Development of an analytical method for analyzing pyrrolizidine alkaloids in different groups of food by UPLC-MS/MS

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Table S1 SPE elution profile with neutralized, alkaline and acidic extract

	pH 6.7		pH 8.4		pH 3.4	
PAs	1st eluate (MeOH)	2nd eluate (2.5% NH_3 MeOH)	1st eluate (MeOH)	2nd eluate (2.5% NH_3 MeOH)	1st eluate (MeOH)	2nd eluate (2.5% NH_3 MeOH)
	Recoveries without IS correction (%)					
Em	73	0	69	0	0	87
EmN	75	0	76	0	11	70
Er	69	0	73	0	0	83
ErN	73	0	74	0	37	42
Eu	72	0	69	0	0	84
EuN	74	0	73	0	0	89
Hn	74	0	76	0	0	94
HnN	71	0	74	0	0	85
Im	72	0	73	0	0	88
ImN	71	0	76	0	0	91
Jb	69	0	65	0	0	85
JbN	72	0	73	0	52	23
Lc	70	2	64	2	0	81
LcN	73	0	65	0	16	54
La	75	0	70	0	0	82
LaN	76	0	76	0	0	85
Mc	72	0	73	0	10	61
McN	68	0	70	0	22	57
Re	71	0	72	0	0	86
ReN	79	0	78	0	24	61
Sc	74	0	70	0	0	88
ScN	75	0	74	0	12	63
Sp	72	0	74	0	0	70
SpN	71	0	68	0	12	**15**[1]
Sv	72	0	61	0	0	83
SvN	72	0	79	0	19	66
Sk	**58**	**11**[2]	**51**	**12**[2]	0	82
Td	64	0	68	0	0	84

Remarks: 1, SpN degradation in alkaline MeOH.

2, Sk completely eluted in alkaline MeOH.

Table S2 Estimates of LOQs of 28PAs in different food matrices

	Estimated LOQs
	Range (μg kg^{-1})
Cow milk	0.010-0.040
Tea infusion	0.015-0.075
Honey	0.014-0.074
Cooked chicken egg	0.013-0.052
Cooked beef	0.010-0.087
Barley flour	0.011-0.063
Clove leave	0.04-0.76

Figure S1 Chromatogram of quantitation MRMs of PAs/PANs at concentration of 0.1 μg L^{-1}

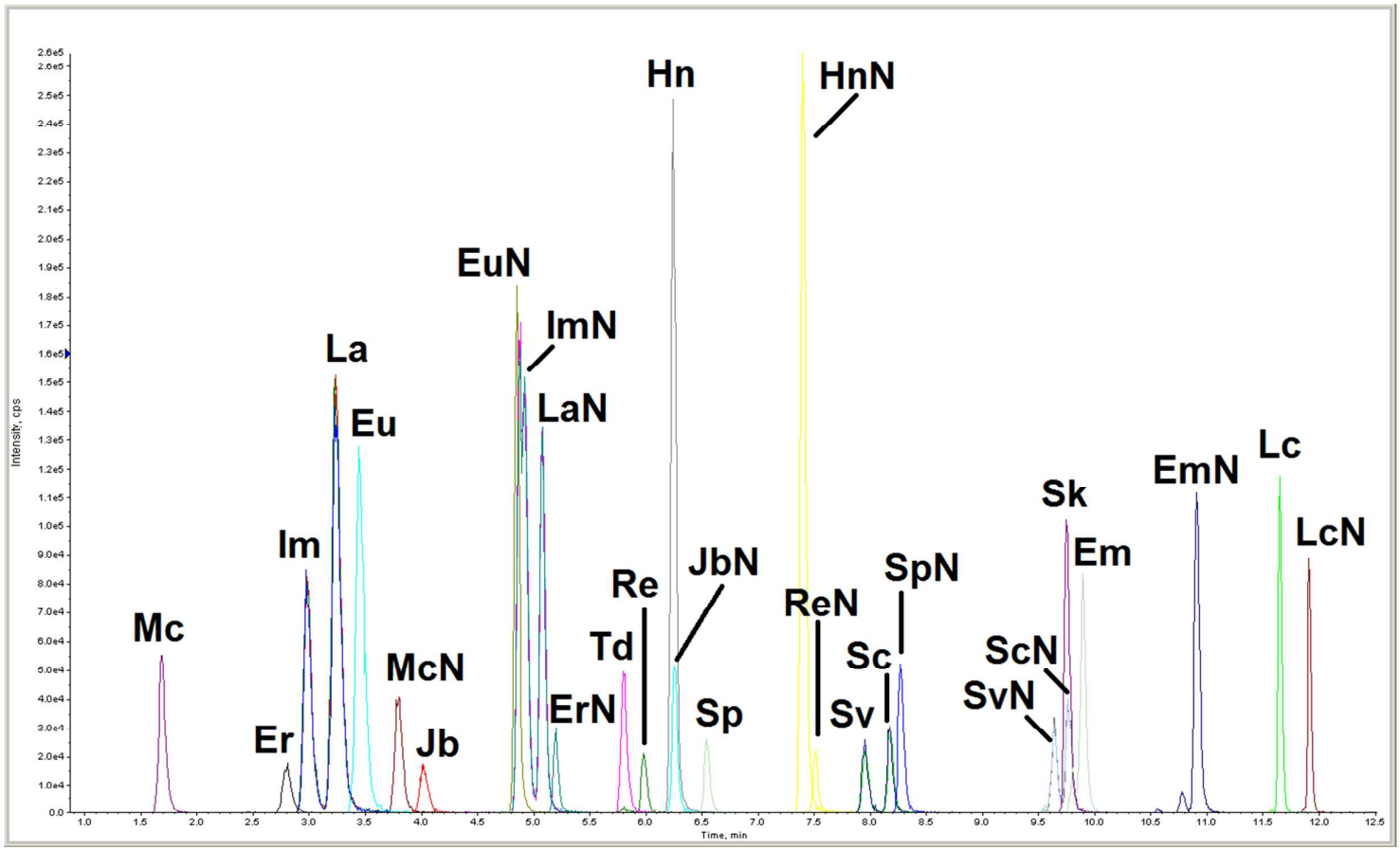

Figure S2 Milky milk extracts becomes translucent after the freeze-out steps

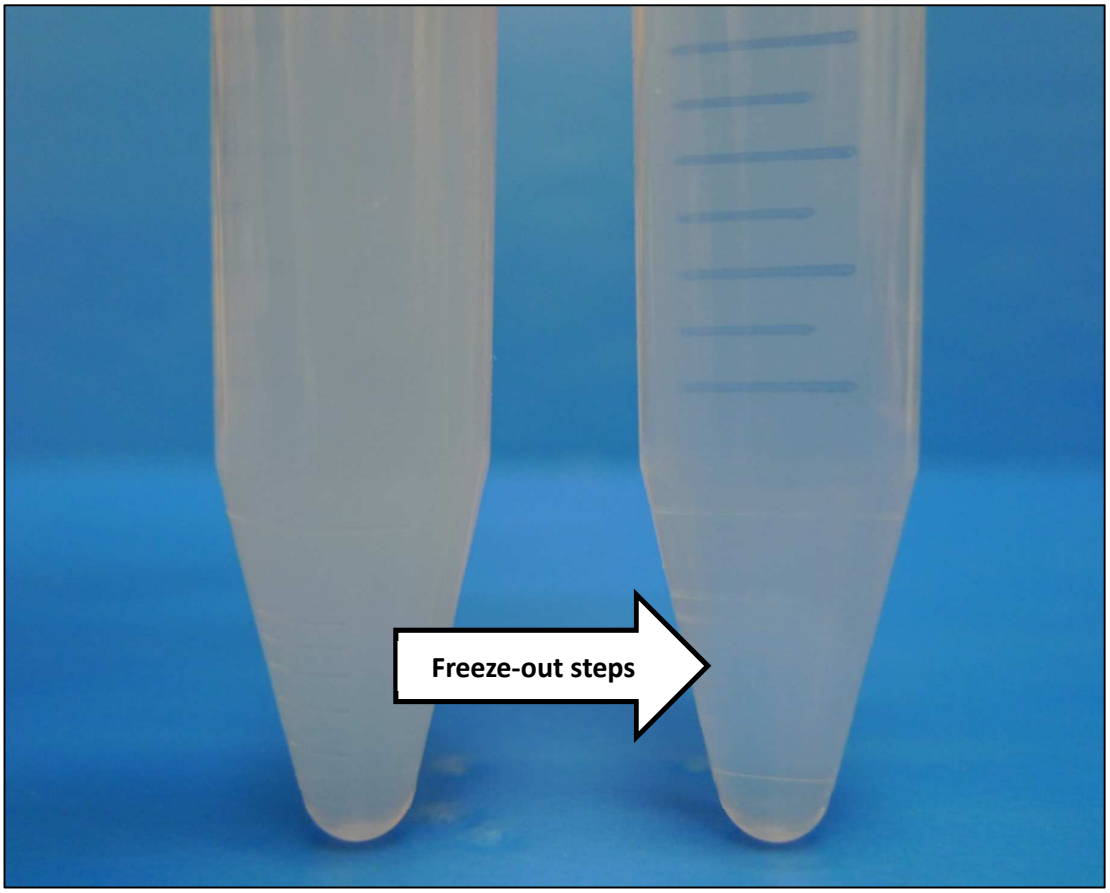

Figure S3 Sample solutions (left: black tea; right: black pepper) with and without the acetonitrile washing step

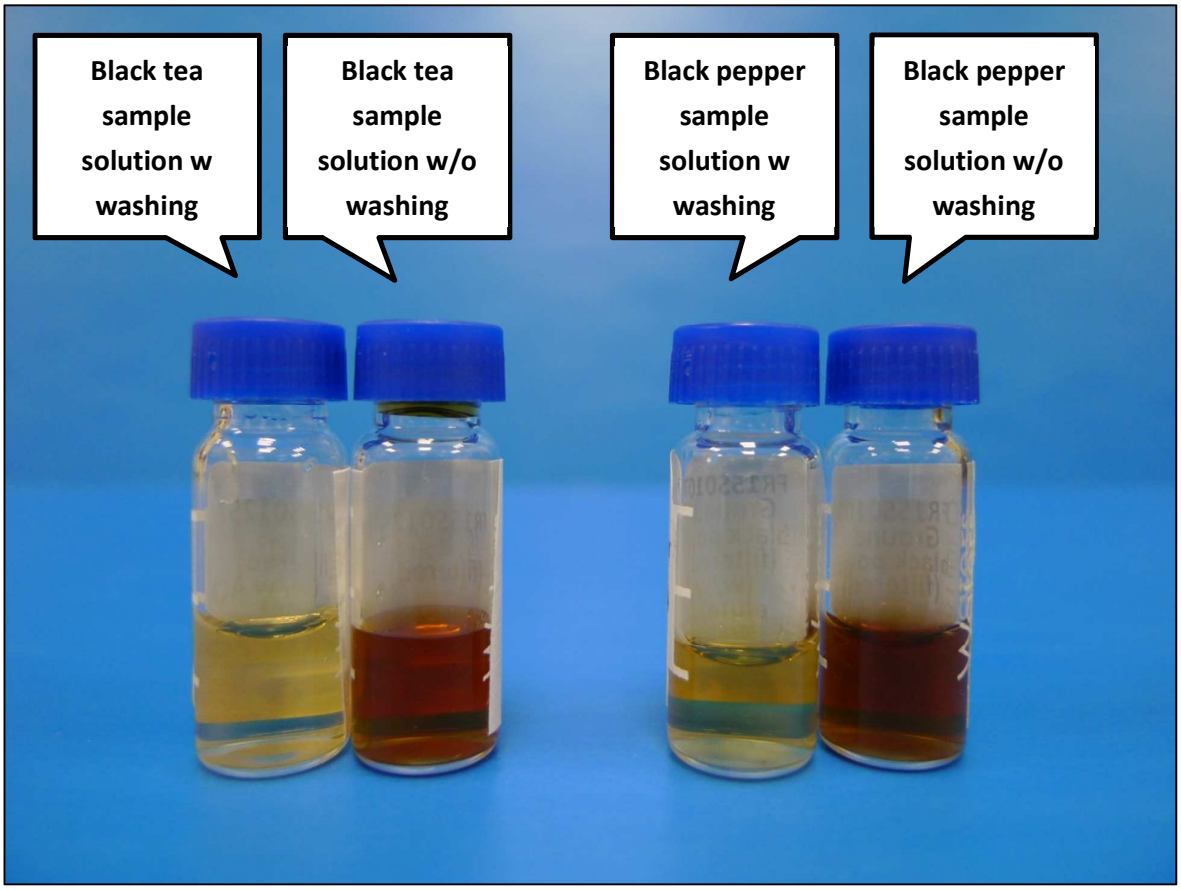

Figure S4 Lasiocarpine responses in water with different percentages of methanol