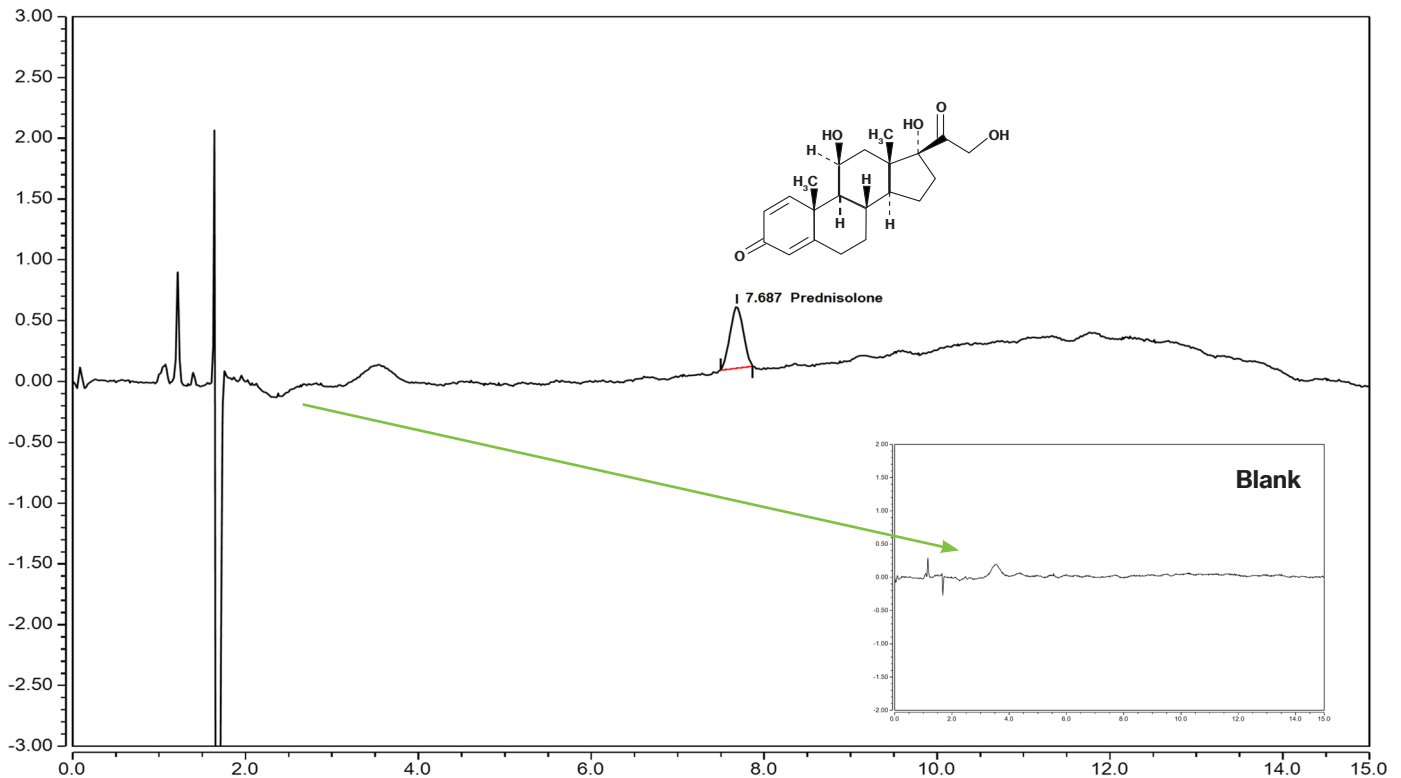




## Prednisolone

### Endurus<sup>®</sup> C18 Classic 5µm 250X4.6



#### Test Condition (As per BP)

##### Column:

Endurus<sup>®</sup> C18 Classic 5µm 250X4.6

**Injection:** 20 µL

**Detection:** UV 254 nm

**Flow Rate:** 1.5 mL/min

**Mobile Phase:** Water:Methanol (42:58)

**Diluent:** Mobile Phase

**Temperature:** 40°C

Autosampler temperature: 10°C

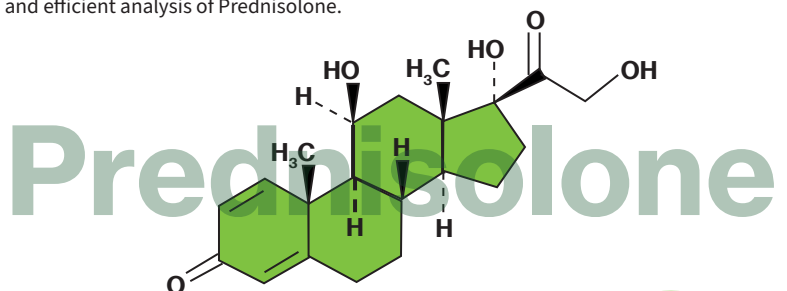
##### Sample / Standard:

Weigh and powder 10 tablets containing 20 mg Prednisolone each. Shake the powder with 50 ml mobile phase, dilute to 100 ml with mobile phase to obtain 2000 ppm solution. Pipette out 500 µl of this solution and dilute it to 10 ml with mobile phase. Further, pipette out 100 µl from this solution and dilute to 10 ml with mobile phase to obtain 1 ppm solution.

#### Chromatographic data

No.	Compound	Retention Time (min)	Tailing Factor	Theoretical plates
1	Prednisolone	7.687	1.0	11100

Prednisolone, a synthetic glucocorticoid with the molecular formula C<sub>21</sub>H<sub>28</sub>O<sub>5</sub> and a molecular weight of 360.44 g/mol, was analyzed using an Endurus<sup>®</sup> C18 Classic HPLC column (250x4.6 mm, 5 µm). This white crystalline powder, slightly soluble in water and more soluble in ethanol and acetone, has a retention time of 7.687 minutes on the hydrophobic C18 column, indicating strong interaction with the stationary phase. The tailing factor was 1.0, showing excellent peak symmetry, and the theoretical plates were 11,100, reflecting high column efficiency. This setup ensures accurate, reliable, and efficient analysis of Prednisolone.



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