

IC Application Note No. U-34

Title: Chromatographic purity determination of Ibuprofen according to USP

Summary: Determination of Valerophenone and Ibuprofen according to USP 28-NF 23 (second supplement) using RP chromatography with UV detection.

Sample: Ibuprofen

Sample Preparation: Dissolved to 5 mg/mL in acetonitrile

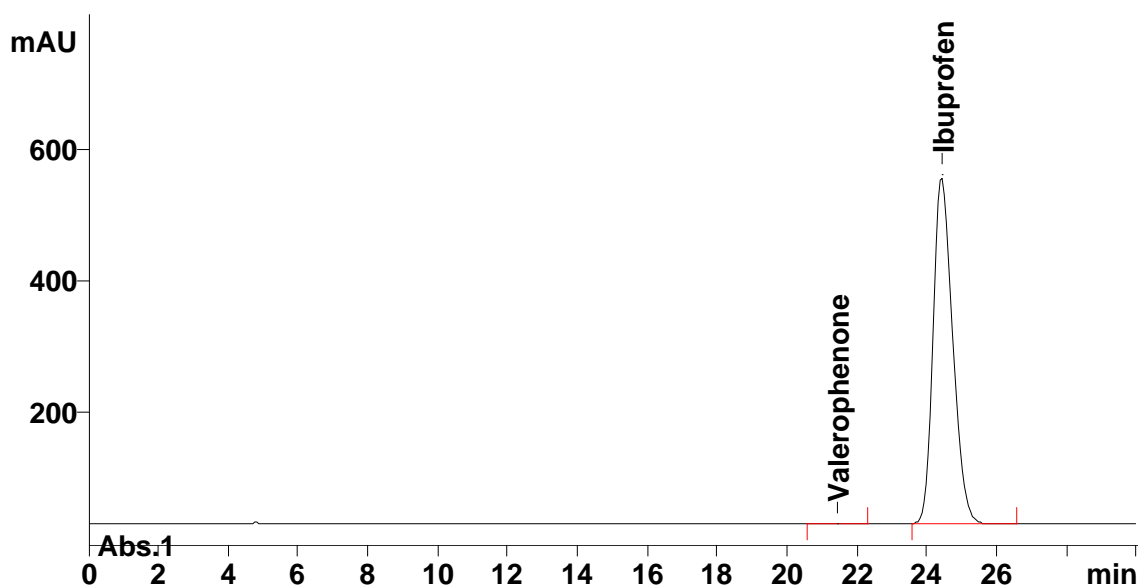
Column: 6.1008.100 Prontosil 120-5-C18 AQ 150

Wavelength: 214 nm

Eluent: Water (pH = 2.5, H₃PO₄) / acetonitrile (1340:680)

Flow: 2.0 mL/min

Injection Volume: 5 µL



Chromatogram:	Valerophenone	Ibuprofen area%
	Not detected	99.8

Results:

Test factors	Value	Limit	Result
Response of Ibuprofen	99.82 %	More than 99.0%	PASS
Relative retention time for Valerophenone	0.87	About 0.8	PASS
Relative retention time for Ibuprofen	1.15	About 1.0	PASS