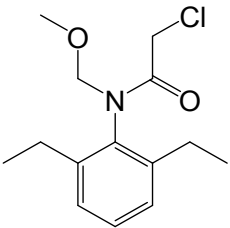
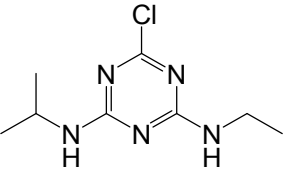
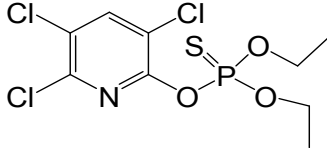
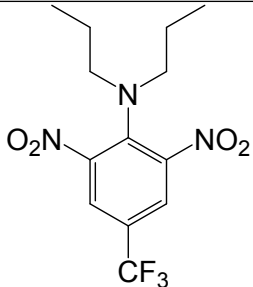


ELECTRONIC SUPPLEMENTARY INFORMATION

Table SI-1 Physical and chemical properties of the analyzed pesticides in this work

Property	Alachlor	Atrazine	Chlorpyrifos	Trifluralin
Molecular structure				
Log K _{oa}	⁵⁷ 9.72	⁵⁷ 8.38	⁵⁸ 8.32	⁵⁷ 8.41
⁵⁷ Vapour pressure (mPa)	1.0	0.04	2.7	6.1
Solubility in acetone (g L ⁻¹)	> 827 (20 °C) ⁵⁹	31 (25 °C) ⁶⁰	> 1000 (20 °C) ⁶¹	250 (20 °C) ⁶²

57 USEPA, CompTox Chem. Dashboard

58 M. Odabasi and B. Cetin, Determination of octanol–air partition coefficients of organochlorine pesticides (OCPs) as a function of temperature: application to air–soil exchange, *J. Environ. Manage.*, 2012, **113**, 432–439.

59 FAO-UNEP, Rotterdam Convention – Draft Decision Guidance Document Alachlor, 2011

60 WHO-IARC, IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, 1999, vol. 73

61 FAO-UNEP, Chlorpyrifos, 2020

62 IUPAC, PPDB – Pesticide Properties Database, <https://sitem.herts.ac.uk/aeru/iupac/Reports/667.htm>, accessed 16 August 2020

Table SI-2 External calibration and matrix-matched calibration. Method analytical performance using ultrasound-assisted extraction with acetone at 30 °C for 15 min in 20 µg L⁻¹

Pesticide	External calibration – Recovery (%) ± RSD	
	1 cycle	3 cycles
Alachlor	66 ± 19	125 ± 13
Atrazine	58 ± 18	124 ± 15
Chlorpyrifos	74 ± 19	150 ± 13
Trifluralin	52 ± 21	122 ± 13
Pesticide	Matrix-matched calibration – Recovery (%) ± RSD	
	1 cycle	3 cycles
Alachlor	58 ± 19	81 ± 13
Atrazine	59 ± 20	84 ± 15
Chlorpyrifos	58 ± 19	85 ± 12
Trifluralin	53 ± 21	87 ± 13

Table SI-3 Pesticides outdoor concentrations and frequencies of detection (FD) between February and November 2017 at Arapongas in XAD-2 cartridges

Month	<i>XAD-2 cartridges</i>								
	Atrazine			Chlorpyrifos			Trifluralin		
	Range (pg m ⁻³)	Average (pg m ⁻³)	FD (%)	Range (pg m ⁻³)	Average (pg m ⁻³)	FD (%)	Range (pg m ⁻³)	Average (pg m ⁻³)	FD (%)
Feb/17 (n = 4)	<LOQ	-	25	<LOQ	-	0	<LOQ-299	299	25
Mar/17 (n = 2)	353-884	618	100	<LOQ	-	0	<LOQ	-	0
Apr/17 (n = 2)	<LOQ-260	260	50	<LOQ	-	50	<LOQ-404	404	50
May/17 (n = 6)	<LOQ	-	17	<LOQ	-	0	<LOQ	-	0
Jun/17 (n = 2)	<LOQ	-	50	<LOQ	-	50	<LOQ	-	0
Aug/17 (n = 4)	<LOQ	-	0	<LOQ	-	0	<LOQ	-	0
Sep-Nov/17 (n = 18)	<LOQ-286	268	11	<LOQ	-	56	<LOQ	-	0

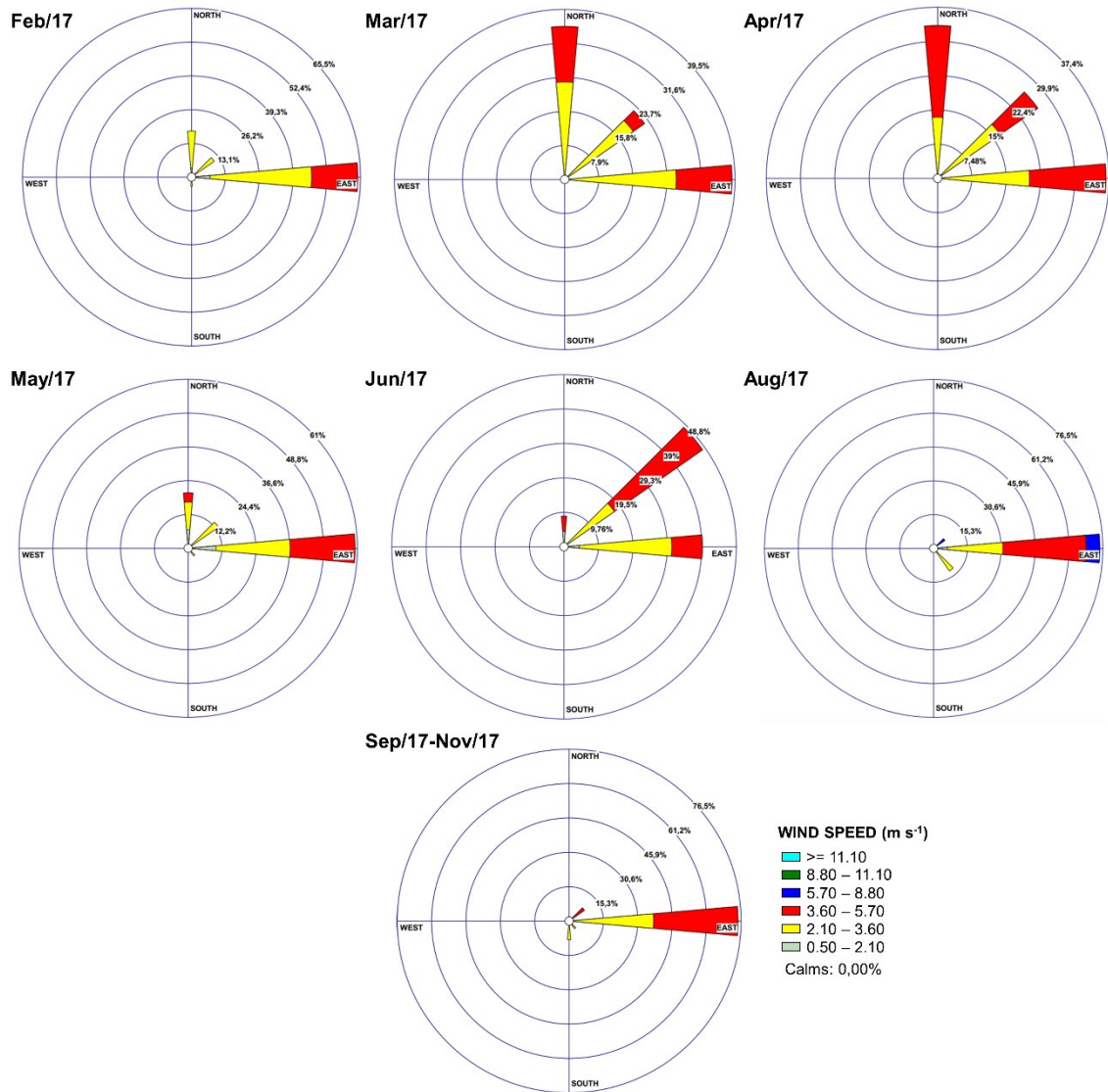


Fig. SI-1 Wind roses during gas phase sampling from February/17 to November/17 in Arapongas city (Brazil).