

Supplement Table 11. Bone Mineral Analysis at 18 months in C8 vertebrae of male mice ($\mu\text{g/g}$)

Mineral / Diet group	Zero Time	HFWD	HFWD+ AQ
Barium	<0.5	<0.5	<0.5
Calcium	97610	145700	159600
Copper	71.2	18.4	6.03
Gadolinium	0.401	0.001	0.002
Iron	25.1	23	11.2
Lanthanum	<0.5	<0.5	<0.5
Magnesium	1843	1923	2500
Manganese	<0.5	<0.5	<0.5
Phosphorus	52910	64910	74470
Potassium	3378	1141	1477
Silicon	73	17.2	52.9
Strontium	12.5	40.9	254
Sulfur	3126	1832	1868
Zinc	306	235	169

The caudal 8 vertebrae (from each animal in the group) were “pooled” and analyzed for levels of trace metals found in the multi-mineral-rich product to give a single value at each time point. Some of these elements were recorded below detectable levels when their concentration level found below $0.5\mu\text{g/g}$. The levels of individual trace elements were determined by Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES) assay.