

Supporting Information

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Simple high-performance liquid chromatographic method for determination of Donepezil HCl in pharmaceutical formulations

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Table S1 : Physicochemical properties of DHCl

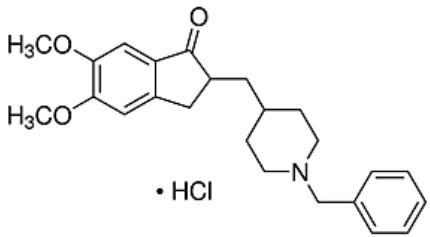
Physicochemical properties	Value
Molecular structure	
Molecular formula:	C ₂₄ H ₂₉ NO ₃ .HCl
Molecular weight (g/mol):	415.96
logP:	4.27
pKa:	8.90

Table S2 : Accuracy of the HPLC Method

Nominal value of DHCl (µg/mL)	Spiked amount of substance (µg/mL)	Measured amount of substance ^a (µg/mL) (Mean ± S.D. ^b)	Recovery (%)	RSD (%)
50.00	10.00	60.04 ± 0.06	100.07	0.10
	50.00	100.54 ± 0.25	100.54	0.25
	150.00	201.70 ± 0.62	100.35	0.31

^aFive independent analyses.^bStandard deviation**Table 3 : Precision data of the developed HPLC method**

Compound	Repeatability (n=6)		Reproducibility (n=6)	
	Mean ± SD	RSD, %	Mean ± SD	RSD, %
DHCl	50.07 ± 0.72	1.44	50.88 ± 1.80	3.54

SD: Standard deviation; RSD: Relative standard deviation

Table S4 : Robustness test results the method

Robustness Parameters	Parameter Value	Recovery %	RSD %
Mobile phase flow rate	1.10 mL/min	100.12	0.12
	1.30 mL/min	99.68	0.05
Column temperature	25 °C	99.67	0.07
	35 °C	100.13	0.18
Buffer concentration	0.040 M	100.78	0.93
	0.060 M	99.62	0.64
pH value	2.20	100.05	0.71
	2.40	100.54	0.63

Table S5 : System suitability tests results of the method

System suitability parameters	Std. Solution Conc. µg/mL		
	30.00	60 .00	120.00
Symmetry factor	0.6444	0.6452	0.6521
Plates number	3180	3184	3184
Peak Tailing	1.5061	1.5180	1.4881
Peak areas (% RSD)	0.1685 %	0.1527 %	0.1432 %
Retention times (% RSD)	0.0597 %	0.0536 %	0.0521 %

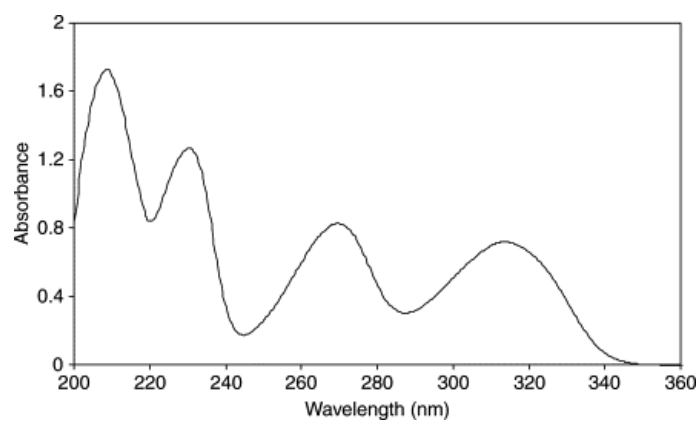


Figure S1 : UV spectrum of DHCl solution

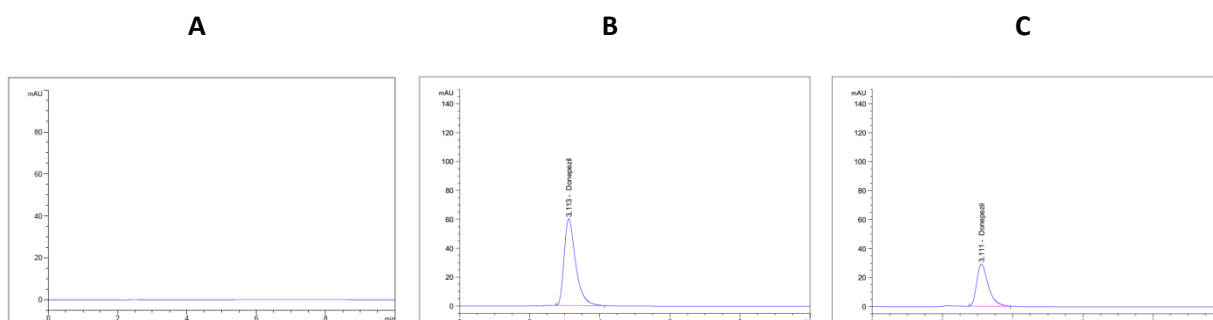


Figure S2. Representative chromatograms of LC measurements (A) Blank, (B) DHCl standard solution (60 µg/mL) and (C) pharmaceutical

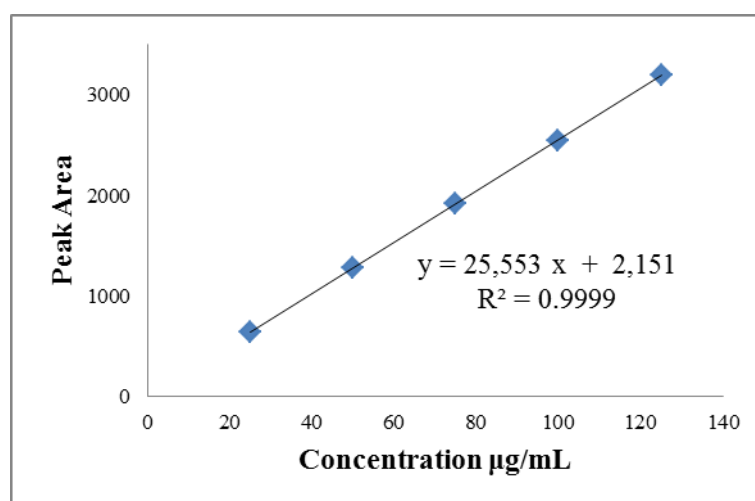


Figure S3 : Linearity of the developed method