

Supplementary Material for article:

# Investigating the effectiveness of different porous nanoparticles as drug carriers for retaining the photostability of pinosylvin derivative

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Area Percent Report

Data Path : C:\msdchem\2\data\Ati\Natural compounds\  
Data File : PsMME-Pure-no silylation.D  
Acq On : 29 Mar 2019 12:18  
Operator : Ati  
Sample :  
Misc :  
ALS Vial : 19 Sample Multiplier: 1

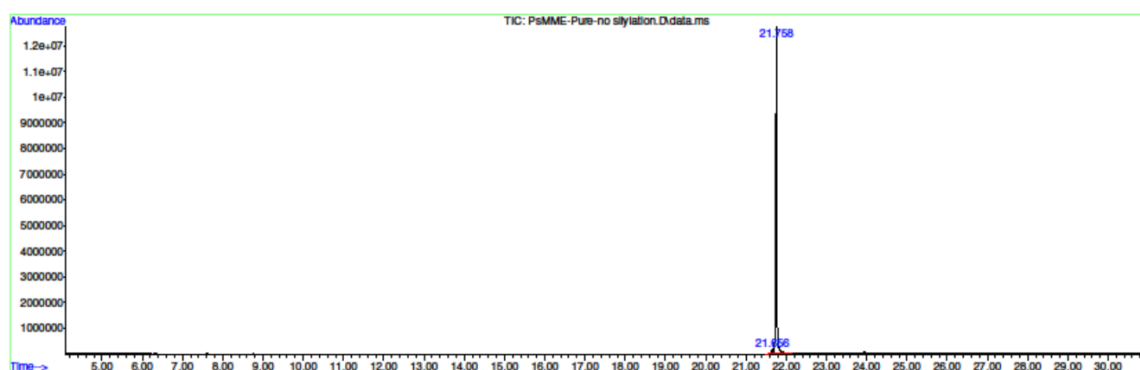
Integration Parameters: autoint1.e  
Integrator: ChemStation

Method : C:\MSDCHEM\2\METHODS\default.m  
Title :

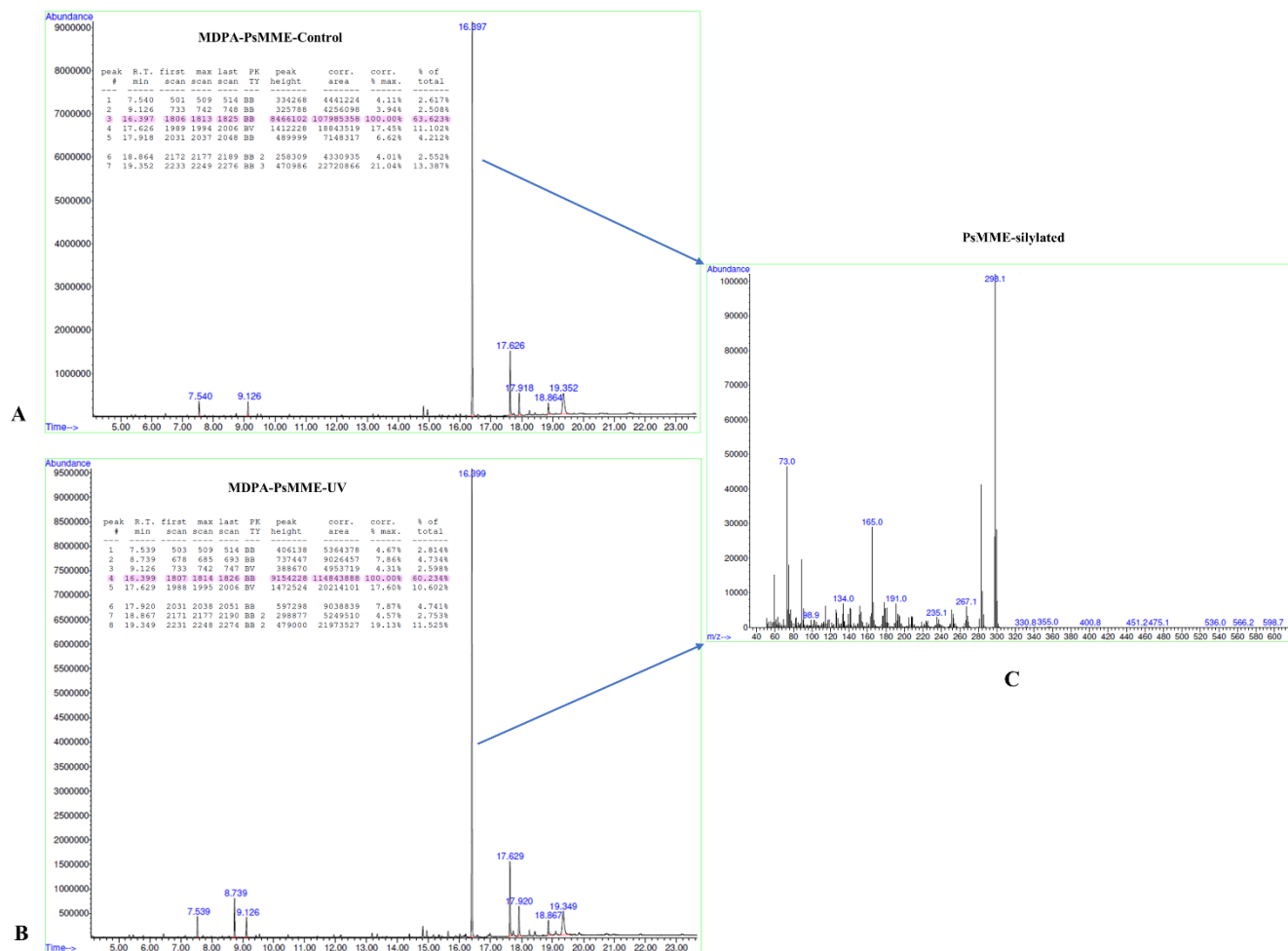
Signal : EIC TIC: PsMME-Pure-no silylation.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	21.656	2379	2399	2404	BV	181065	3187848	1.41%	1.393%
2	21.758	2404	2413	2466	VV	12083217	225643927	100.00%	98.607%

Sum of corrected areas: 228831775



**Figure S1.** GC-MS chromatogram of PsMME (peak number 2) and the area percent report (purity: 98.6 %).



**Figure S2.** GC-MS spectra of MPDA-PsMME before (A) and after (B) UV exposure. (C) Mass spectra for silylated PsMME.

**Table S1.** Release kinetics analysis of PEI-PDA-MSN-PsMME.

PEI-PDA-MSN-PsMME	Zero order		First order		Higuchi diffusion		Korsmeyer-Peppas	
	R <sup>2</sup>	K	R <sup>2</sup>	K	R <sup>2</sup>	K	R <sup>2</sup>	n
<b>pH: 5</b>	0.8344	0.5969	0.8490	0.0069	0.9128	4.0519	0,9497	0,3537
<b>pH: 6.8</b>	0.7639	0.5147	0.7791	0.0060	0.8560	3.5789	0,9272	0,2269
<b>pH: 7.4</b>	0.6694	0.3471	0.6791	0.0040	0.7803	2.5110	0,8830	0,1579

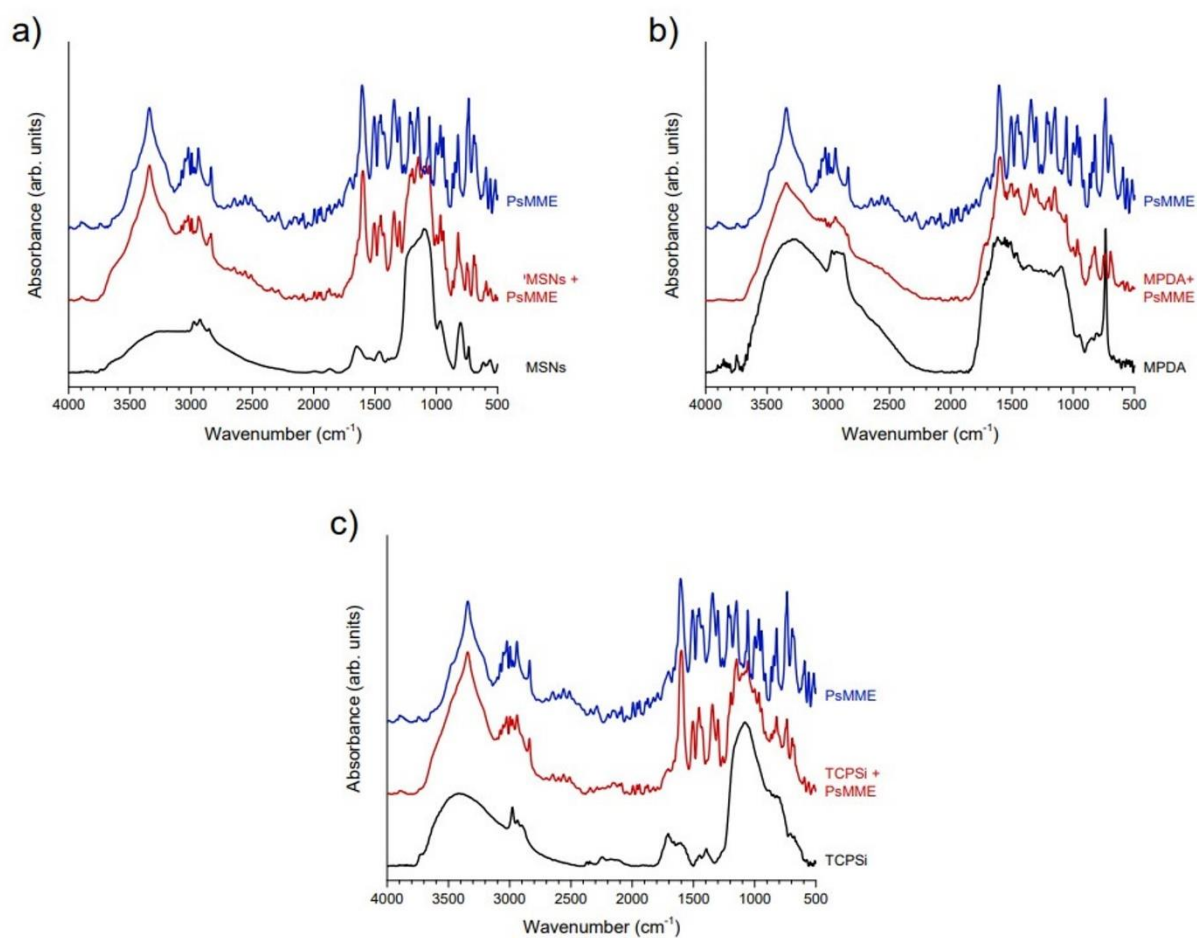
**Table S2.** Release kinetics analysis of MPDA-PsMME.

MPDA-PMME	Zero order		First order		Higuchi diffusion		Korsmeyer-Peppas	
	R <sup>2</sup>	K	R <sup>2</sup>	K	R <sup>2</sup>	K	R <sup>2</sup>	n
<b>pH: 5</b>	0.8675	0.4652	0.9075	0.0081	0.9354	4.9794	0,9444	0,3758
<b>pH: 6.8</b>	0.9581	0.8045	0.9261	0.0138	0.9252	7.7115	0,9204	0,7350
<b>pH: 7.4</b>	0.8933	0.3762	0.8963	0.0046	0.8964	3.7477	0,9186	1,1453

**Table S3.** Release kinetics analysis of TCPSi –PsMME.

TCPSi-PsMME	Zero order		First order		Higuchi diffusion		Korsmeyer-Peppas	
	R <sup>2</sup>	K	R <sup>2</sup>	K	R <sup>2</sup>	K	R <sup>2</sup>	n
<b>pH: 5</b>	0.7773	0.2986	0.7802	0.0031	0.8249	2.0961	0,8364	0,7813
<b>pH: 6.8</b>	0.7171	0.1562	0.7221	0.0016	0.7866	1.1334	0.9575	0.1185
<b>pH: 7.4</b>	0.9638	0.2129	0.9655	0.0022	0.9767	1.5233	0.7339	0.7537

R<sup>2</sup> = coefficient of determination, n = release exponent, k= kinetic constant



**Figure S3.** FT-IR spectra of (a) PsMME-MSNs, (b) PsMME-MPDA, and (c) PsMME-TCPsi nanoformulations accompanied by PsMME and plain NPs as reference.