

Donepezil (Aricept®)

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Manufacturer: Pfizer and Eisai as 5 or 10 mg tablets.

FDA Approval: 1996

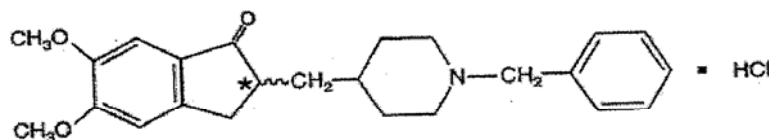
Use: Donepezil is a reversible inhibitor of acetylcholinesterase used in the treatment of Alzheimer's Disease to improve cognitive performance.

Chemical Name: (+/-)-2,3-dihydro-5,6-dimethoxy-2-[[1-(phenylmethyl)-4-piperidinyl]methyl]-1H-inden-1-one hydrochloride.

Molecular Formula: C₂₄H₂₉NO₃ HCl

Molecular Weight: 379.5

Formula Weight: 415.96



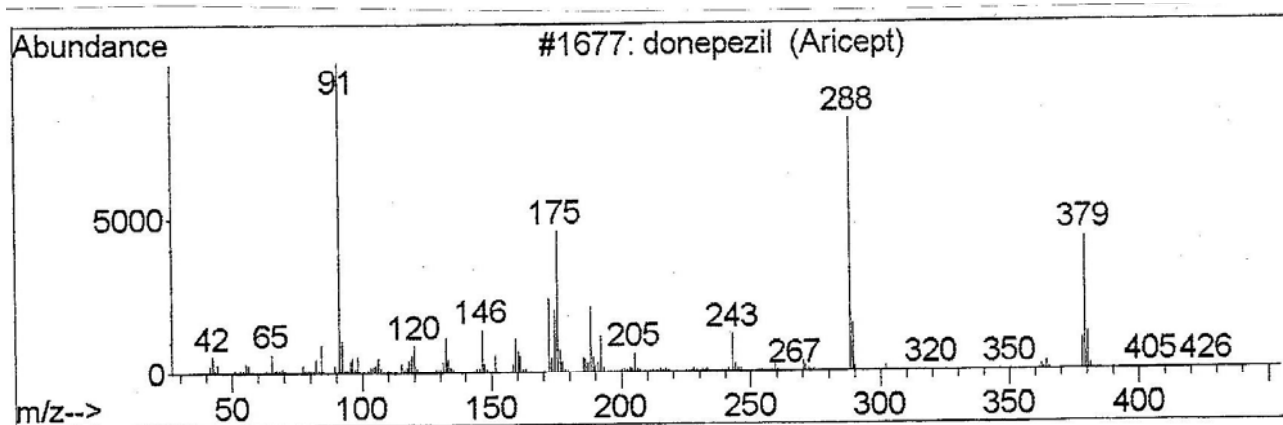
Pharmacology: Low rate of binding to CYP 3A4 and CYP 2D6, not thought to interfere with clearance of other drugs.
Possible side effects: bradycardia, increased gastric secretion, seizures, nausea, and vomiting.

Extraction: Donepezil is a basic drug that can be extracted with an n-butylchloride liquid/liquid (single-step) extraction. If a back extraction is performed, the recovery of the drug is significantly less.

Instrumentation: Detection of donepezil is possible by either GC/NPD or GC/MS.

Relative retention time of donepezil to other commonly encountered basic drugs are as follows: papaverine, strychnine, trazodone, **donepezil**. (trazodone and donepezil r.t. almost identical).

GC/MS Ions: 91, 288, 175, 379, 188 m/z



Case Report: Elderly male died by suicide (hanging). This was his only prescription.