Supplementary Material

Table S1. The initial weight of mealworms and Se contents in the substrates in different treatments

Se treatment		Initial weight of mealworms (g/100 individuals)	Se content in the substrates (mg/kg)
	CK	4.01 ± 0.25	0.12 ± 0.054
	Se5	4.03 ± 0.34	5.21 ± 0.25
Se^{4+}	Se10	4.00 ± 0.42	9.83 ± 0.48
	Se20	4.04 ± 0.29	20.72 ± 0.56
	Se5	4.04 ± 0.41	5.09 ± 0.32
Se^{6+}	Se10	4.06 ± 0.31	10.26 ± 0.55
	Se20	4.02 ± 0.19	20.93 ± 0.74

Table S2. Operating conditions for selenium species analysis

HPLC (Agilent 1260) parameters	
Separation ccolumn	C_{18}, 4.6 mm × 250 mm, 5 μm, Athena
Injection volume	50 μL
Flow rate	1 mL/min
mobile phase	40 mM $(NH_4)_2HPO_4$, pH 6.0
Temperature	25 °C
ICP-MS (Agilent 7700x) parameters	
Radio-frequency power	1550 W
Carrier gas	Ar, 650 mL/min
Collision gas	Ar, 450 mL/min
Sprayer flow rate	0.3 rps
Isotopes	^{78}Se, ^{82}Se