

Reference Sample – *Litterfall Beech Leaves (Austria)*

(used in the 21th Needle/Leaf Interlaboratory Test as Sample 4)

Element concentration calculated on dry mass (105°C).

Element (n/l)	Unit	Mean	S _R
N 176/44	mg/g	7.84	0.485
S 144/36	mg/g	0.69	0.048
P 172/43	mg/g	0.52	0.040
Ca 172/43	mg/g	22.30	1.676
Mg 167/42	mg/g	2.28	0.089
K 184/46	mg/g	2.26	0.233
C 164/41	g/100g	47.59	1.646
Zn 144/36	µg/g	38.31	3.100
Mn 147/37	µg/g	743.76	32.671
Fe 136/34	µg/g	1766.5	187.52
Cu 135/34	µg/g	6.10	0.576
Pb 100/25	µg/g	2.30	0.323
Cd 95/24	ng/g	101.02	13.734
B 88/22	µg/g	12.65	1.181
As 40/10	ng/g	906.44	20.987
Cr 88/22	µg/g	30.65	4,536
Co 79/20	µg/g	1.05	0.150
Hg 55/14	ng/g	51.77	4.578
Ni 100/25	µg/g	18.99	3.106

n	Outlier free single values
l	Number of laboratories without outliers type 2 an 3
Mean ...	Total mean value from all results without outliers
S_R ...	Standard deviation from all outlier free results
$S_{mean} = \frac{S_R}{\sqrt{N}}$	Standard error of the mean

A homogeneity test was made with 250 mg sample material – the recommended minimum sample intake is therefore 250 mg.