

Supporting Information

Direct Analysis of Melamine in Complex Matrices using a Handheld Mass Spectrometer

Guangming Huang¹, Wei Xu², Michelle A. Visbal-Onufrak³, Zheng Ouyang^{2,3*} and R. Graham Cooks^{1*}

¹Department of Chemistry and Center for Analytical Instrumentation Development, 560 Oval Drive, Purdue University, West Lafayette, IN, 47907, USA.

²Department of Electrical & Computer Engineering, 465 Northwestern Avenue, Purdue University, West Lafayette, IN, 47907, USA.

³Weldon School of Biomedical Engineering, Purdue University, 206 South Intramural Drive, West Lafayette, IN 47907, USA.

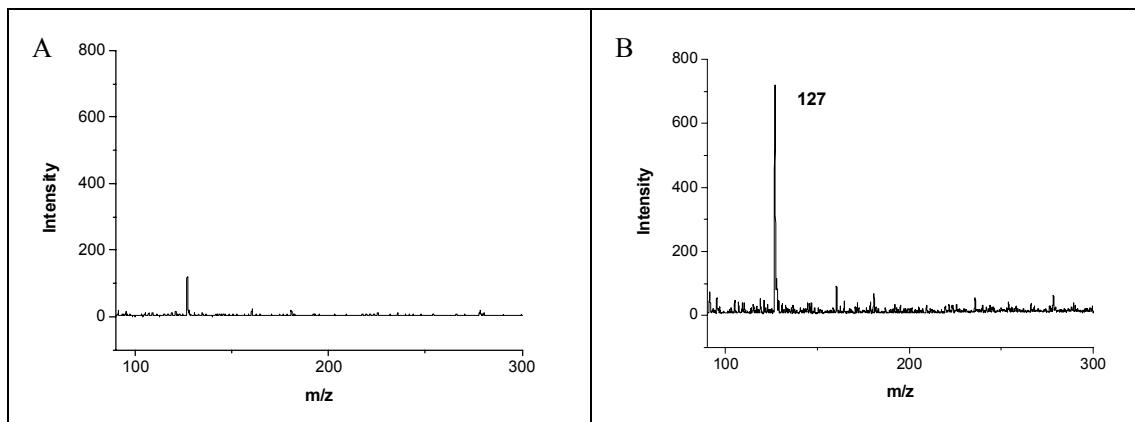


Figure S1. Effect of the interface on the quality of the mass spectrum

Typical spectra of 1.5 ng melamine dissolved in methanol/water (v:v=1:1) (500 ng/mL, 3 μ L) obtained via A) direct connection of LTP (air used as carrier gas) and Mini 10.5 and B) configuration as shown in Figure 1 A with a supplementary pump to increase the ion transfer efficiency.

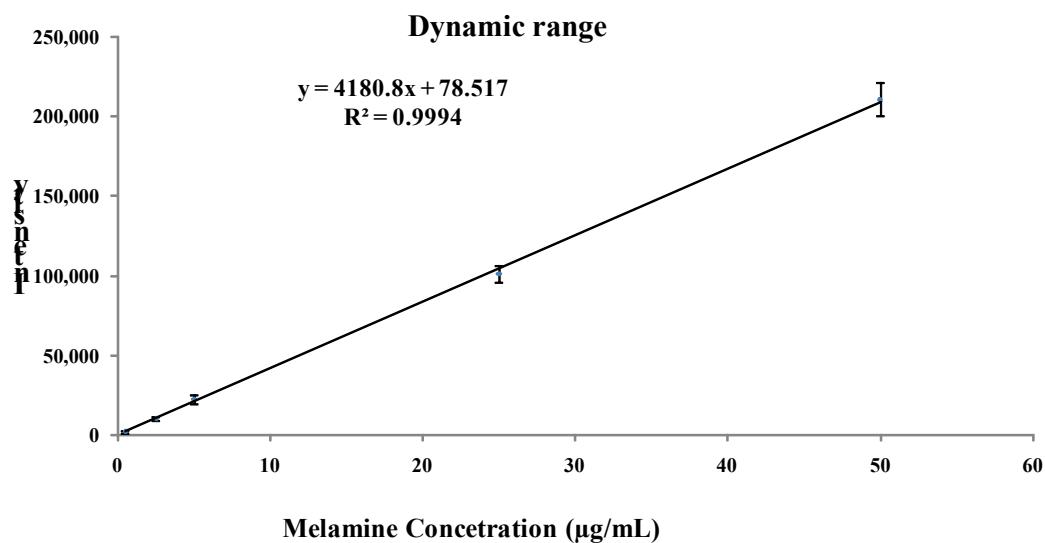


Figure S2. Calibration curve of LTP/Mini 10.5 for melamine detection in whole milk

Calibration curve was achieved by measuring solid phase and liquid phase samples at various concentrations, while scanning the mass spectrometer in MS/MS spectra, using characteristic fragment ion (m/z 85) obtained via CID from protonated melamine (m/z 127).