

Supplemental materials

Table S1. Summary of experimental design.

<i>Experiment 1: Stability during conditioning of filters</i>				
Filter ID ^a	Spiked ^b	Conditioning (h)		
S1a, S1b	Yes	0		
S1c, S1d	Yes	24		
S4a, S4b	No	0		
S4c, S4d	No	24		
B1a, B1b	No	0		
B1c, B1d	No	24		

<i>Experiment 2: Stability during storage of filters</i>				
Filter ID	Spiked ^b	Conditioning (h)	Storage of filter (d)	
S2a, S2b	Yes	24	0	
S2c, S2d, S3a, S3b	Yes	24	7	
S3c, S3d	Yes	24	30	
S5a, S5b	No	24	0	
S5c, S5d, S6a, S6b	No	24	7	
S6c, S6d	No	24	30	
B2a, B2b	No	24	0	
B2c, B2d, B3a, B3b	No	24	7	
B3c, B3d	No	24	30	

<i>Experiment 3: Stability during storage of extracts</i>				
Filter ID	Spiked ^b	Conditioning h	Storage of filter d	Storage of extract m
S7-S18, Test #1	No	24	0	0
S7-S18, Test #2	No	24	0	1
S7-S18, Test #3	No	24	0	5
S7-S18, Test #4	No	24	0	6

^aS1a, S1b, S1c and S1d are quarter filters from filter S1. See text for details.

^bThe composition of the spiking solution is shown in Table 1.

Table S2. Reproducibility of Σ PAH and Σ NPAH measurements among spiked quarter filters.

Filter ID ^a	Conditioning (hr)	Storage of filter (day)	Σ PAHs		Σ NPAHs	
			Average ^b (ng)	Absolute % difference ^c (%)	Average ^b (ng)	Absolute % difference ^c (%)
S1a, S1b	0	0	59.4	118	1.78	46.8
S1c, S1d	24	0	33.6	n/a ^d	0.56	84.1
S2a, S2b	24	0	42.5	7.2	0.67	1.0
S2c, S2d	24	7	53.2	20.3	0.67	1.3
S3a, S3b	24	7	43.5	7.8	1.62	1.3
S3c, S3d	24	30	41.8	10.7	1.60	1.9
Average ^e				11.5		1.4

^a IDs are quarter filters.

^b Average mass Σ PAHs or Σ NPAHs of the two quarter filters.

^c Calculated as the absolute value of the difference between two quarter filters, divided by the average of these two quarter filters.

^d Data for sample S1c is missing.

^e Excludes data for samples S1a, S1b, S1c and S1d

Table S3. Average mass of target SVOCs in conditioned and unconditioned quarter filters, and the change in conditioned quarter filters compared to unconditioned ones. Standard deviation in parentheses.

Group	Compound	Unconditioned (ng)	Conditioned (ng)	Change (%)
	Sample size (N)	2	2	
PAHs ^a	NAP	1.16 (0.04)	0.84 (0.01)	-27 (3)
	ACY	0.06 (0.02)	0.04 (0.01)	-39 (22)
	ACT	0.09 (0.00)	0.09 (0.00)	-3 (5)
	PHE	0.02 (0.01)	0.02 (0.00)	-35 (36)
	PYR	0.46 (0.02)	0.33 (0.07)	-29 (15)
	Average			-27 (20)
	Sample size (N)	2	2	
NPAHs ^a	2-NNAP	0.06 (0.00)	0.05 (0.00)	-14 (4)
	2-NBPH	0.09 (0.05)	0.08 (0.04)	-10 (61)
	3-NBPH	0.14 (0.05)	0.13 (0.04)	-9 (45)
	4-NBPH	0.04 (0.01)	0.04 (0.01)	-13 (31)
	6-NCHR	0.72 (0.10)	0.73 (0.11)	2 (21)
	Average			-9 (38)
	Sample size (N)	4	4	
Hopanes ^b	Hop19	0.02 (0.00)	0.02 (0.00)	7 (27)
	Hop15	0.02 (0.00)	0.03 (0.01)	39 (40)
	Average			23 (34)
	Sample size (N)	4	4	
Steranes ^b	Ster42	2.29 (0.20)	2.34 (0.25)	2 (14)
	Ster43	0.19 (0.03)	0.22 (0.04)	13 (26)
	Average			8 (21)

^aIncludes only unspiked quarter filters.

^bIncludes both spiked and unspiked quarter filters.

Table S4. Mass of PAHs in stored and unstored quarter filters, separated by filter. Data presented are mean (SD).

Treatment	Compound	Day 0 (ng)	Day 7-1 (ng)	Day 7-2 (ng)	Day 30 (ng)	Change (Day7-1 vs. Day0) (%)	Change (Day30 vs. Day7-2) (%)
Unspiked	Filters involved	S5a, S5b	S5c, S5d	S6a, S6b	S6c, S6d	S5a, S5b, S5c, S5d	S6a, S6b, S6c, S6d
	NAP	0.00 (0.00)	0.00 (0.00)	1.22 (0.00)	1.09 (0.15)	n/a	-11 (12)
	ACY	0.16 (0.04)	0.16 (0.03)	0.10 (0.00)	0.09 (0.00)	0 (31)	-4 (5)
	ACT	0.15 (0.02)	0.14 (0.03)	0.08 (0.02)	0.08 (0.02)	-6 (23)	-1 (31)
	PHE	0.00 (0.00)	0.00 (0.00)	0.02 (0.00)	0.02 (0.00)	n/a	0 (1)
	PYR	0.21 (0.03)	0.20 (0.03)	0.37 (0.02)	0.34 (0.01)	-2 (21)	-7 (6)
	BBF	0.47 (0.08)	0.55 (0.19)	0.00 (0.00)	0.00 (0.00)	17 (44)	n/a
	BAP	0.16 (0.04)	0.16 (0.03)	0.00 (0.00)	0.00 (0.00)	-1 (32)	n/a
	Average					2 (32)	-4 (15)
	Spiked	Filters involved	S2a, S2b	S2c, S2d	S3a, S3b	S3c, S3d	S2a, S2b, S2c, S2d
NAP		1.85 (0.09)	1.77 (0.13)	1.79 (0.06)	1.79 (0.00)	-4 (8)	0 (3)
ACY		1.20 (0.16)	1.20 (1.02)	0.24 (0.08)	0.23 (0.09)	0 (86)	-6 (46)
ACT		0.97 (0.23)	2.17 (2.45)	0.77 (0.01)	0.77 (0.02)	123 (257)	0 (3)
PHE		2.97 (0.20)	3.35 (1.41)	2.60 (0.09)	2.50 (0.12)	12 (48)	-4 (6)
ANT		1.91 (0.17)	1.95 (1.55)	0.30 (0.00)	0.30 (0.00)	2 (82)	-3 (0)
FLA		3.56 (0.33)	3.55 (0.68)	1.26 (0.06)	1.24 (0.14)	0 (21)	-2 (12)
PYR		3.70 (0.30)	3.55 (0.52)	3.44 (0.06)	3.14 (0.10)	-10 (16)	-9 (3)
BAA		0.00 (0.00)	0.00 (0.00)	3.00 (0.15)	2.92 (0.15)	n/a	-2 (7)
CHR		0.00 (0.00)	0.00 (0.00)	2.46 (0.18)	2.42 (0.18)	n/a	-2 (10)
BBF		10.03 (0.44)	15.74 (1.09)	5.82 (0.39)	5.66 (0.26)	57 (13)	-3 (8)
BKF		0.00 (0.00)	0.00 (0.00)	1.10 (0.21)	1.18 (0.14)	n/a	7 (24)
BAP		2.57 (0.30)	2.87 (1.06)	0.20 (0.01)	0.21 (0.00)	12 (43)	2 (6)
IND		13.71 (0.14)	17.30 (2.25)	17.93 (2.41)	16.95 (3.02)	26 (16)	-5 (21)
DBA		0.00 (0.00)	0.00 (0.00)	2.53 (0.07)	2.44 (0.14)	n/a	-4 (6)
Average					11 (46) ^a	-2 (16)	

^aExcludes ACT.**Table S5.** Mass of NPAHs in stored and unstored quarter filters, separated by filter. Data presented are mean (SD).

Treatment	Compound	Day 0 (ng)	Day 7-1 (ng)	Day 7-2 (ng)	Day 30 (ng)	Change (Day7-1 vs. Day0) (%)	Change (Day30 vs. Day7-2) (%)
Unspiked	Filters involved	S5a, S5b	S5c, S5d	S6a, S6b	S6c, S6d	S5a, S5b, S5c, S5d	S6a, S6b, S6c, S6d
	1-NNAP	0.109 (0.005)	0.100 (0.007)	0.127 (0.022)	0.113 (0.014)	-8 (8)	-11 (19)
	2-NNAP	0.103 (0.002)	0.138 (0.007)	0.273 (0.084)	0.258 (0.076)	34 (8)	-5 (40)
	2-NBPH	0.138 (0.007)	0.140 (0.010)	0.128 (0.006)	0.109 (0.008)	1 (9)	-15 (7)
	3-NBPH	0.575 (0.014)	0.393 (0.084)	0.243 (0.012)	0.222 (0.015)	-32 (15)	-9 (8)
	4-NBPH	0.189 (0.013)	0.134 (0.013)	0.000 (0.000)	0.000 (0.000)	-29 (8)	n/a
	6-NCHR	0.808 (0.038)	0.640 (0.082)	0.753 (0.115)	0.777 (0.063)	-21 (11)	3 (18)
	Average					-9 (10)	-7 (20)
Spiked	Filters involved	S2a, S2b	S2c, S2d	S3a, S3b	S3c, S3d	S2a, S2b, S2c, S2d	S3a, S3b, S3c, S3d
	1-NNAP	0.017 (0.002)	0.012 (0.001)	0.018 (0.002)	0.014 (0.000)	-30 (9)	-25 (8)
	2-NNAP	0.076 (0.026)	0.070 (0.015)	0.071 (0.014)	0.069 (0.015)	-9 (37)	-2 (29)
	2-NBPH	0.273 (0.019)	0.294 (0.001)	0.284 (0.002)	0.283 (0.005)	8 (8)	-1 (2)
	3-NBPH	0.112 (0.001)	0.086 (0.004)	0.305 (0.015)	0.298 (0.014)	-23 (4)	-2 (7)
	4-NBPH	0.028 (0.012)	0.031 (0.003)	0.055 (0.002)	0.053 (0.001)	10 (49)	-4 (4)
	6-NCHR	0.072 (0.038)	0.062 (0.004)	0.804 (0.014)	0.806 (0.004)	-14 (46)	0 (2)
	Average					-10 (32)	-6 (13)

Table S6. Mass of hopanes and steranes in stored and unstored quarter filters, separated by filter. Data presented are mean (SD).

Group	Compound	Day 0 (ng)	Day 7-1 (ng)	Day 7-2 (ng)	Day 30 (ng)	Change (Day7-1 vs. Day0) (%)	Change (Day30 vs. Day7-2) (%)
	Filters involved	S2a, S2b, S5a, S5b	S2c, S2d, S5c, S5d	S3a, S3b, S6a, S6b	S3c, S3d, S6c, S6d		
Hopanes	Hop19	0.01 (0.00)	0.01 (0.00)	0.02 (0.00)	0.01 (0.00)	-2 (14)	-13 (16)
	Hop15	0.02 (0.00)	0.01 (0.00)	0.01 (0.00)	0.02 (0.00)	-22 (21)	25 (27)
	Average					-12 (18)	6 (22)
Steranes	Ster42	2.03 (0.07)	1.87 (0.21)	1.75 (0.17)	1.84 (0.06)	-8 (11)	5 (11)
	Ster43	0.18 (0.00)	0.17 (0.02)	0.16 (0.02)	0.16 (0.02)	-9 (13)	1 (18)
	Average					-8 (12)	3 (15)

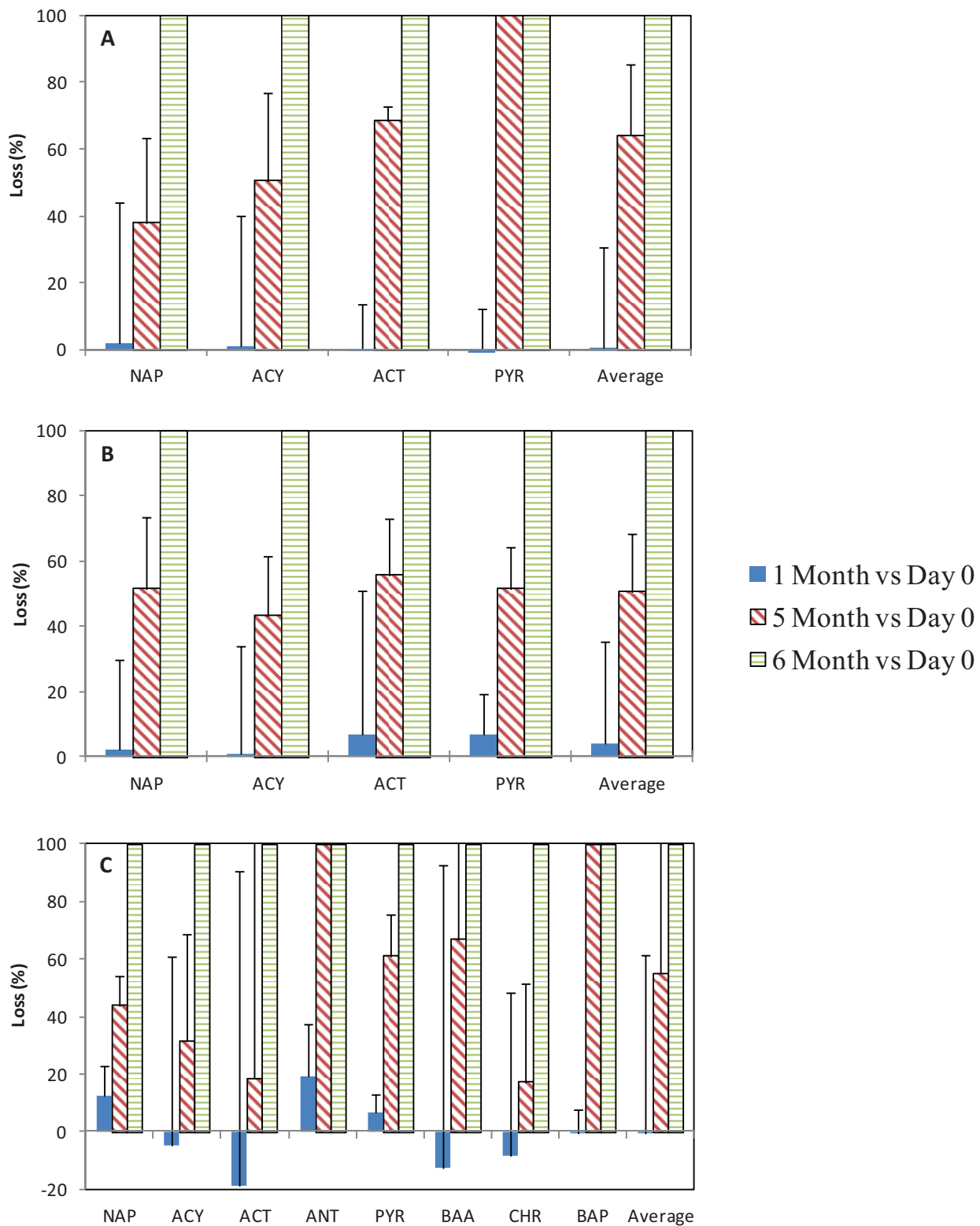


Fig. S1. Losses of PAHs in stored extracts compared to directly analyzed extracts. (A) Idle; (B) 1500 rpm-6 bar; (C) 2500 rpm-9 bar. Error bars show 1 SD.

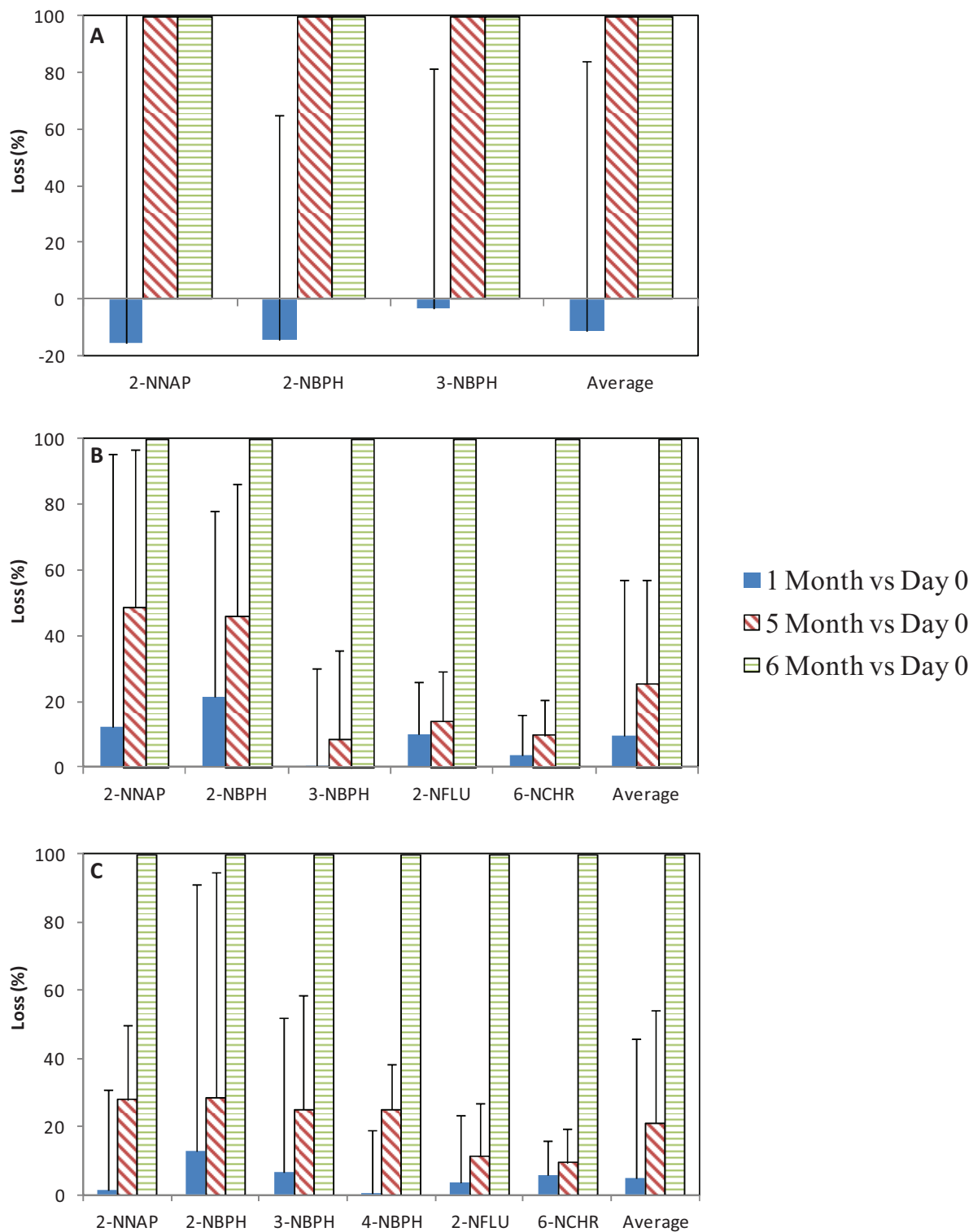


Fig. S2. Losses of NPAHs in stored extracts compared to directly analyzed extracts. (A) Idle; (B) 1500 rpm-6 bar; (C) 2500 rpm-9 bar. Error bars show 1 SD.

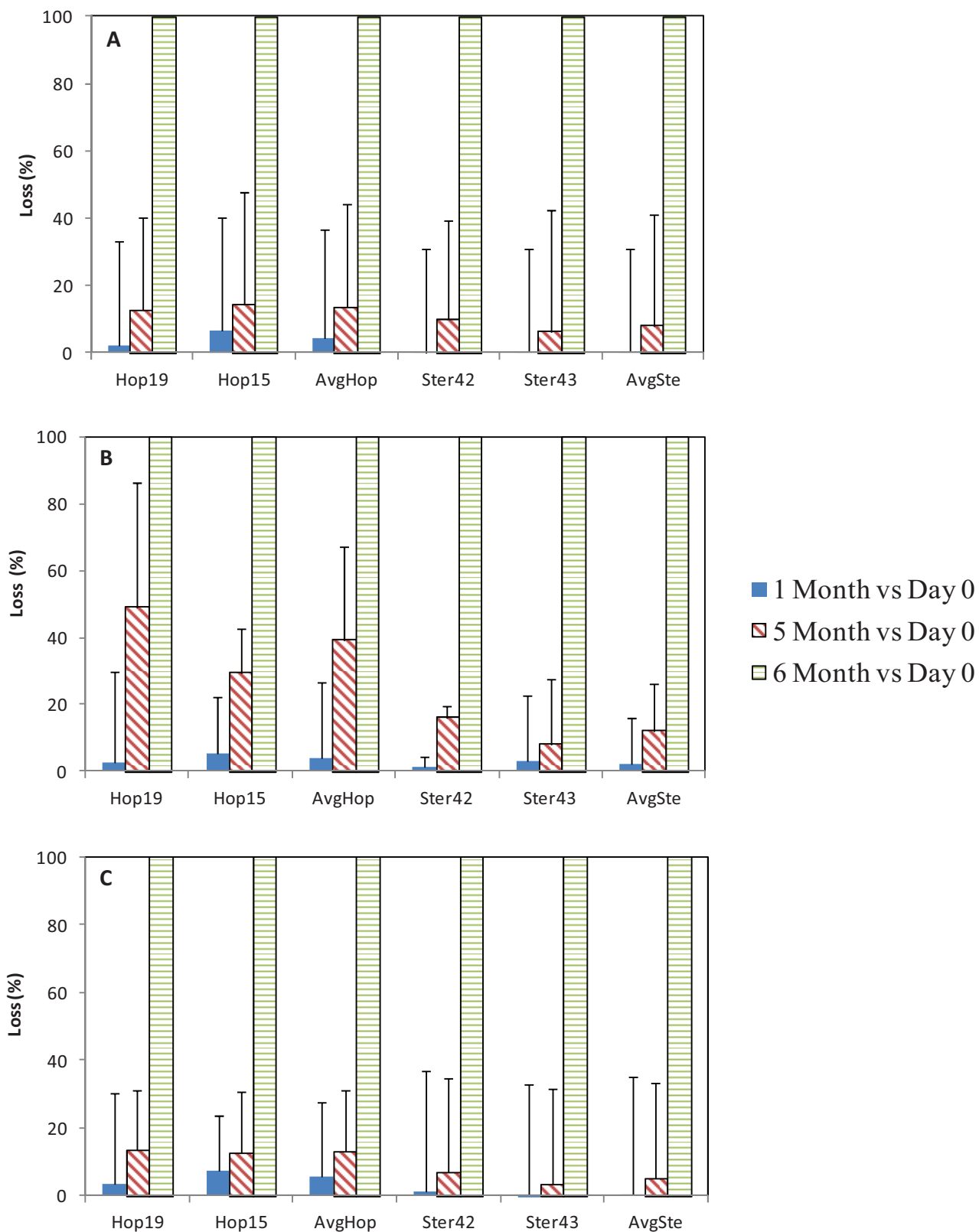


Fig. S3. Losses of hopanes and steranes in stored extracts compared to directly analyzed extracts. (A) Idle; (B) 1500 rpm-6 bar; (C) 2500 rpm-9 bar. Error bars show SD.

