

응용 자료

Synthetic Corticosteroids

Waters Corporation



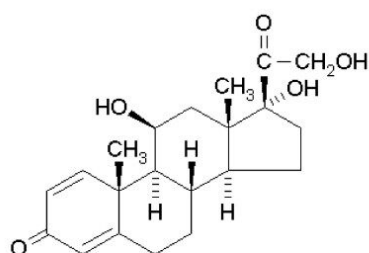
This is an Application Brief and does not contain a detailed Experimental section.

Abstract

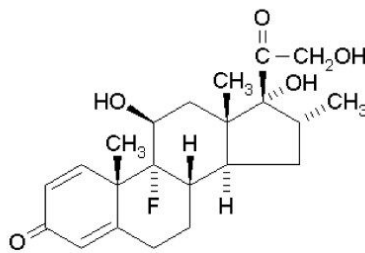
This application brief highlights the analysis of synthetic corticosteroids.

Introduction

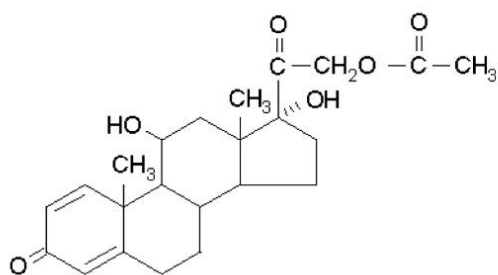
Corticosteroids have potent anti-inflammatory properties, and are used in a wide variety of inflammatory conditions such as arthritis, colitis, asthma, bronchitis, certain skin rashes, and allergic or inflammatory conditions of the nose and eyes.



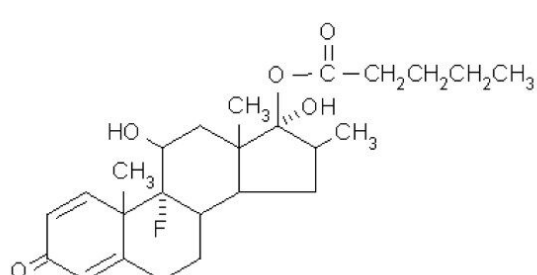
Prednisolone



Dexamethasone



Prednisolone 21-acetate



Betamethasone 17-valerate

Experimental

Conditions

Column:

SunFire C₈ 4.6 x 150 mm, 5 μm

Part number:

186002737

Mobile phase A:	Water
Mobile phase B:	Acetonitrile
Flow rate:	1 mL/min
Injection volume:	10 µL
Sample concentration:	20 µg/mL in water; 1 mg/mL stock solution prepared in acetonitrile
Temperature:	30 °C
Detection:	UV @ 254 nm
Instrument:	Alliance 2695 with 2996 PDA

Isocratic Gradient

Time (min)	Profile	
	%A	%B
0.0	50	50
12.0	50	50

Compounds

Column:	SunFire C ₈ 4.6 x 100 mm, 3.5 µm
Part number:	186002731
Mobile phase A:	Water

Mobile phase B:	Acetonitrile
Flow rate:	1 mL/min
Injection volume:	10 µL
Sample concentration:	20 µg/mL in water; 1 mg/mL stock solution prepared in acetonitrile
Temperature:	30 °C
Detection:	UV @ 254 nm
Instrument:	Alliance 2695 with 2996 PDA

Isocratic Gradient

Time (min)	Profile	
	%A	%B
0.0	50	50
12.0	50	50

Results and Discussion

Compounds	USP Tailing
Prednisolone	1.46
Dexamethasone	1.34

Compounds	USP Tailing
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Prednisolone 21-acetate	1.32
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Betamethasone 17-valerate	1.1
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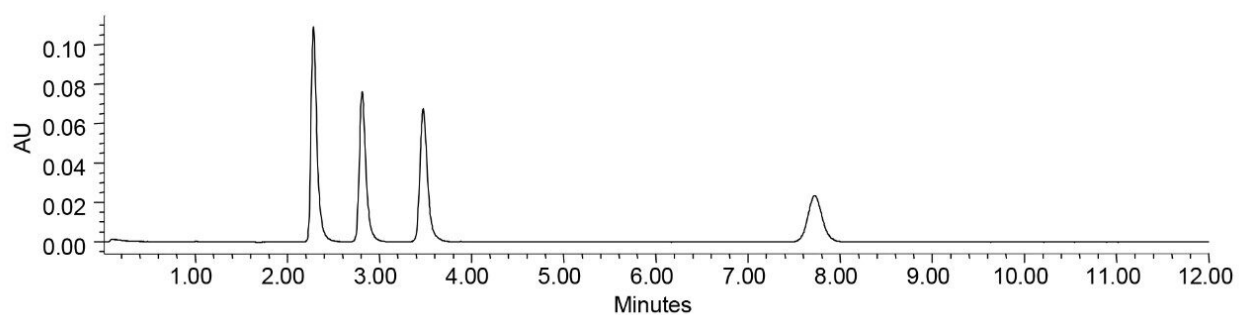
Compounds	USP Tailing
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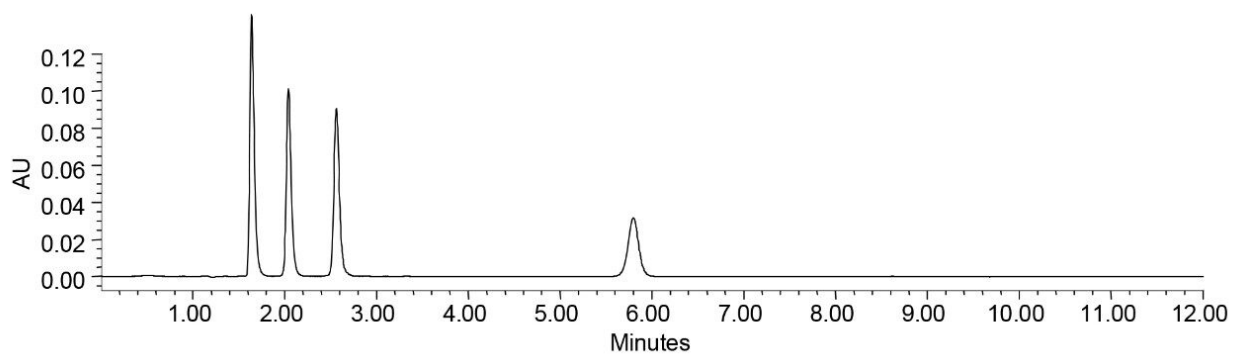
Prednisolone	1.41
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Dexamethasone	1.31
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Prednisolone 21-acetate	1.22
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Betamethasone 17-valerate	1
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Alliance HPLC <<https://www.waters.com/514248>>

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