

Table S1. LC gradient conditions.

Time (min)	LC Pump	
	% Pump-1 0.1% Acetic acid	% Pump-2 Methanol
0.00	98	2
0.50	98	2
3.00	75	25
3.50	75	25
3.51	20	80
4.00	20	80
4.01	98	2
6.50	98	2

Table S2. LC conditions.

LC parameters	
Pump-1	0.1% Acetic acid
Pump-2	Methanol
Flow rate	0.4 mL/min
Injection volume	10 μ L
Column temperature	40°C

Table S3. Monitoring of ion mass transition.

	Target ion (m/z)		Qualifier ion (m/z)		Declustering Potential (V)		Collision Energy (eV)		Ionization mode
	Precursor	Product	Precursor	Product	Target ion	Qualifier ion	Target ion	Qualifier ion	
Native	177.0	80.0	177.0	98.0	75.0	75.0	28.0	27.0	positive
Internal standard ($^{13}\text{C}_3$)	180.0	80.1	–	–	61.0	–	30.0	–	positive

Table S4. Ion source and collision cell conditions.

Parameters	Setting
IonSpray voltage (V)	5000
Heating gas temperature (°C)	650
Nebulizer gas (psi)	50
Heating gas (psi)	80
Curtain gas flow (psi)	30
Collision gas pressure	10

Table S5. Range of calibration curves for cotinine.

Native	Concentrations (ng/mL)										Internal standard	Concentrations (ng/mL)	
<i>Cotinine</i>	0	0.006	0.01	0.02	0.06	0.1	0.2	0.4	0.6	1	2	<i>Cotinine</i> - ¹³ C ₃	0.06

Table S6. UCOV, LCOV and sensitivity and specificity of UCOV in four different datasets.

Operation	N	UCOV, LCOV	Sensitivity, specificity of UCOV
Current	89,895	36.7, 0.31	0.523, 0.998
Data <MRL substituted by half the MRL	89,895	41.5, 0.34	0.526, 0.998
Excluding data <MRL	80,023	32.9, 0.36	0.521, 0.998
Gestational week <26.9	41,310	34.6, 0.30	0.526, 0.999
Gestation week ≥26.9	48,555	38.1, 0.31	0.519, 0.998

UCOV; cut-off value for dividing active smokers from others, LCOV; cut-off value for discriminating passive smokers from non-smokers, MRL; minimum reporting level.

Table S7. The proportion of participants with urinary cotinine concentrations exceeding the UCOV in each ETS exposure group.

ETS exposure	N	Number of participants (%)	
		<UCOV	UCOV≤
1 day/week	10,337	9,990	347 (3.4%)
2-3 days/week	6,887	6,361	526 (7.6%)
4-6 days/week	3,955	3,582	373 (9.4%)
7 days/week	8,912	7,483	1,429 (16.0%)

UCOV; cut-off value for dividing active smokers from others, ETS; environmental tobacco smoke.

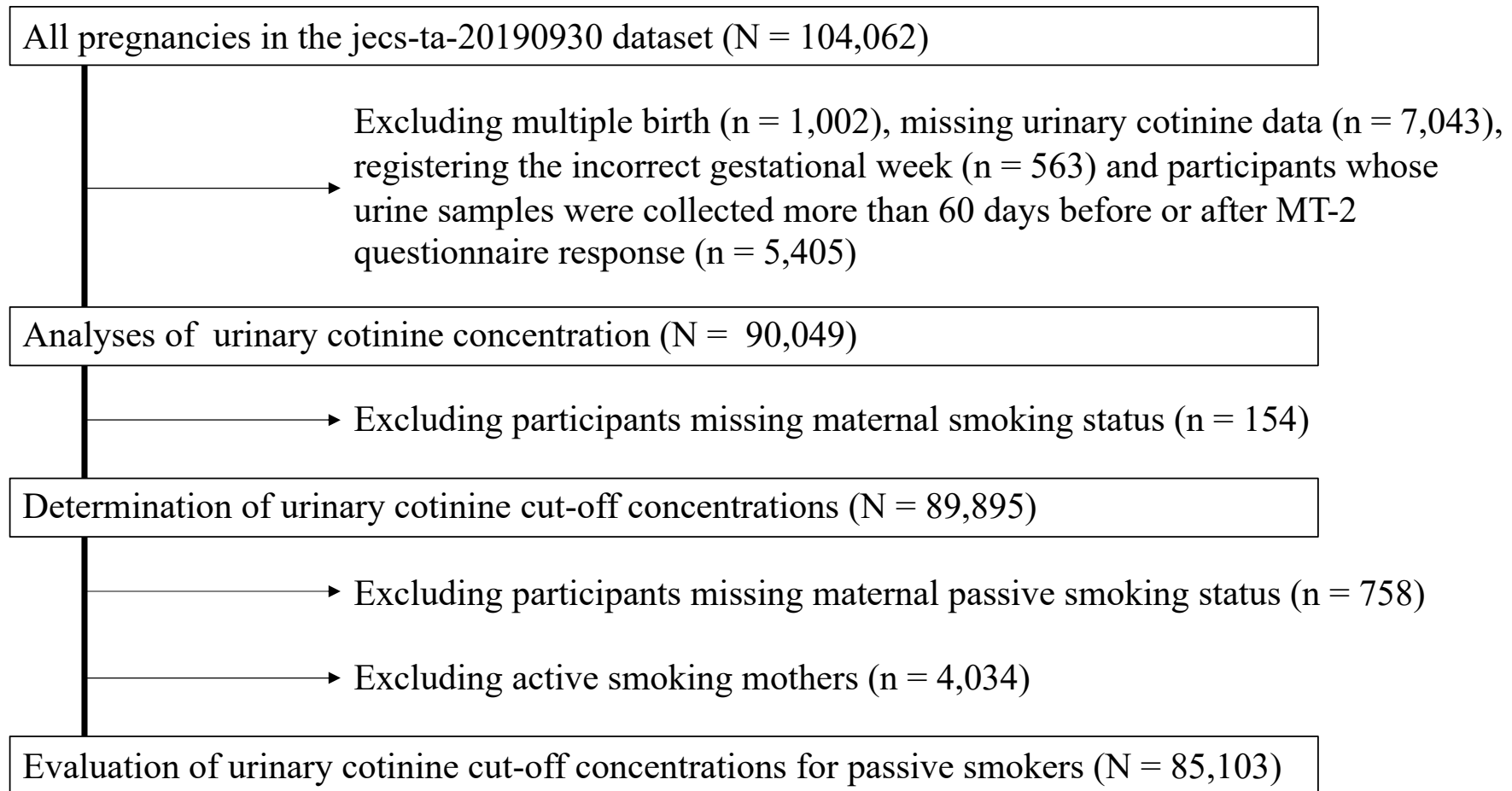


Figure S1. Flow chart of the study participants.

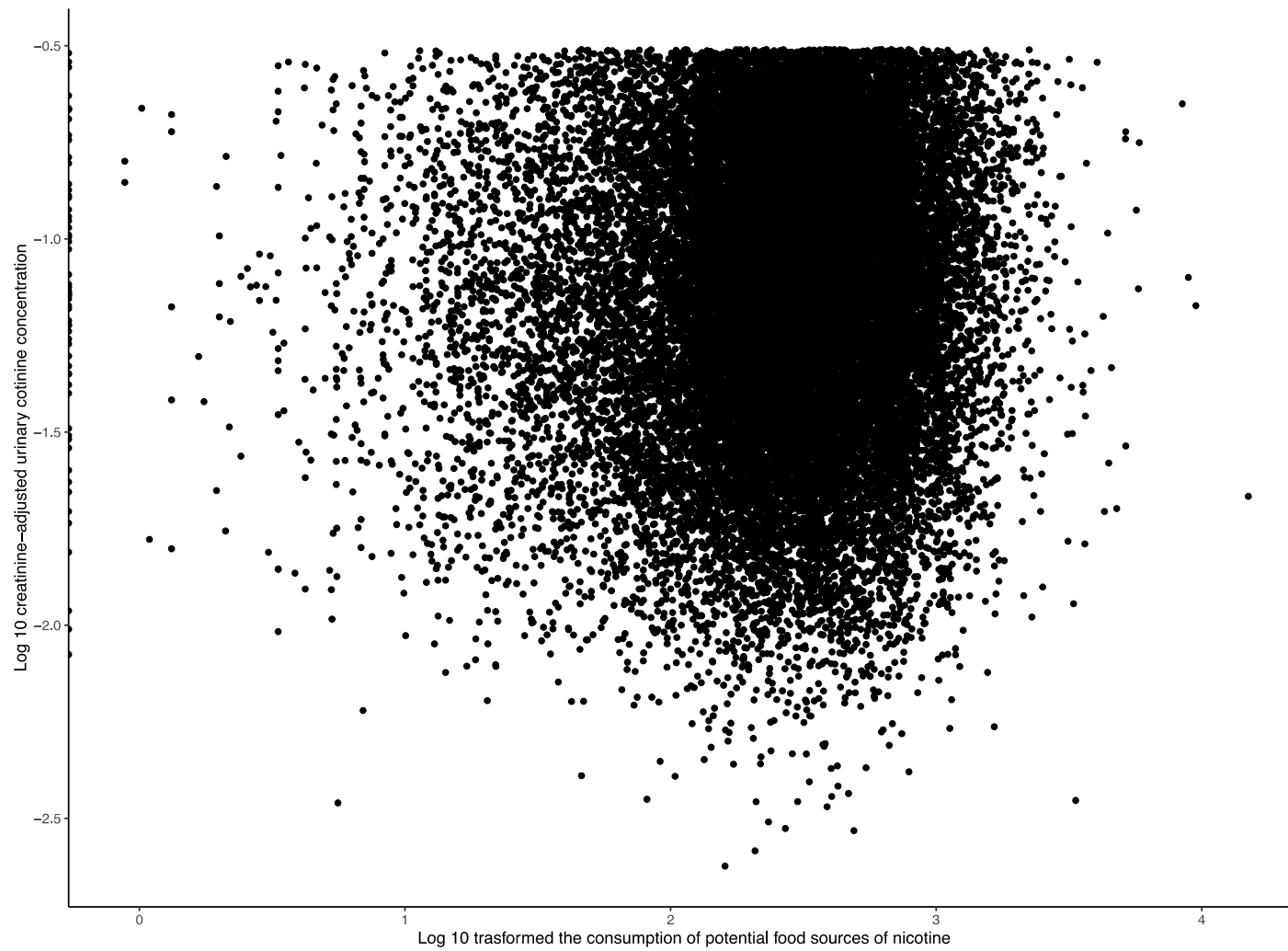


Figure S2. Correlation between the consumption of potential food sources of nicotine and urinary cotinine concentrations among non-smokers ($N = 29,908$, Spearman's rank correlation $r_s = 0.046$).

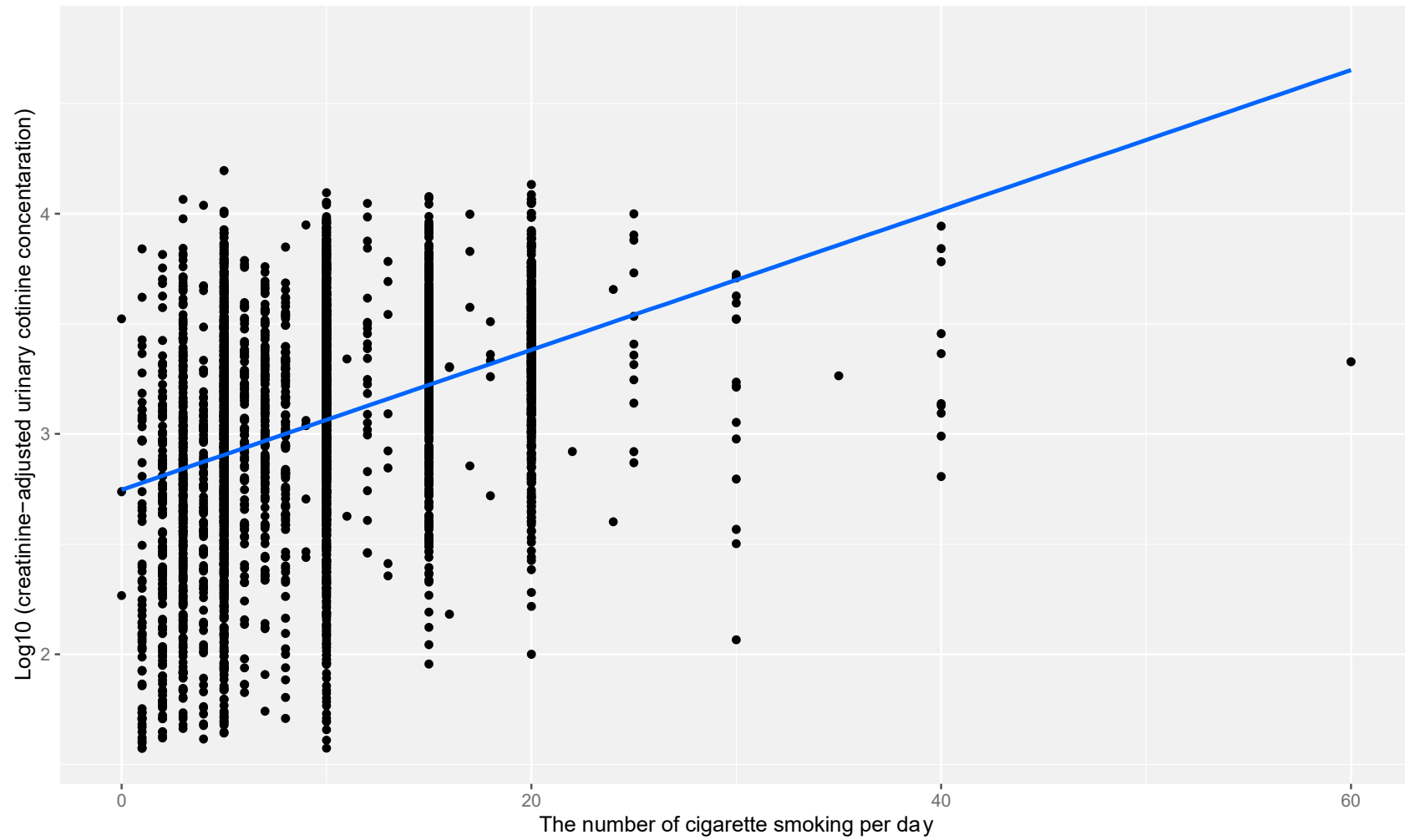


Figure S3. Single regression analysis showing the relationship between the number of cigarettes smoked per day and urinary cotinine concentrations of current smokers (adjusted $R^2 = 0.128$).

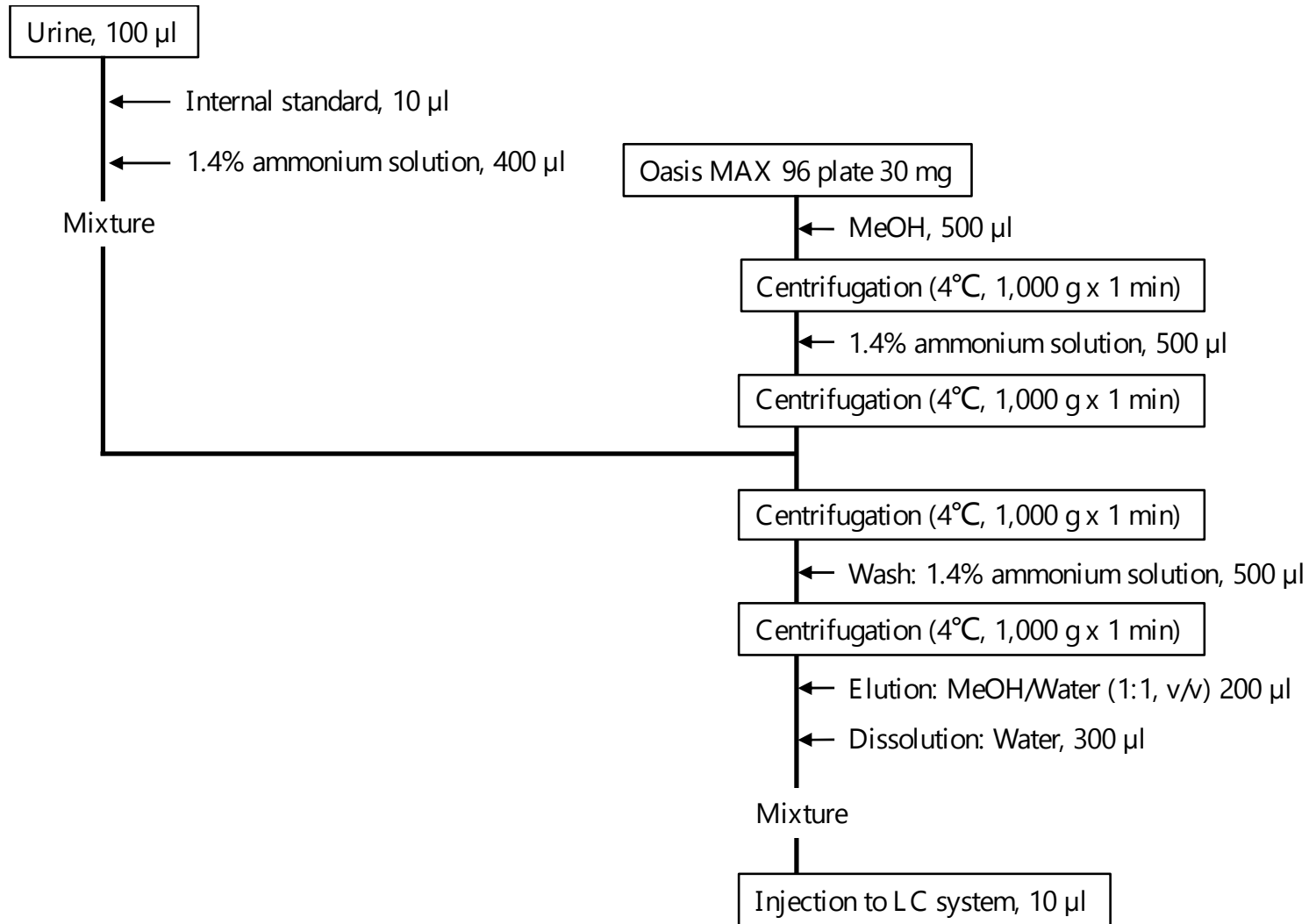


Figure S4. Sample treatment for measurement of urinary cotinine.