

Table S1 Physical and chemical properties of penflufen

Solubility - In water at 20°C (mg/L)	10.9
Soil degradation (days) DT50 (typical)	192
Aqueous photolysis DT50 (days) at pH 7	17.3
Water-sediment DT50 (days)	21
Water phase only DT50 (days)	246
Log KOW	3.3

Table S2 Gradient elution procedure

Time (min)	A: 0.1% aqueous formic acid	B: acetonitrile
0	15%	85%
20	15%	85%
25	65%	35%
55	65%	35%
60	15%	85%

Table S3 Mass spectrometry conditions of target compounds in MRM mode

Compound	Ion source	Parent ion	Product ion	Q1 collision voltage (V)	Collision energy (V)	Q3 collision voltage (V)
Penflufen	ESI+	318.10	234.05*	-26.0	-15.0	-30.0
			141.05	-26.0	-30.0	-26.0