



Frontier BioPharm

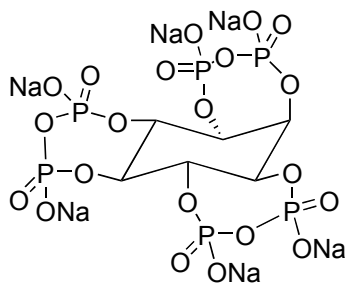
LLC

6013 Atwood Drive, Suite 300 • Richmond, KY 40475 • phone 859.623.0409 | fax 888.315.8599 • www.frontierbiopharm.com
mailing/billing address | P.O.Box 614 • Richmond, Ky 40476-0614


CERTIFICATE OF ANALYSIS

***Myo*-Inositol-Tris-pyrophosphate Sodium Salt ITPP Na**

Sample Identity:	I-9000 Lot No.: 10210006
Chemical Identity:	<i>myo</i> -inositol-tris-pyrophosphate- <i>hexa</i> -sodium salt
Appearance:	White Powder
Storage Condition:	Protect from light, moisture, freeze (-10 – -20°C)
Residual solvents	2.5% (TGA) Methanol 2.45% (headspace GC) Triethylamine 0.05% (headspace GC)
Molecular Formula:	C ₆ H ₆ Na ₆ O ₂₁ P ₆
Formula Weight	737.88
Free Acid Formula Weight:	605.83
Elemental Analysis	Calculated %: Na, 18.69 P, 25.19 Found %: Na, 19.04 P, 26.19
Date of Analysis:	21 September, 2012
Re-analysis Date:	21 September, 2016
Corrected purity	97.5%



For research and diagnostic purposes only. Not for animal, household or other uses.

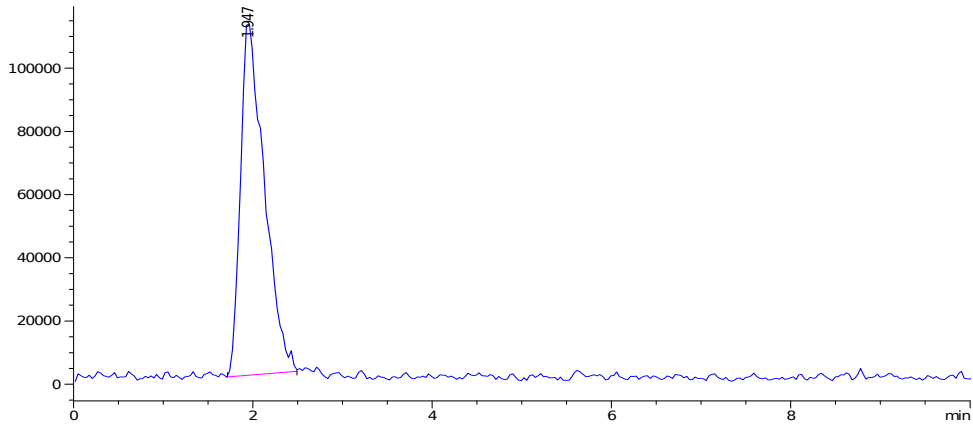
Approved: 
Rodney L. Eisenberg, Ph.D.
Director

08/26/2013
Date

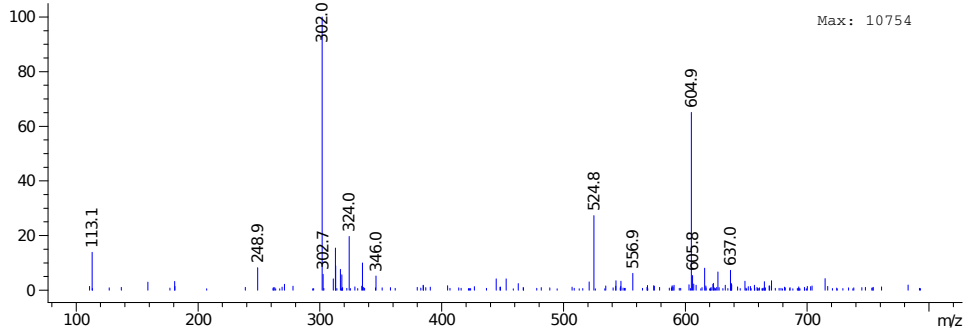
Mass Spectral Data

HPLC Mass Spectral Detection (ESI negative ion mode)

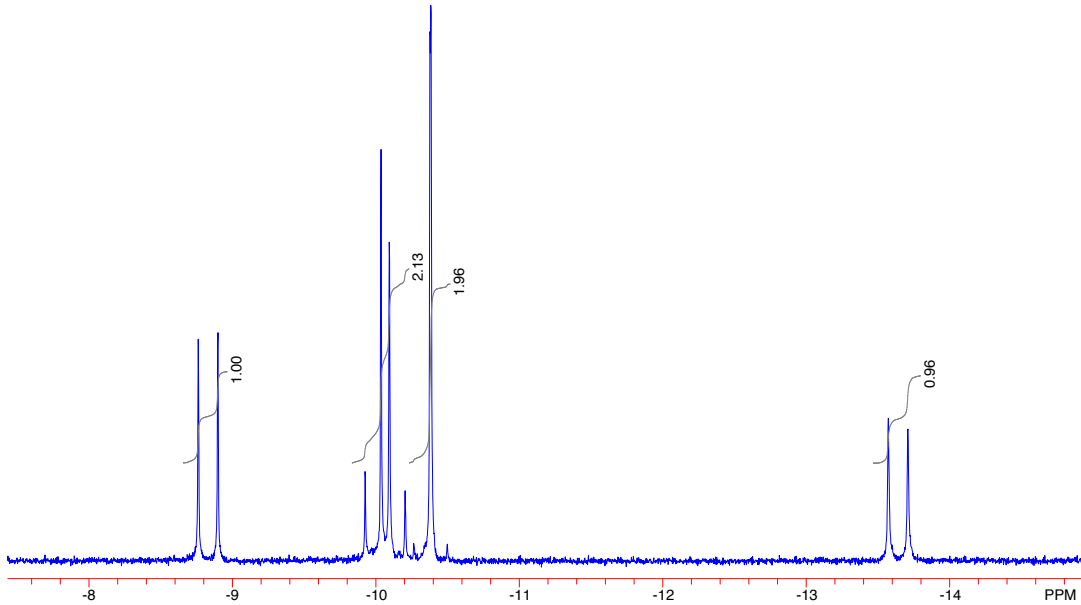
MSD2 TIC, MS File (C:\10170190.D) ES-API, Scan, Frag: 70, "Scan -"



*MSD2 SPC, time=1.835:2.304 of C:\10170190.D ES-API, Scan, Frag: 70, "



^1H , ^{13}C , and ^{31}P NMR. (D_2O) Consistent with structure
 ^{31}P NMR (D_2O 161 MHz)



Revision History.

Rev. 1.00. Original

Rev 1.10. Analysis date 09/21/2012 updated. Two year expiration date added

Rev 1.11 Expiration date extended to four years. 08/26/2013