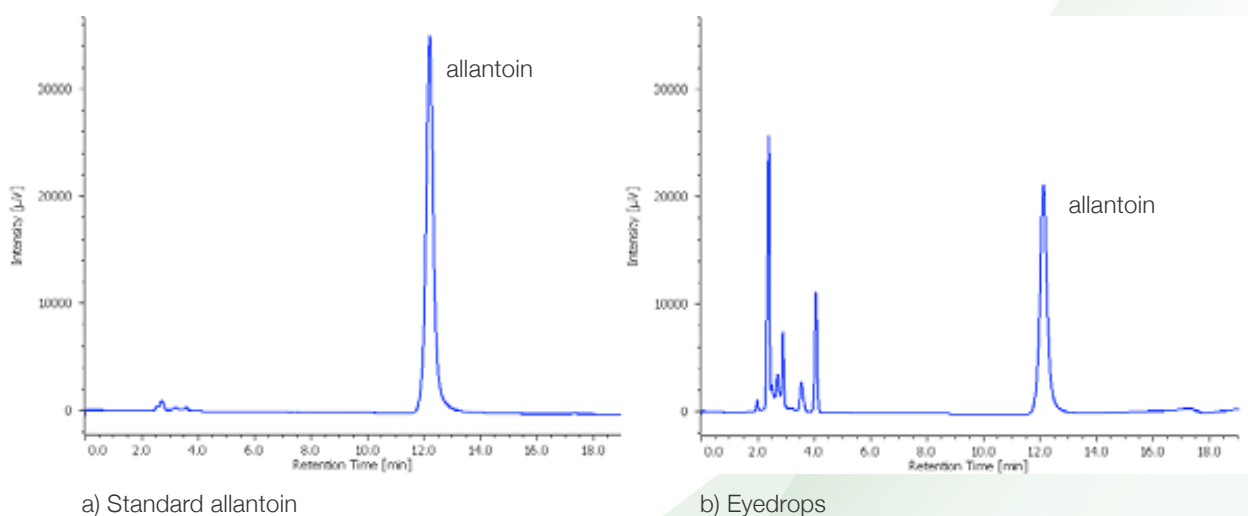


Fig.1 The structural formula of allantoin

## Results

Fig.2 Chromatogram of standard allantoin and eyedrops



a) Standard allantoin

b) Eyedrops

Preparation:

Dilute the eye-drops by mobile phase about 10 times, then filtrate by 0.45 $\mu$ m membrane filter