

Surface Enhanced Raman Spectroscopic direct determination of low molecular weight biothiols in umbilical cord whole blood

Julia Kuligowski^a, Marwa R. EL-Zahry^{b,c}, Ángel Sánchez-Illana^a, Guillermo Quintás^{d,e}, Máximo

Vento^{a,f,g}, Bernhard Lendl^{b*}

^aNeonatal Research Unit, Health Research Institute Hospital La Fe, Avda Fernando Abril Martorell 106, 46026 Valencia, Spain

^bInstitute of Chemical Technologies and Analytics, Vienna University of Technology, Getreidemarkt 9/151, A-1060 Vienna, Austria

^cDepartment of Pharmaceutical Analytical Chemistry, Faculty of Pharmacy, Assiut University, 71526 Assiut, Egypt

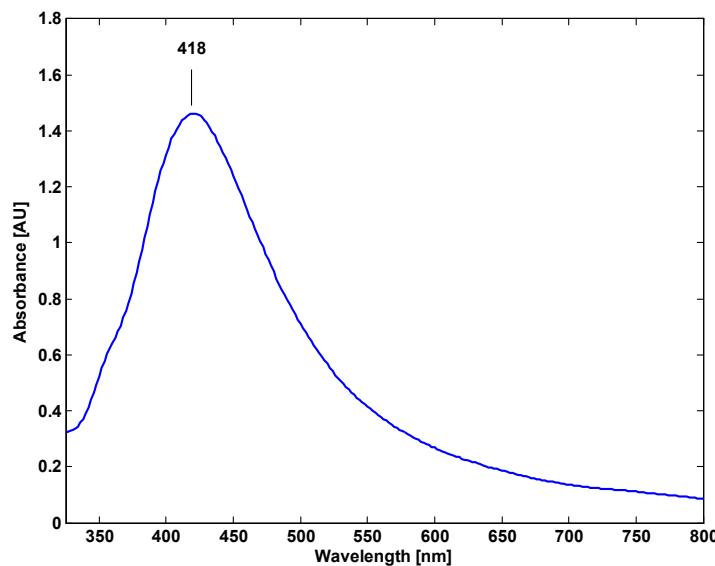
^dSafety & Sustainability, Leitat Technological Center, Avda Fernando Abril Martorell 106, 46026 Valencia, Spain

^eAnalytical Unit, Health Research Institute Hospital La Fe, Avda Fernando Abril Martorell 106, 46026 Valencia, Spain

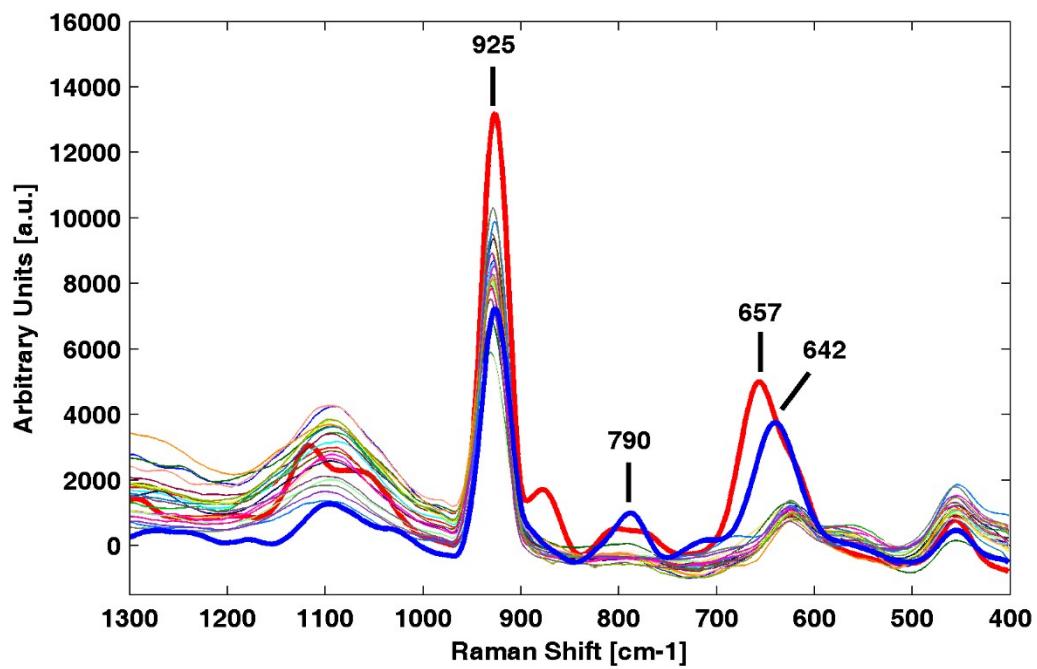
^fDivision of Neonatology, University & Polytechnic Hospital La Fe, Avda Fernando Abril Martorell 106, 46026 Valencia, Spain

^gNational Coordinator Spanish Maternal and Child Health and Development Network SAMID, Instituto Carlos III (Spanish Ministry of Economy and Competitiveness)

* e-mail: bernhard.lendl@tuwien.ac.at, Tel.: +43/1 58801 15140, Fax: +43/1 58801 15199



Supplementary Material Figure 1. UV-Vis spectrum of the silver colloid.



Supplementary Material Figure 2. SERS spectra of a GSH standard solution (blue bold line) in comparison to spectra of other amino acids listed in Table 3. Note: red bold line: cysteine