

Table S1 Elemental concentrations of 60 leech samples obtained by pXRF and ICP methods

SAMPLE	Zn (mg Kg ⁻¹)		Fe (mg Kg ⁻¹)		Cu (mg Kg ⁻¹)		As (mg Kg ⁻¹)		Ca (mg Kg ⁻¹)		K (mg Kg ⁻¹)		S (mg Kg ⁻¹)	
	PXRF	ICP	PXRF	ICP	PXRF	ICP	PXRF	ICP	PXRF	ICP	PXRF	ICP	PXRF	ICP
HB-2-1	485.05	316	486.39	406	24.52	22.1	9.96	8.25	2906.45	1800	10869.54	6700	48382.63	32100
HB-2-2	368.51	237	508.74	464	34.71	29.5	4.45	4	4523.69	3400	10475.07	6700	40905.07	30900
HB-2-3	431.73	272	704.11	566	26.88	21.3	5.38	4.23	3554.02	1900	11181.31	6300	40503.64	31500
HB-2-5	396.21	278	584.83	513	21.08	23.5	6.19	5.24	4508.54	2200	11974.70	6400	39713.07	30500
JS-1-1	93.04	84.6	501.41	612	<LOD	15.8	<LOD	2.69	911.97	900	2597.40	2100	73510.32	75000
JS-1-3	78.51	75.4	122.17	238	<LOD	18.7	<LOD	3.84	1576.23	1000	2343.36	2000	72966.91	75500
JS-1-5	89.88	86.3	450.69	545	<LOD	15.95	<LOD	3.53	1536.25	1000	2736.11	2100	76326.05	77500
JS-2-3	318.25	206	924.50	657	35.10	27	6.25	5.12	4728.92	2800	11574.81	6700	43947.85	28600
JS-2-5	361.85	248	942.57	807	46.71	39.5	17.26	12.45	7541.31	4000	15718.51	7400	31203.65	18800
JS-3-1	365.94	230	1902.01	1390	46.20	33.9	14.05	10.35	7059.03	3600	21951.73	8800	16591.11	7980
JS-3-3	529.56	332	1118.13	908	90.79	64.9	8.99	7.28	5403.74	2700	23402.89	9400	12620.08	7970
JS-3-6	372.79	237	738.29	602	68.31	51.5	9.55	7.57	6583.94	3600	22500.92	9300	12958.48	8450
JS-4-1	114.75	108	444.44	581	22.26	31.7	<LOD	3.01	1687.33	1900	3520.61	3000	88395.88	88600
JS-4-2	146.72	128.5	500.31	553	23.48	29.4	5.19	4.7	1927.06	2000	4374.58	3400	85099.15	74200
JS-4-4	131.34	114	312.21	378	19.30	27.9	<LOD	2.96	1889.53	1900	4799.22	3700	78946.11	68200
JS-4-6	144.17	125	569.51	628	19.80	25.7	<LOD	2.45	1669.78	1600	5185.63	3800	85134.48	71000
JS-5-1	256.40	174	442.26	385	35.24	39.4	3.96	3.74	7502.02	3800	19524.45	8300	16593.15	10200
JS-5-2	214.07	135.5	110.69	180	<LOD	18.1	<LOD	3.17	3126.26	1500	18983.80	7300	9413.48	5720
JS-5-3	264.91	159	209.26	248	31.03	32.6	4.95	4.71	4886.18	2100	21900.85	7900	10533.18	5920
JS-6-1	486.50	286	947.65	732	37.31	35.3	10.18	8.58	7834.66	3500	20738.52	7900	12009.12	6860
JS-6-3	408.28	241	1236.21	848	17.82	22.9	9.33	7.82	7465.35	3300	20721.14	7900	12147.64	6930
JS-7-1	280.49	172	307.85	258	20.95	26.7	<LOD	3.53	4796.14	2200	18107.31	7000	14400.59	8260
JS-7-2	199.21	125.5	159.64	210	16.54	21	<LOD	2.35	3710.27	1700	18996.52	7000	9470.42	5640

Table S1 Elemental concentrations of 60 leech samples obtained by pXRF and ICP methods

SAMPLE	Zn (mg Kg ⁻¹)		Fe (mg Kg ⁻¹)		Cu (mg Kg ⁻¹)		As (mg Kg ⁻¹)		Ca (mg Kg ⁻¹)		K (mg Kg ⁻¹)		S (mg Kg ⁻¹)	
	PXRF	ICP	PXRF	ICP	PXRF	ICP	PXRF	ICP	PXRF	ICP	PXRF	ICP	PXRF	ICP
JS-7-3	213.75	132.5	146.02	203	20.98	25.8	<LOD	2.47	3270.99	1500	19298.89	7100	9629.69	5610
JS-8-1	206.22	150	319.95	388	<LOD	23.5	<LOD	2.99	3454.90	2100	11779.18	6300	54880.11	37800
JS-8-2	213.45	146	213.52	284	26.96	35.9	<LOD	3.75	4838.87	2700	14890.41	7600	42964.26	26600
JS-8-3	222.91	151	238.84	297	38.61	42.4	<LOD	3.39	3326.02	1900	14981.66	7300	42429.34	25200
JS-9-1	415.28	233	387.97	356	19.81	22.5	4.85	4.64	3737.53	1700	20827.14	8000	12120.06	7040
JS-9-2	369.80	220	464.39	405	17.68	21.3	6.84	6.4	5456.67	2500	22142.83	8500	11726.95	6790
JS-9-3	337.32	197	350.60	329	18.07	23.2	9.59	7.89	4870.72	2200	21734.41	8200	11568.67	6730
JS-9-4	353.93	195	943.56	682	18.34	20.7	6.83	6.24	8823.80	3800	21259.51	7700	12027.64	6550
JS-9-5	398.88	233	639.08	471	17.89	22.4	5.17	4.75	5787.90	2700	22509.49	8500	11694.29	6700
JS-9-6	401.67	238	617.74	493	29.49	30.1	7.29	6.68	6238.06	2800	20536.13	7900	11454.58	6840
JSB-1-1	381.87	220	1028.27	752	60.52	50	7.16	6.03	5442.90	2400	22332.73	8300	11467.16	6570
JSB-1-10	378.16	210	3939.63	2870	1137.80	875	7.88	7.28	5051.02	2400	23925.25	8900	13678.87	7010
JSB-1-2	317.69	188	643.15	540	58.01	52.9	5.93	5.27	5698.92	2800	22845.74	8500	12058.24	6900
JSB-1-3	549.07	313	971.83	739	54.32	48	12.33	9.62	7284.03	3300	22495.06	8200	13352.01	6700
JSB-1-4	339.05	201	654.26	544	67.14	59.7	7.87	6.86	5553.27	2600	22958.67	8800	11698.33	7010
JSB-1-5	351.88	209	513.59	464	50.55	51.2	9.50	8.35	5473.56	2500	21701.62	8200	11989.38	6790
JSB-1-6	355.49	213	410.52	405	17.76	22.8	4.88	4.96	5922.60	2900	21973.47	9000	12282.46	7360
JSB-1-7M	364.77	237	412.33	430	63.87	59.8	7.48	7.6	5660.09	2800	23241.42	9500	12249.24	7440
JSB-1-8	558.26	328	592.32	490	21.00	24.2	7.22	7.02	6502.85	3100	22817.37	9100	12407.57	7470
JSB-1-9	410.73	238	495.06	433	29.64	31.5	18.52	15.7	6958.99	3100	22481.50	8700	12103.39	7090
JSB-2-10	418.30	234	3636.25	2570	1046.81	842	8.61	7.77	5327.21	2600	22607.96	8700	11829.86	6910
JSB-2-2	354.25	199.5	766.22	559	30.08	31.7	5.79	5.89	5406.56	2500	24215.49	9000	12194.93	6880

Table S1 Elemental concentrations of 60 leech samples obtained by pXRF and ICP methods

SAMPLE	Zn (mg Kg ⁻¹)		Fe (mg Kg ⁻¹)		Cu (mg Kg ⁻¹)		As (mg Kg ⁻¹)		Ca (mg Kg ⁻¹)		K (mg Kg ⁻¹)		S (mg Kg ⁻¹)	
	PXRF	ICP	PXRF	ICP	PXRF	ICP	PXRF	ICP	PXRF	ICP	PXRF	ICP	PXRF	ICP
JSB-2-3	322.68	195.5	3362.79	2520	996.91	820	5.76	5.98	4729.97	2300	23355.84	8800	11950.07	6900
JSB-2-5	436.14	248	283.50	294	19.61	26.7	4.87	4.66	6747.82	3000	22922.51	8600	11759.28	6700
JSB-2-8	346.09	212	2786.74	2120	711.77	541	7.21	6.94	6750.05	3600	22872.81	8600	11570.19	6650
JSB-2-9	441.13	256	1265.02	997	189.84	157	12.48	10.3	6031.53	2800	22769.39	9000	11288.55	6920
JSB-3-1	344.46	192.5	529.67	447	75.33	65.9	7.98	7.16	4256.73	2000	23329.76	8700	11981.99	6810
JSB-3-2	360.55	216	724.21	617	156.70	130.5	5.93	6.24	4744.15	2300	23243.52	9300	11736.39	7130
JSB-3-3	279.86	175.5	1341.45	1740	168.15	147	5.18	5.63	3641.32	1900	18823.94	7700	24939.04	18800
JSB-3-4	331.25	197	408.92	458	26.42	29.9	5.86	5.78	4138.32	2000	23480.74	9100	12501.62	6950
JSB-3-5	370.65	218	800.42	636	60.33	50.7	7.94	7.11	5727.67	2800	23602.81	9000	12599.59	6760
JSB-3-6	400.71	219	1184.30	853	264.80	184.5	7.61	6.44	4702.58	2200	22579.73	8500	11937.83	6700
JSB-3-7	295.69	187	2964.82	2170	866.17	693	5.04	4.75	4455.75	2400	17592.97	7000	28158.45	19600
JSB-3-8	297.76	167.5	568.00	466	127.72	101.5	5.74	5.03	4600.00	2000	24215.11	8700	12771.45	6570
JSB-3-9	255.15	163.5	1173.80	974	304.06	255	5.80	6.06	4206.27	2100	16241.42	6600	32425.06	23800
JS-M-1	370.41	211	569.41	409	26.35	26.9	7.09	6.01	5368.60	2500	18520.83	7500	22824.50	13000
JS-X-1	279.49	159	423.70	352	36.60	31.7	5.31	4.71	4087.72	1900	22984.09	8700	11471.45	6790

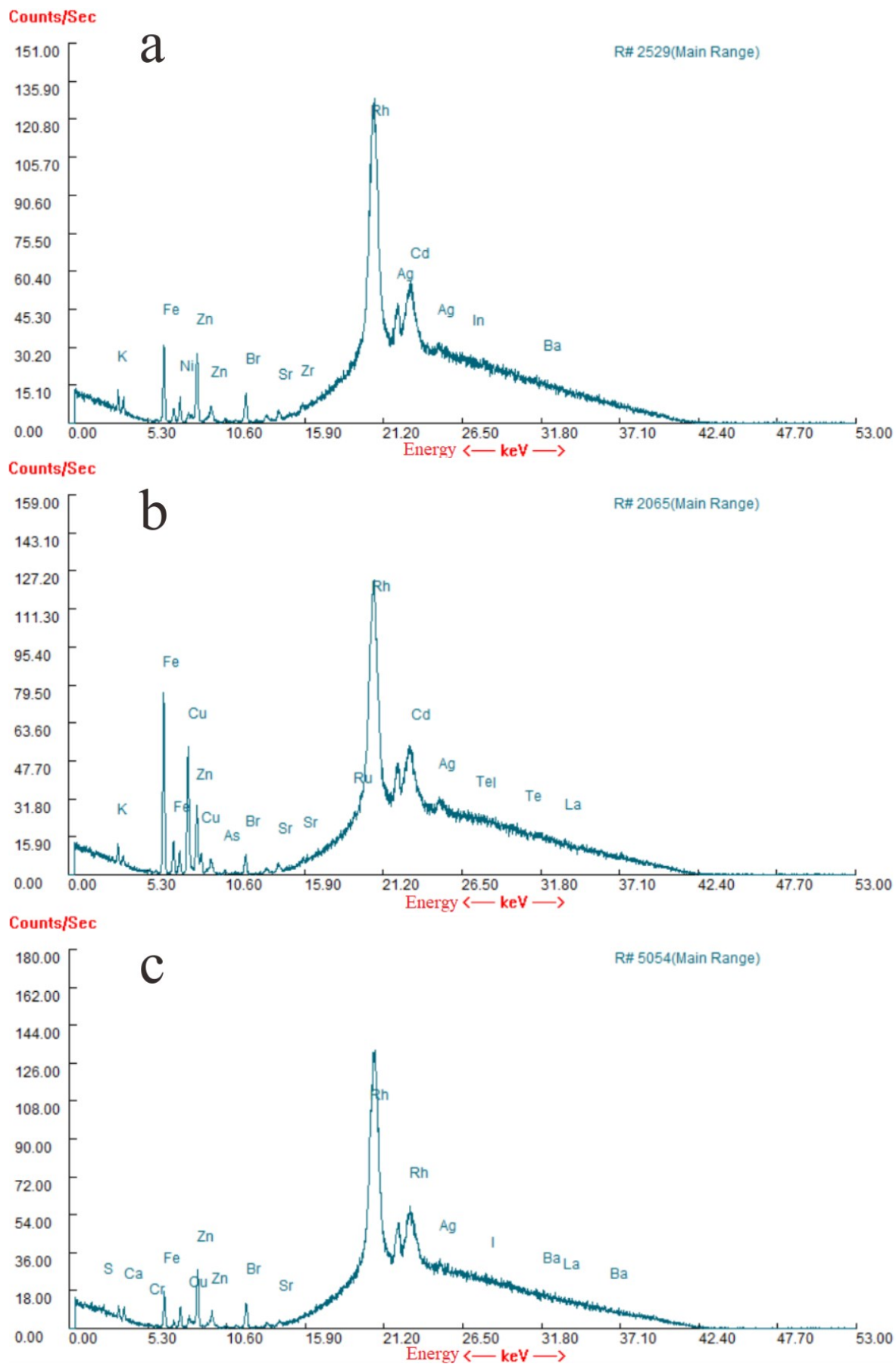


Fig. S1 The full spectrums of three leech samples. (a) JS-6-3, (b) JSB-2-10, (c) HB-2-5. The elemental concentrations of the three leech samples are provided in Supplementary Table. S1.