

**Table S3. EDCs metabolite distribution in the population (grouped by vitamin D level).**

Environmental endocrine disruptors(ng/mL)	Detection rate N (%)	Mean	Percentiles					
			P5	P25	P50	P75	P95	
Vitamin D is normal								
CNP	4822 (96.32)	59.19	0.67	1.37	2.30	4.21	13.51	
ECP	4993 (99.74)	32.02	4.48	9.09	15.13	27.99	94.99	
MBP	4874 (97.36)	36.46	2.41	7.00	12.00	20.60	50.40	
MC1	4764 (95.17)	23.41	0.55	1.26	2.24	4.35	16.60	
MEP	5001 (99.90)	6.99	7.96	22.50	55.01	166.18	990.32	
MHH	4977 (99.42)	263.15	2.39	5.45	9.60	18.21	67.63	
MHP	3372 (67.36)	25.74	0.35	0.79	1.51	2.94	10.38	
MOH	4959 (99.06)	3.91	1.65	3.51	5.92	10.82	37.08	
MZP	4893 (96.94)	14.80	0.94	2.60	4.91	9.54	26.91	
BP3	4831 (96.50)	8.71	0.94	4.08	14.00	69.22	1375.96	
BPH	4581 (91.51)	313.78	0.45	0.94	1.57	2.75	7.36	
TRS	3781 (75.53)	3.34	1.02	2.89	8.68	44.01	520.06	
MPB	4985 (99.58)	90.44	3.92	15.23	68.71	244.89	880.98	
PPB	4745 (94.79)	224.47	0.22	1.09	8.15	51.94	267.55	
Vitamin D deficiency								
CNP	450 (95.74)	4.05	0.51	1.15	1.97	3.57	9.59	
ECP	470 (100.00)	26.62	3.79	8.05	14.30	26.86	94.32	
MBP	463 (98.51)	19.18	2.56	7.40	12.79	21.96	53.39	

MC1	451 (95.96)	4.50	0.43	1.03	1.90	3.62	16.64
MEP	470 (100.00)	258.68	8.24	24.84	62.77	197.19	1096.76
MHH	468 (99.57)	18.87	2.45	5.08	9.71	18.31	65.99
MHP	358 (76.17)	2.90	0.37	0.82	1.51	2.90	9.03
MOH	465 (98.94)	10.70	1.66	3.22	5.74	10.62	35.80
MZP	465 (98.94)	10.07	1.07	2.97	5.52	11.40	31.40
BP3	456 (97.02)	99.83	0.66	2.49	7.00	22.45	423.59
BPH	436 (92.77)	3.52	0.38	0.94	1.63	2.85	8.10
TRS	362 (77.02)	61.81	0.85	2.26	6.30	26.69	379.67
MPB	465 (98.94)	212.88	3.25	17.02	73.03	233.05	875.65
PPB	446 (94.89)	43.58	0.19	1.15	8.16	48.01	199.27

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