

S2 Table: Composition of low-mineral diet consisting of the same main components as the normal diet but with Ca, P, Mg, Zn and F reduced in quantity to <0.001% of the original composition (modified from Nakada et al., 2011, Journal of Hard Tissue Biology , p107-114).

Composition	%
Mineral Mixture	3.5
Casein	$1.4 \times 10^{+1}$
L-Cystine	1.8×10^{-1}
β - Cornstarch	$4.7 \times 10^{+1}$
α -Cornstarch	$1.6 \times 10^{+1}$
Sucrose	$1.0 \times 10^{+1}$
Soybean Oil	4.0
Cellulose Powder	5.0
Vitamin	1.0
Choline Bitartrate	0.3
Tert-Butylhydroquinone	0.8×10^{-3}

Composition of 3.5% minerals	Minerals (%)
CaCO ₃	$< 0.1 \times 10^{-3}$
KH ₂ PO ₄	$< 0.1 \times 10^{-3}$
K ₃ C ₆ H ₅ O ₇ · H ₂ O	7.9×10^{-1}
NaCl	2.6×10^{-1}
K ₂ SO ₄	1.6×10^{-1}
MgO	$< 0.1 \times 10^{-3}$
FeC ₆ H ₅ O ₇ · x H ₂ O	0.2×10^{-2}
ZnCO ₃	$< 0.1 \times 10^{-3}$
MnCO ₃	2.2×10^{-3}
CuCO ₃ · Cu (OH) ₂ · H ₂ O	1.1×10^{-3}
KIO ₃	3.5×10^{-5}
Na ₂ SeO ₄	3.6×10^{-5}
(NH ₄)Mo ₇ O ₂₄ · 4 H ₂ O	2.8×10^{-5}
Na ₂ SiO ₃ · 9 H ₂ O	5.1×10^{-3}
CrK(SO ₄) ₂ · 12 H ₂ O	9.6×10^{-4}
LiCl	6.1×10^{-5}
H ₃ BO ₃	2.9×10^{-4}
NaF	$< 0.1 \times 10^{-3}$
NiCO ₃ · 2 Ni (OH) ₂ · 4 H ₂ O	1.1×10^{-4}
NH ₄ VO ₃	2.3×10^{-5}
Sucrose	2.3