

Overview table on retention results

PARTICULATE	Mean	ASD	RSD	Mean	ASD	RSD	Mean	ASD	RSD
	(µg/lung)		(%)	(µg/lung)		(%)	(µg/lung)		(%)
	Day 3			Day 45			Day 94		
Clean Air Control	< 5			< 5			< 5		
NM-103, low	358	80	22.3	179	44	24.4	122	30	24.3
NM-103, mid	1625	248	15.3	1530	199	13.0	1107	166	15.0
NM-103, high	7081	918	13.0	7664	987	12.9	6028	510	8.5
NM-104, low	436	41	9.5	370	147	39.8	209	43	20.6
NM-104, mid	1698	189	11.1	1674	145	8.6	1344	92	6.8
NM-104, high	3782	507	13.4	3928	479	12.2	3113	211	6.8
NM-105, low	477	140	29.4	255	93	36.3	121	27	22.5
NM-105, mid	1819	180	9.9	1806	356	19.7	1345	141	10.5
NM-105, high	5879	594	10.1	6679	622	9.3	5212	844	16.2
SOLUBLE	Mean	ASD	RSD	Mean	ASD	RSD	Mean	ASD	RSD
	(µg/lung)		(%)	(µg/lung)		(%)	(µg/lung)		(%)
	Day 3			Day 45			Day 94		
Clean Air Control	< 2.5			< 2.5			< 2.5		
NM-103, low	8.5	2.3	27.6	5.8	2.1	36.7	4.8	0.6	11.8
NM-103, mid	9.6	6.3	66.2	10.7	2.6	24.6	13.2	5.7	42.9
NM-103, high	40.0	16.6	41.5	37.0	8.1	21.8	16.9	3.2	19.0
NM-104, low	12.1	5.2	43.3	7.2	1.3	17.8	11.4	3.2	27.9
NM-104, mid	11.2	5.2	46.7	17.4	4.7	26.8	9.8	3.8	38.9
NM-104, high	34.6	5.1	14.8	16.1	3.7	22.9	17.9	8.5	47.8
NM-105, low	21.8	9.3	42.6	7.9	3.6	46.0	4.3	1.4	31.8
NM-105, mid	17.4	10.6	60.7	39.9	18.6	46.6	18.1	2.6	14.3
NM-105, high	54.0	6.5	12.0	51.8	12.2	23.6	44.4	4.4	9.8

ASD Absolute standard deviation

RSD Relative standard deviation

Processing of organ samples

Samples were cut into smaller pieces and oxidized using low-temperature plasma ashing. The remaining ash was put into 25 ml water (Milli-Q) and shaken until homogeneity. After a further 30-min period the particle suspension was filtrated using a 0.2 µm Whatman-Nuclepore filter (pore filter); then the filter was rinsed with 25 ml additional water. Recoveries: Plasma ashing - Ionic Ti: 103-105%; Filtration - Ionic Ti: 96%; Chemical analysis - QC standards: 101%; NBS SRM 349: 102%

Juxtaposition of particulate vs. soluble moieties of the test items
(lungs, in µg/lung)

	Day 3				Day 45				Day 94			
	P	S	T	S	P	S	T	S	P	S	T	S
				(%)				(%)				(%)
Control	< 5	< 2.5			< 5	< 2.5			< 5	< 2.5		
NM-103, low	358	8.5	366	2.3	179	5.8	185	3.1	122	4.8	135	3.5
NM-103, mid	1625	9.6	1635	0.6	1530	10.7	1541	0.7	1107	13.2	1120	1.2
NM-103, high	7081	40.0	7121	0.6	7664	37.0	7701	0.5	6028	16.9	6045	0.3
NM-104, low	436	12.1	448	2.7	370	7.2	377	1.9	209	11.4	220	5.5
NM-104, mid	1698	11.2	1710	0.7	1674	17.4	1691	1.0	1344	9.8		0.7
NM-104, high	3782	34.6	3817	0.9	3928	16.1	3944	0.4	2860	17.9	2878	0.6
NM-105, low	477	21.8	499	4.4	255	7.9	262	3.0	121	4.3	125	3.5
NM-105, mid	1819	17.4	1836	0.9	1806	39.9	1846	2.2	1345	18.1	1363	1.3
NM-105, high	5879	54.0	5933	0.9	6679	51.8	6731	0.8	5527	44.4	5531	0.8

P Particulate moiety
 S Soluble moiety
 T Total: Particulate + soluble moiety
 S (%) Soluble moiety in percent of total mass