SUPPLEMENTAL MATERIAL

DEVELOPMENT AND FIELD TESTING OF A MINIATURIZED SAMPLING SYSTEM FOR SIMULTANEOUS SAMPLING OF VAPOURS AND DROPLETS

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Compound	Storage **[days]**	Filter ratio ± St. Dev. **[%]**	Tube ratio ± St. Dev. **[%]**	Total recovery ± St. Dev. **[%]**
Diethylene glycol monobutyl ether 134.4 mg/m³	0	34 ± 6	53 ± 5	88 ± 3
	1	47 ± 7	42 ± 7	88 ± 1
	3	59 ± 1	39 ± 10	98 ± 11
	7	68 ± 4	29 ± 3	97 ± 1
	14	54 ± 4	39 ± 3	93 ± 1
	21	36 ± 2	36 ± 3	90 ± 1
	28	57 ± 6	35 ± 4	93 ± 2
Diethylene glycol 25.3 mg/m³	0	52 ± 11	30 ± 9	82 ± 4
	1	35 ± 8	39 ± 5	74 ± 4
	3	32 ± 3	43 ± 4	75 ± 5
	7	34 ± 6	31 ± 6	64 ± 0
	14	25 ± 13	50 ± 1	75 ± 11
	28	26 ± 4	39 ± 2	65 ± 74
n-Hexadecane 25.5 mg/m³	0	37 ± 7	41 ± 6	78 ± 3
	1	50 ± 8	44 ± 8	94 ± 0
	3	60 ± 24	44 ± 19	103 ± 5
	7	48 ± 2	42 ± 1	90 ± 2
	14	20 ± 4	69 ± 5	88 ± 0
	21	16 ± 8	67 ± 5	83 ± 6
	28	30 ± 3	85 ± 9	115 ± 6
n-Hexadecane 202 mg/m³	0	92 ± 3	6 ± 1	98 ± 4
	14	94 ± 3	3 ± 2	98 ± 1
	21	100 ± 2	7 ± 1	108 ± 2

Table S 1: Storage stability and recovery

Compound	Mass **[mg]**	Concentration[1] **[mg/m³]**	Filter ratio ± St. Dev. **[%]**	Tube ratio ± St. Dev. **[%]**	Total recovery ± St. Dev. **[%]**
Diethylene glycol	0.18	4.5	36 ± 20	63 ± 14	99 ± 6
	1.0	25	52 ± 11	30 ± 9	82 ± 4
	3.5	87	89 ± 8	7 ± 4	96 ± 5
Diethylene glycol monobutyl ether	0.26	6.6	n.d.	90 ± 2	90 ± 2
	1.0	25	7 ± 6	80 ± 7	88 ± 1
	5.4	134	34 ± 8	54 ± 5	88 ± 3
n-Hexadecane	0.4	10	56 ± 22	48 ± 21	104 ± 14
	1.0	25.5	37 ± 7	41 ± 3	78 ± 3
	8.0	202	102 ± 10	5 ± 6	107 ± 8
n-Octadecane	0.4	10	86 ± 4	4 ± 1	90 ± 5
	1.0	25	89 ± 4	6 ± 1	95 ± 4

Table S 2: Fractionation and variability on the single parts of the GGP-Mini sampler

[1] calculated for a sampling volume of 40 l

Compound	Extraction	GC / Column used	Temperature Program
1-Ethoxy-2-propanol	in 5ml CH2Cl2 /CH3OH 7:3 mixture	Clarus 500 / 60m StabilWax, FD 0.5µm, ID 0.25mm	50°C, 5min, 10°C/min ==> 200°C, 4min
Ethoxypropyl acetate	in 5ml CH2Cl2 /CH3OH 7:3 mixture	Clarus 500 / 60m StabilWax, FD 0.5µm, ID 0.25mm	50°C, 5min, 10°C/min ==> 200°C, 4min
Propylene glycol	in 5ml CH2Cl2 /CH3OH 7:3 mixture	Clarus 500 / 60m StabilWax, FD 0.5µm, ID 0.25mm	50°C, 5min, 10°C/min ==> 200°C, 4min
Diethylene glycol monomethyl ether	in 5ml CH2Cl2 /CH3OH 7:3 mixture	Clarus 500 / 60m StabilWax, FD 0.5µm, ID 0.25mm	50°C, 5min, 10°C/min ==> 200°C, 4min
Ethylene glycol	in 2.5ml CH2Cl2 /CH3OH 7:3 mixture	Clarus 500 / 60m StabilWax, FD 0.5µm, ID 0.25mm	50°C, 5min, 15°C/min ==> 200°C, 3.5min
Diethylene glycol monoethyl ether	in 5ml CH2Cl2 /CH3OH 7:3 mixture	Clarus 500 / 60m StabilWax, FD 0.5µm, ID 0.25mm	50°C, 5min, 10°C/min ==> 200°C, 4min
Diethylene glycol monobutyl ether	in 5ml CH2Cl2 /CH3OH 7:3 mixture	Clarus 500 / 60m StabilWax, FD 0.5µm, ID 0.25mm	50°C, 5min, 20°C/min ==> 200°C, 10min
Diethylene glycol	in 5ml CH2Cl2 /CH3OH 7:3 mixture	Clarus 500 / 60m StabilWax, FD 0.5µm, ID 0.25mm	50°C, 5min, 20°C/min ==> 200°C, 10min
Triethylene glycol monomethyl ether	in 5ml CH2Cl2 /CH3OH 7:3 mixture	Clarus 500 / 60m StabilWax, FD 0.5µm, ID 0.25mm	50°C, 5min, 20°C/min ==> 200°C, 10min
n-Hexadecane	in 10ml CS2	AutoSysXL3 / 30m DB-5, FD 5µm, ID 0.53mm	100°C, 0min, 10°C/min ==> 235°C, 3.5min
n-Octadecane	in 10ml CS2	AutoSysXL3 / 30m DB-5, FD 5µm, ID 0.53mm	100°C, 0min, 10°C/min ==> 235°C, 3.5min

Table S 3: GC-FID analysis of the filter and adsorber samples