

Supporting Information

Exposure of nail salon workers to phthalates, di(2-ethylhexyl) terephthalate, and organophosphate esters: A pilot study

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Figure S1. Comparison of Creatinine-Corrected Pre- and Post-Shift Concentrations* of Phthalates, Phthalate Alternatives, and Organophosphate Esters (ng/g) Detected $\geq 50\%$ in Individual Nail Salon Workers' Urine in the Greater Boston Area (2016-2017)

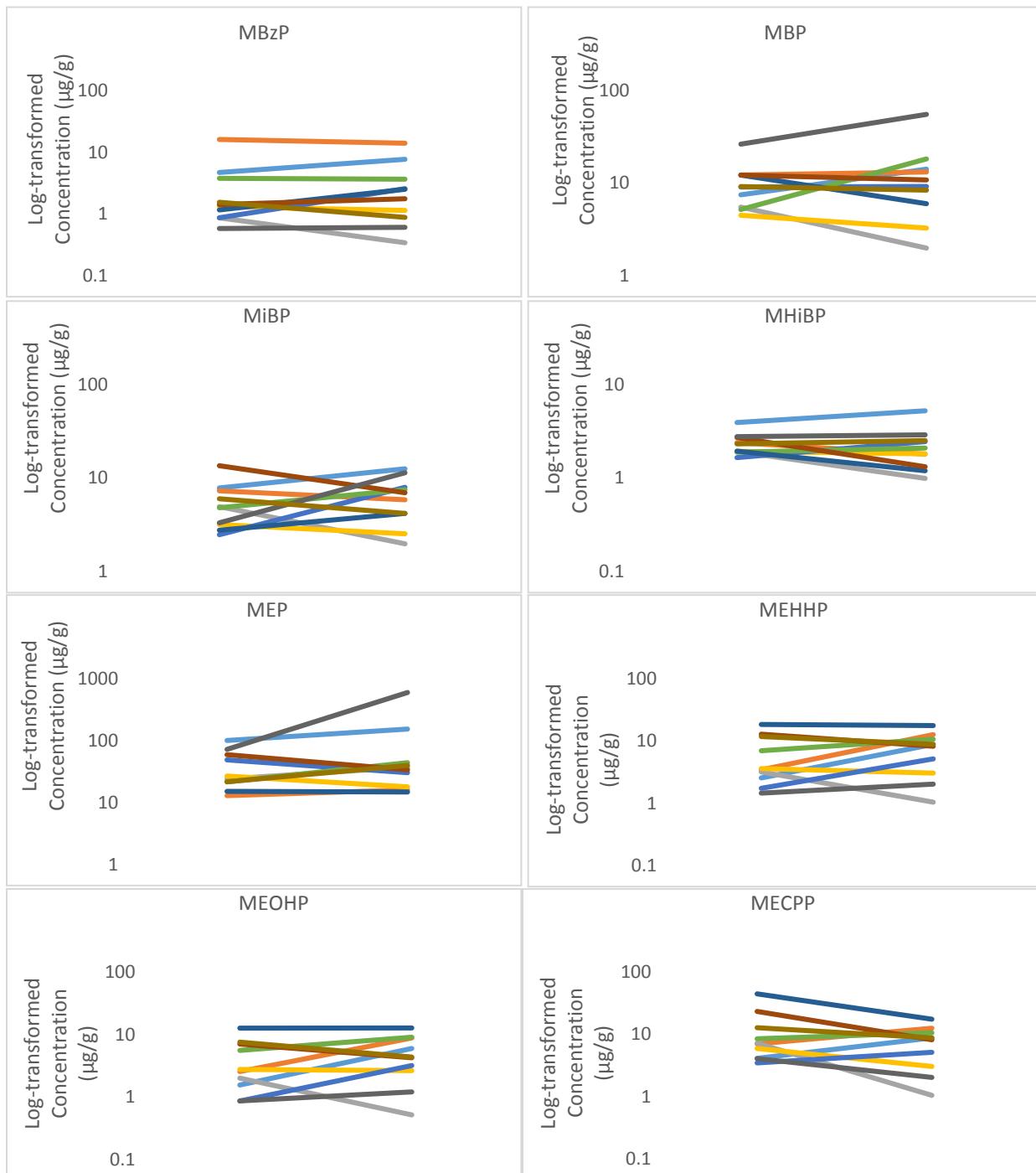


Figure S1 (Continued). Comparison of Creatinine-Corrected Pre- and Post-Shift Concentrations* of Phthalates, Phthalate Alternatives, and Organophosphate Esters (ng/g) Detected $\geq 50\%$ in Individual Nail Salon Workers' Urine in the Greater Boston Area (2016-2017)

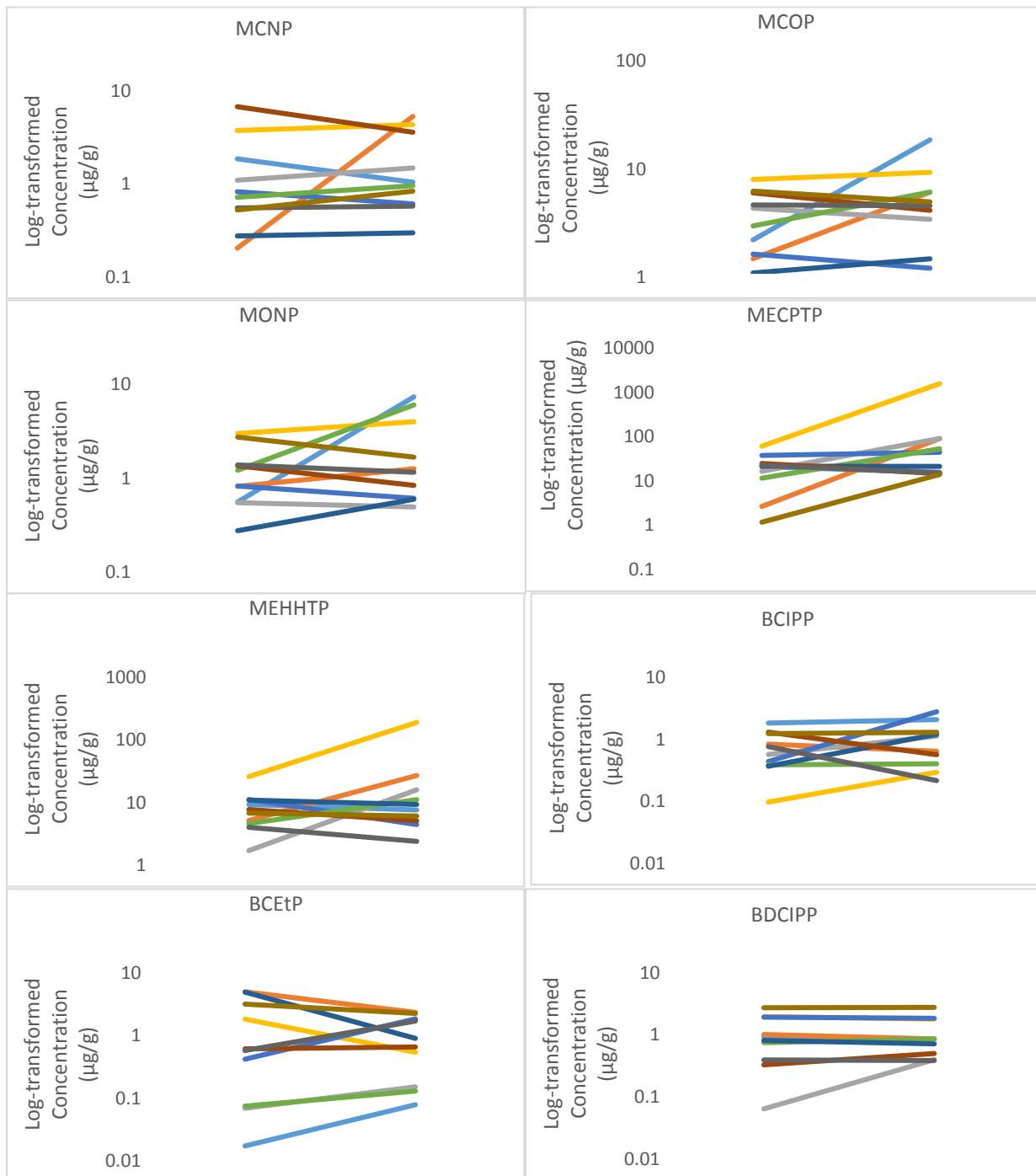
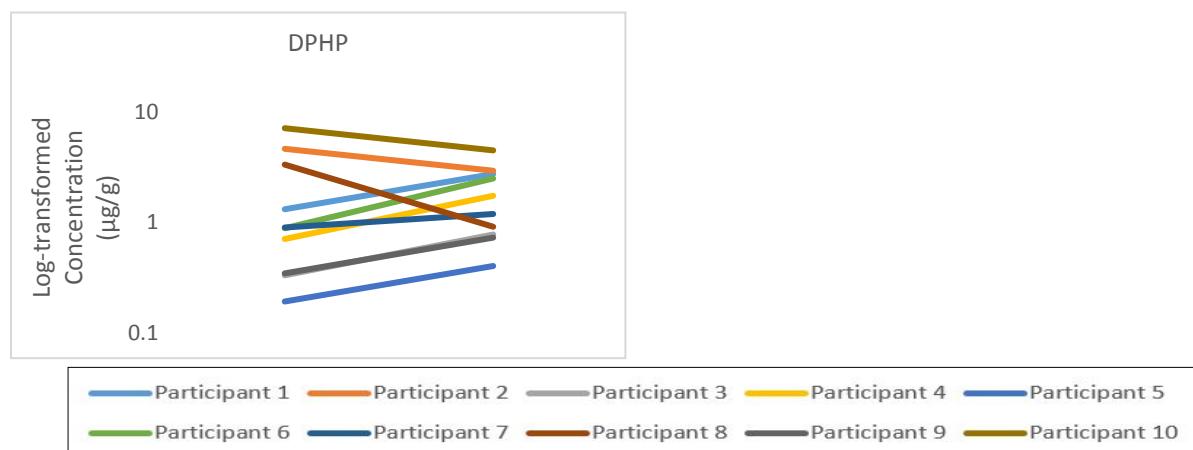


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*Concentrations <LOD replaced

Figure S2. Concentrations of SVOCs Detected $\geq 50\%$ on Silicone Wrist Bands Worn on the Lapel or Wrist During a Work Shift by Nail Salon Workers in the Greater Boston Area (2016-2017)

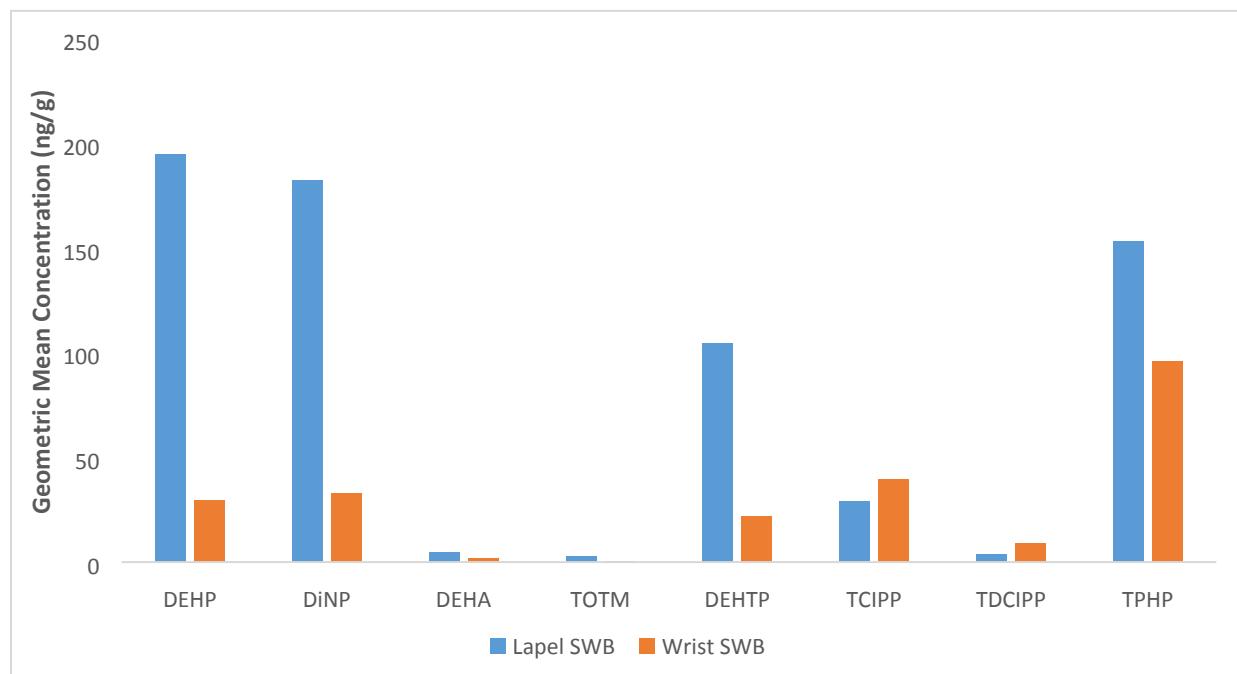


Table S1. Correlations between SVOCs in Silicone Wrist Bands (SWBs) measured in ng/g and SVOC concentrations measured in SWBs corrected for work shift length (ng/g)^{-hr} from Nail Salon Workers in the Greater Boston Area (2016-2017)

SWB Parent Compound	Spearman correlation coefficients	
	Lapel SWB	Wrist SWB
Phthalates		
DEHP	1.0	1.0
DiNP	1.0	1.0
Phthalate Alternatives		
DEHA	1.0	1.0
TOTM	0.98	1.0
DEHTP	0.98	1.0
Organophosphate Esters		
TCIPP	1.0	1.0
TDCIPP	1.0	1.0
TPHP	0.98	1.0

Table S2. Descriptive Statistics for SVOCs Examined in Silicone Wrist Bands (SWBs) Worn During a Work Shift Adjusted for Work-Shift Duration by Nail Salon Workers in the Greater Boston Area (2016-2017)

Compound	Lapel SWB Concentrations (ng/g) ^{-hr} (n=9)					Wrist SWB Concentrations (ng/g) ^{-hr} (n=9)					[Lapel/Wrist] Difference	Wrist/Lapel Correlation [#]
	% >MDL	GM	GSD	Median	Range	% >MDL	GM	GSD	Median	Range		
Phthalates												
BBzP	44.4	N/A	N/A	<MDL	<MDL – 5.1	22.2	N/A	N/A	<MDL	<MDL – 2.0	N/A	N/A
DBP	0.0	N/A	N/A	N/A	N/A	11.1	N/A	N/A	<MDL	<MDL – 179	N/A	N/A
DiBP	33.3	N/A	N/A	<MDL	<MDL – 6.2	33.3	N/A	N/A	<MDL	<MDL – 13.0	N/A	N/A
DEP	22.2	N/A	N/A	<MDL	<MDL – 52.4	22.2	N/A	N/A	<MDL	<MDL – 87.9	N/A	N/A
DMP	33.3	N/A	N/A	<MDL	<MDL – 0.43	33.3	N/A	N/A	<MDL	<MDL – 0.53	N/A	N/A
DEHP	100	21.9	4.0	25.1	4.5 - 397	55.6	3.5	19.2	4.5	<MDL – 182	6.3	0.17
DiNP	88.9	20.5	3.9	22.3	<MDL - 149	55.6	3.9	26.4	5.3	<MDL – 429	5.3	-0.21
Phthalate Alternatives												
DEHA	77.8	0.51	16.9	0.46	<MDL - 152	55.6	0.22	21.8	0.25	<MDL – 23.6	2.3	0.81*
TOTM	100	0.31	5.9	0.29	0.03 – 7.8	55.6	0.05	76.4	0.15	<MDL – 44.8	6.2	0.64
DEHTP	100	11.8	3.9	9.0	1.9 - 182	77.8	2.6	25.7	33.7	<MDL - 529	4.5	0.21
Organophosphate Esters												
TCIPP	77.8	3.3	3.9	4.5	<MDL – 19.5	88.9	4.7	4.5	4.4	<MDL – 33.2	0.70	0.48
TCEP	11.1	N/A	N/A	<MDL	<MDL – 6.2	0.0	N/A	N/A	<MDL	N/A	N/A	N/A
TDCIPP	77.8	0.39	4.8	0.44	<MDL – 4.6	88.9	1.1	3.7	1.8	<MDL – 3.7	0.35	0.43
TPHP	88.9	17.2	4.7	33.8	<MDL – 134	100	11.4	3.5	12.0	1.3 – 49.0	1.5	0.10

GM = Geometric Mean; GSD = Geometric Standard Deviation; MDL = Method Detection Limit; [#]Spearman Correlation

N/A Not calculated: proportion of results below method detection limit was too high to provide a valid result

*Spearman correlation statistically significant (p<0.05)

Note: Not all compounds listed in Table 1 were measured in SWBs

Table S3. Correlations between SVOCs in Silicone Wrist Bands (SWBs) and Creatinine-Corrected Urinary Metabolites in Post-Shift minus Pre-shift Urine Samples Adjusted for Work-Shift Duration from Nail Salon Workers in the Greater Boston Area (2016-2017)

SWB Parent Compound	Urinary Metabolite	Spearman correlation coefficients for Difference of post-shift and pre-shift urine/ Lapel SWB Wrist SWB	
		Lapel SWB	Wrist SWB
Phthalates			
DEHP	MEHP	0.18	0.15
	MEHHP	0.28	0.18
	MEOHP	0.17	0.07
	MECPP	0.63	0.22
DiNP	MCOP	0.27	0.45
	MONP	-0.08	0.30
Phthalate Alternatives			
DEHTP	MECPTP	0.52	0.33
	MEHHTP	0.33	0.55
Organophosphate Esters			
TCIPP	BCIPP	-0.17	-0.30
TDCIPP	BDCIPP	-0.10	0.40
TPHP	DPHP	0.03	0.28