

Revolution System cfDNA extraction is highly efficient

Sample ID	Rxn Vol. [mL]	sDNA SPIKE (NG)	ng/rxn	ng/mL	Average (ng/mL)	Positive - Negative (ng/mL)	P-N / extraction
SS-190905-1	5	200	237.0	47.40	48 ng/mL	35	175
SS-190905-2			227.5	45.50			
SS-190905-3			252.5	50.50			
SS-190905-4			242.0	48.40			
SS-190905-5	0	0	65.5	13.10	13 ng/mL		
SS-190905-6			68.5	13.70			
SS-190905-7			63.0	12.60			
SS-190905-8			60.5	12.10			
Efficiency						88%	88%

Calculations (Extraction)

sDNA: $40 \text{ ng}/\mu\text{L} \times 25 \text{ mL} = 1000 \text{ ng sDNA}$, and $1000 \text{ ng} / 32.62 \text{ ng}/\mu\text{L} = 30.656 \mu\text{L}$ sDNA. After rounding and adjusted for pipet use: $30.8 \mu\text{L}$ was added.

BRAF Mt: $50 \mu\text{L} \times 100 \text{ copies}/\mu\text{L}$ BRAF Mt DNA = 5000 copies, in 25 mL 5000 copies = 200 copies/mL (or 1000 copies per reaction).

For samples 1-4, $30.8 \mu\text{L}$ of $32.62 \text{ ng}/\mu\text{L}$ of sDNA and $50 \mu\text{L}$ of $100 \text{ copies}/\mu\text{L}$ BRAF Mt DNA was spiked into 25 mL of human plasma.

For samples 5-8, $50 \mu\text{L}$ of $100 \text{ copies}/\mu\text{L}$ BRAF Mt DNA was spiked into 25 mL of human plasma.

After accounting for the 35 ng/mL background (measured in samples 5-8), the Revolution System extracted 175 ng/reaction...an 88% recovery.