



Frontier BioPharm

LLC

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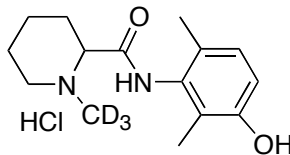
CERTIFICATE OF ANALYSIS

3-Hydroxymepivacaine-*d*₃ HCl 0.105 mg/mL (free base concentration) in Methanol

Product Number: HD-2110
Lot No.: 10280028

Chemical Identity: 3-Hydroxymepivacaine-*d*₃ HCl
Storage Condition: Protect from light, freeze
Chemical Purity: 99.2% by HPLC/UV
Loss on Drying (TGA) <0.2%
Residue on ignition <0.2%
Isotopic Purity: 99% *d*₃ < 0.1% *d*₀
Formula weight: 301.83 (HCl salt) 265.37 (free base)
Combustion analysis
Calc: (%) C: 59.69, H+D: 7.68, N: 9.28, Cl: 11.75
Found: (%) C: 59.31, H+D: 7.70, N: 9.10, Cl: 11.50


Date of Analysis: 04 February, 2013
Expiration Date: 04 February, 2015



Purity (HPLC)	Prepared Concentration*	Analyzed Concentration
99.2%	0.105 mg/mL(as the free base) (±0.003 mg/mL)	N/A

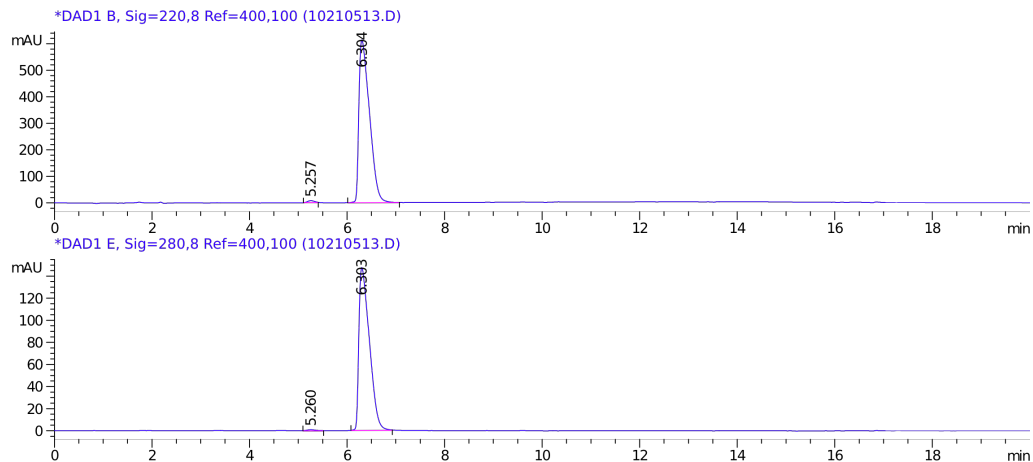
This compound has not been characterized sufficiently to be used as a quantitative standard. Use only as an internal standard.

* Masses are determined using balances calibrated with NIST traceable weights. The prepared concentration is corrected for residual solvents, chromatographic and residue purity.

Approved: 
Rodney L. Eisenberg, Ph.D.
Director

02-04-2013
Date

Spectral and Physical Data
LC UV Data



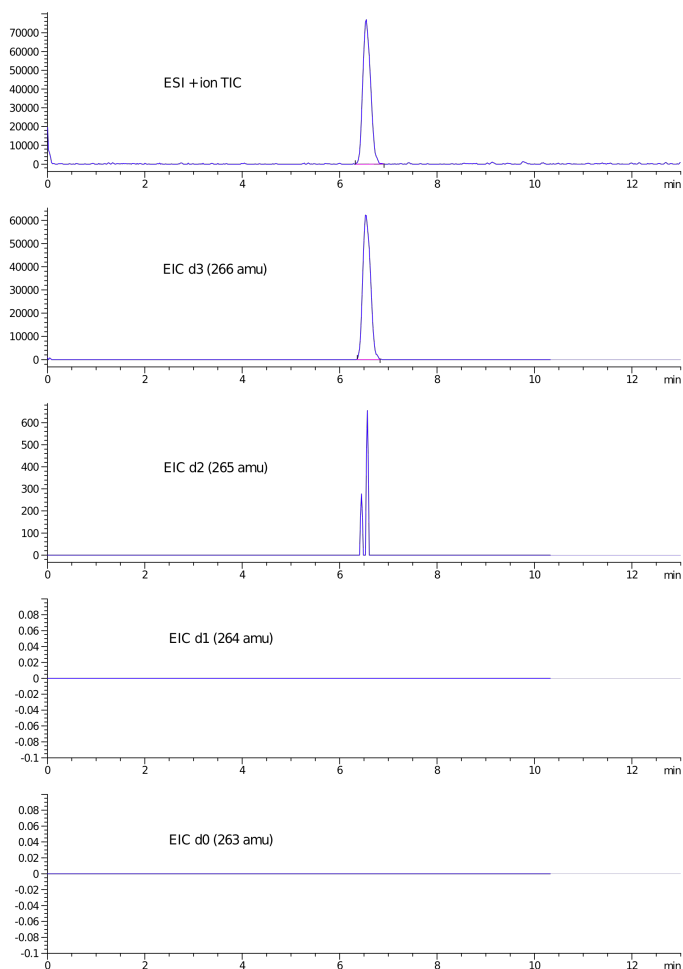
Signal 1: DAD1 B, Sig=220,8 Ref=400,100

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	5.257	MM	0.1658	73.44840	7.38348	0.7900
2	6.304	BB	0.2393	9224.27441	613.78644	99.2100
Totals :				9297.72282	621.16992	

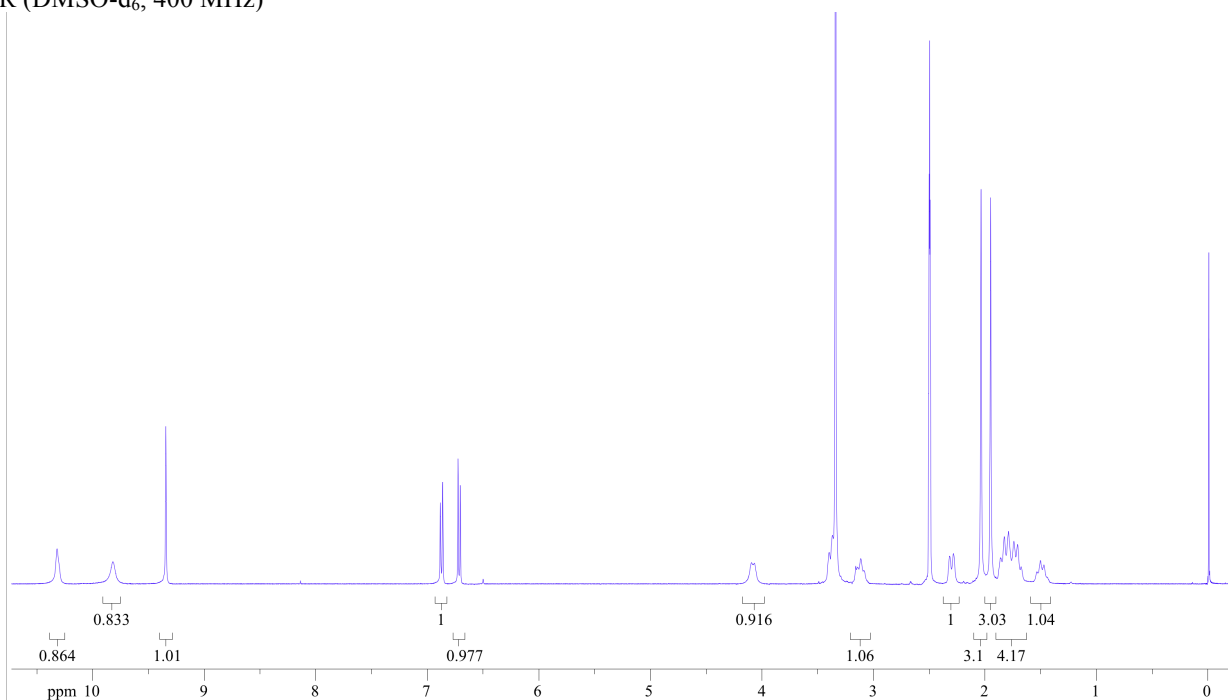
Signal 2: DAD1 E, Sig=280,8 Ref=400,100

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	5.260	MM	0.2510	16.70124	1.10914	0.7516
2	6.303	BB	0.2383	2205.37085	147.58186	99.2484
Totals :				2222.07209	148.69100	

LCMS Data



$^1\text{H-NMR}$ (DMSO- d_6 , 400 MHz)



$^{13}\text{C-NMR}$ (DMSO- d_6 , 100 MHz)

