

The use of Solid Phase Extraction (SPE) for detection Methylphenidate and Ritalinic Acid in small volume plasma samples

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This methodology describes an extraction of Methylphenidate (MPH) and Ritalinic Acid (RA), from plasma using solid-phase extraction (SPE), followed by silylation reaction. In addition an ion chromatographic method was developed for the specific GC determination of MPH and RA. Treated plasma samples were passed through SPE cartridge with Hydrophilic-Lipophilic-Balanced (HLB) sorbent to retain and elute target analytes. Using N-Methyl-N-(trimethylsilyl)trifluoroacetamide (MSTFA) and N-Methyl-bis(trifluoroacetamide) (MBTFA) reagents, eluent was derivatized and the non-polar product was further analyzed using GC-MS. A calibration curve for MPH and RA was constructed in the range 2-250 ug/mL. The SPE resulted in higher extraction recovery (mean x %) with % R.S.D.s similar in both matrix and solvent x%, respectively).

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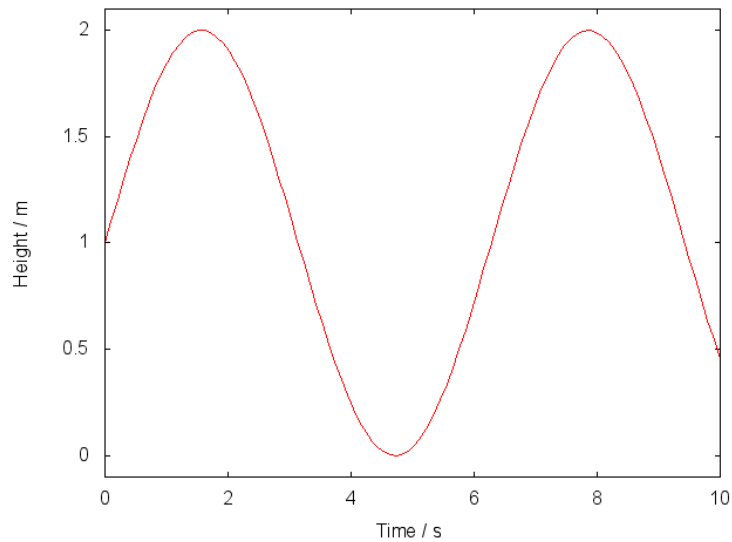


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Supplementary materials

Materials and Methods

Supplementary Text

Figs. S1 to S3

Tables S1 to S4

References (7-0)

Movie S1

Data S1

Supplementary Materials for
The use of Solid Phase Extraction (SPE) for detection
Methylphenidate and Ritalinic Acid in small volume plasma
samples

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This PDF file includes:

Materials and Methods

Supplementary Text

Figures S1 to S3

Tables S1 to S4

Captions for Movies S1 to S2

Captions for Data S1 to S2

Other Supplementary Materials for this manuscript:

Movies S1 to S2

Data S1 to S2

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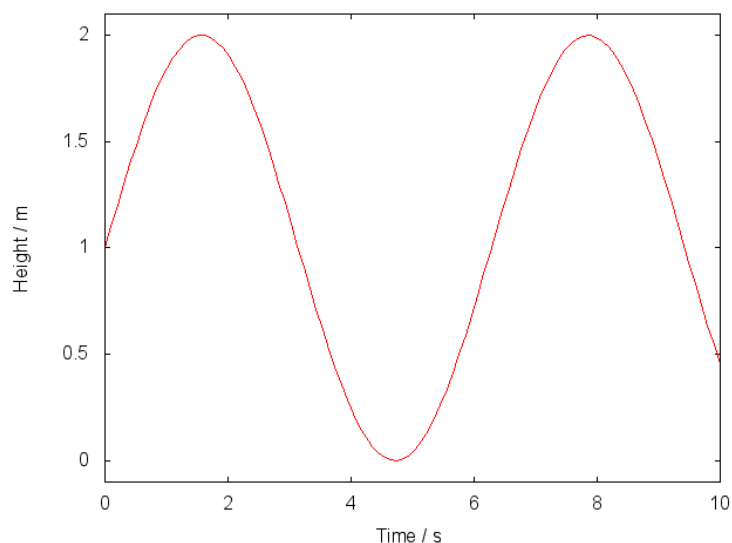


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1	2	3	4
2	4	6	8
3	5	7	9

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