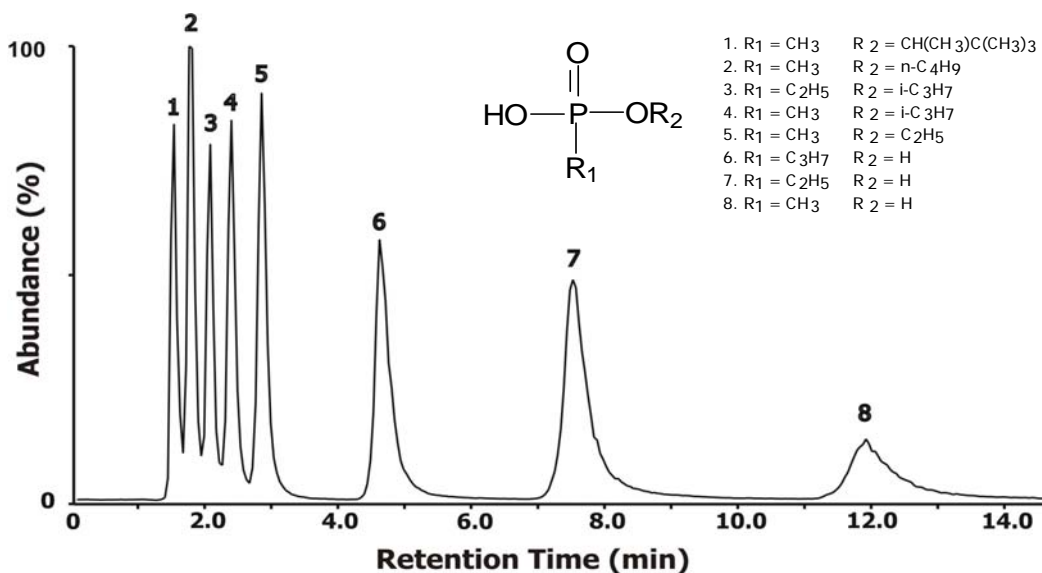


Separation of organophosphonate nerve agent metabolites

Chromatographic Conditions

Column: ZIC®-HILIC, PEEK 150 x 2.1 mm, 5 µm, 200 Å (P/N 2712-152)
 Injection: 2 µL samples diluted in 70:30 acetonitrile/water v/v
 Detection: LC-MS in negative mode
 TIC from SIM m/z: 179 (+ fragment 109, 123, 137, 151, 191, 247 and 286)
 Flow Rate: 0.35 mL/min
 Mobile Phase (v/v): 80%, Acetonitrile
 20%, Ammonium Acetate 100 mM (total ionic strength: 20 mM)



Chromatographic Data

No.	Compound		Concentration (ppm)	Time (min)	Retention factor
	(t ₀)	void volume	-	1.13	-
1	PMPA	Pinacolyl-methyl-phosphonic acid	20	1.50	0.3
2	BMPA	n-Butyl-methyl-phosphonic acid	50	1.76	0.6
3	IEPA	Isopropyl-ethyl-phosphonic acid	100	2.04	0.8
4	IMPA	Isopropyl-methyl-phosphonic acid	50	2.36	1.1
5	EMPA	Ethyl-methyl-phosphonic acid	100	2.81	1.5
6	PPA	Propyl-phosphonic acid	200	4.60	3.1
7	EPA	Ethyl-phosphonic acid	400	7.51	5.6
8	MPA	Methyl-phosphonic acid	300	11.92	9.5

By courtesy of:

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