



Figure S1. Optimization of redox metabolites detection by LC-MS (a) MS2 spectra for the indicated normalized collision energies (NCE) of the derivatization product of Ellman's with glutathione (GSH-Ell). Red arrow indicates mass of precursor; (b) Schematic of the chemical structure and theoretical exact mass of negative or positive ion of GSH-Ell; (c) Optimization of HESI parameters on orbitrap mass spectrometer for the indicated amino acids using ZIC-pHILIC chromatography and $^{13}C^{15}N$ isotopically labeled standards. Graphs represent integrated areas of chromatographic peaks under changing parameters for capillary temperature or S-lens.

