**Supporting Information** 1 2 3 Rapid screening and quantification of heavy metals in traditional Chinese herbal 4 medicines using monochromatic excitation energy dispersive X-ray fluorescence 5 **spectrometry** 7 Xing Ma a, b, †, Marti Z. Hua c, †, Chao Ji d, Jing Zhang b, Rui Shi e, Yabing Xiao b, Xiaojing Liu f, Xiahong 8 He d, e, \*, Wenjie Zheng a, \*, Xiaonan Lu c, \* 9 a Laboratory for Quality Control and Traceability of Food, Tianjin Normal University, Tianjin 300387, 10 China 11 b The Animal, Plant & Foodstuff Inspection Center of Tianjin Customs, Tianjin 300387, China 12 <sup>c</sup> Department of Food Science and Agricultural Chemistry, McGill University Macdonald Campus. 13 21111 Lakeshore Road, Sainte-Anne-de-Bellevue, QC, H9X 3V9, Canada. 14 d State Key Laboratory for Conservation and Utilization of Bio-Resources in Yunnan, Yunnan 15 Agricultural University, Kunming 650201, China 16 e Key Laboratory for Forest Resources Conservation and Utilization in the Southwest Mountains of 17 China, Ministry of Education, Southwest Landscape Architecture Engineering Research Center of 18 National Forestry and Grassland Administration, Southwest Forestry University, Kunming, Yunnan 19 650224, China 20 f Beijing Ancoren Technology, Beijing 100000, China 21 22 <sup>†</sup> These authors contributed equally to this work. \* Corresponding author. Email address: hexiahong@hotmail.com (Xiahong He); skyzwj@tjnu.edu.cn (Wenjie Zheng); xiaonan.lu@mcgill.ca (Xiaonan Lu) 24 25

**Table S1.** Operating parameters of ICP-MS/MS

Parameter	Operating condition
RF power	1500 W
Sampling depth	8.0 mm
Number of replicates	3
Stabilization time	10 s
Auxiliary gas flow rate	0.40 L/min
Makeup gas flow rate	0.20 L/min
Carrier gas flow rate	1.05 L/min
Spray chamber temperature	2.0℃
Quadrupole bias V	-16 V
Octo pole bias V	-18 V
Operational mode	He mode