Electronic Supplementary Material (ESI) for Analyst.

Particle Size Measurement from Infrared Laser Ablation of Tissue

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Supplemental Information

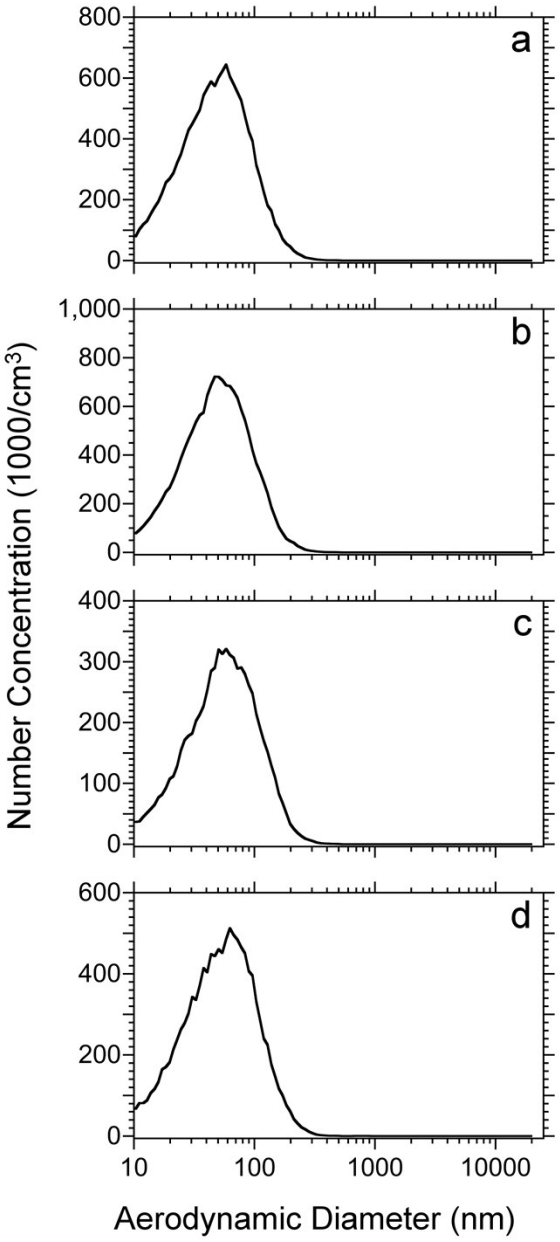

Figure S1: Number weighted particle size distributions for 50 μm thick rat lung tissue sections dried for a) 5; b) 15; c) 30 and d) 60 min under vacuum. Ablation was performed at 17 kJ/m^2 laser fluence. Each plot represents the average of 4 replicates.

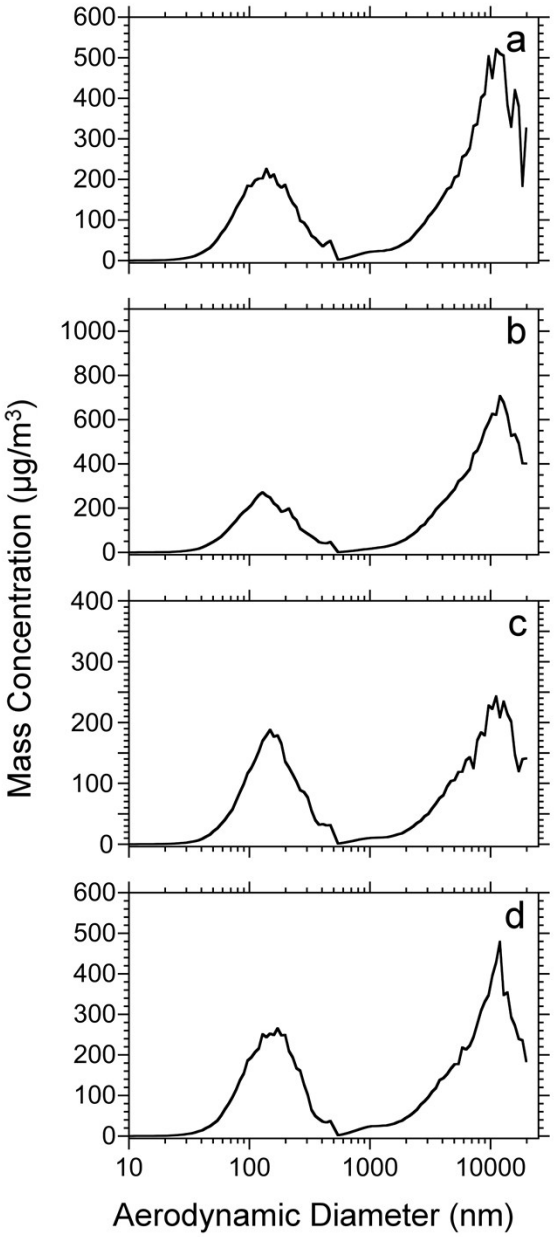

Figure S2: Mass weighted particle size distributions for 50 µm thick rat lung tissue sections dried for a) 5; b) 15; c) 30 and d) 60 min under vacuum. Ablation was performed at 17 kJ/m^2 laser fluence. Each plot represents the average of 4 replicates.

Drying Time (min)	**Average Particle Diameter**				**Concentration**			
	Number Weighted (nm)		**Mass Weighted** (nm)		**Number Weighted** (#/cm^3)		**Mass Weighted** (μg/m^3)	
	< 500 nm	> 500 nm	< 500 nm	> 500 nm	< 500 nm	> 500 nm	< 500 nm	> 500 nm
5	57 ± 3	1400 ± 100	155 ± 2	9000 ± 100	$1.4 \times 10^7 \pm 1 \times 10^6$	700 ± 100	4200 ± 300	9000 ± 700
15	59 ± 2	1700 ± 200	154 ± 9	9000 ± 300	$1.6 \times 10^6 \pm 4 \times 10^6$	600 ± 200	4700 ± 600	12000 ± 5000
30	66 ± 2	1400 ± 200	166 ± 6	9000 ± 400	$7 \times 10^6 \pm 1 \times 10^6$	300 ± 100	3100 ± 200	4000 ± 2000
60	64 ± 2	1300 ± 100	163 ± 6	9000 ± 200	$1.2 \times 10^7 \pm 1 \times 10^6$	700 ± 100	4700 ± 900	7000 ± 1000

Table S1: Average number and mass weighted particle diameters and total concentrations measured by both SMPS (< 500 nm) and APS (> 500 nm) for rat lung tissue sections that were dried for different periods under vacuum. Sections were cut to 50 μm thickness and ablated at 17 kJ/m^2 laser fluence.

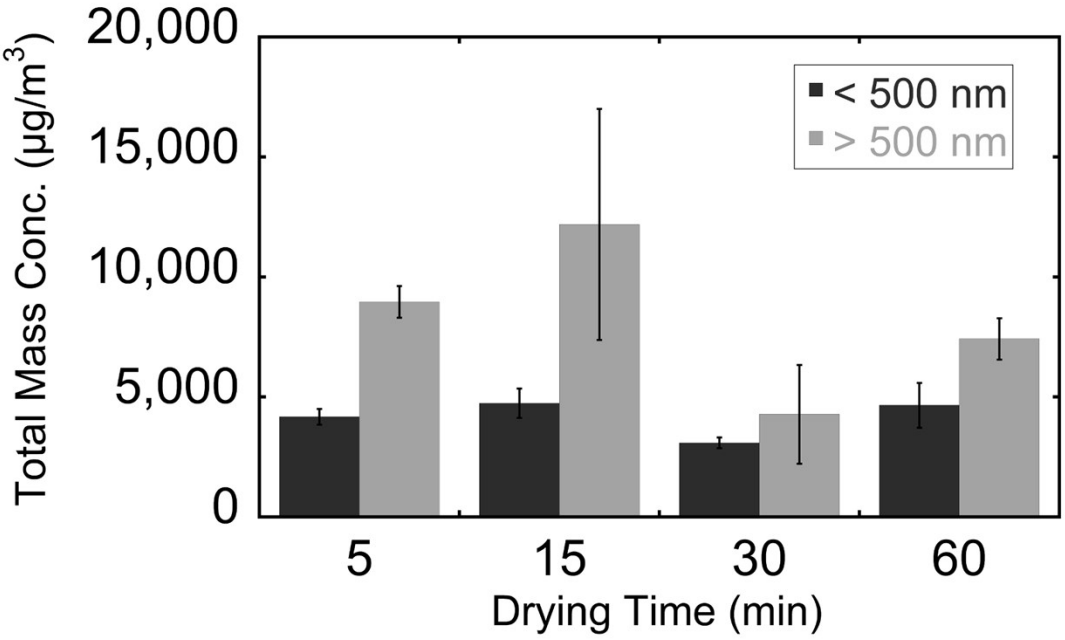

Figure S3: Total mass concentration for different drying times in the two mass ranges (10 - 500 nm and 0.5 - 20 µm) and measured from ablation of rat lung tissue sections. Sections were cut at 50 µm thickness and ablated at 17 kJ/m^2 fluence