

## ***Supplementary Material***

### **Unlocking Chromatographic Quantification of Serum Lactate Dehydrogenase via Ionic-Liquid-Based Aqueous Biphasic System Pretreatment**

*Matheus M. Pereira<sup>1</sup>, Sónia N. Pedro<sup>1</sup>, Francisca A. e Silva<sup>1\*</sup>, João A. P. Coutinho<sup>1</sup> and Mara G. Freire<sup>1\*</sup>*

<sup>1</sup>CICECO – Aveiro Institute of Materials, Department of Chemistry, University of Aveiro, 3810-193 Aveiro, Portugal

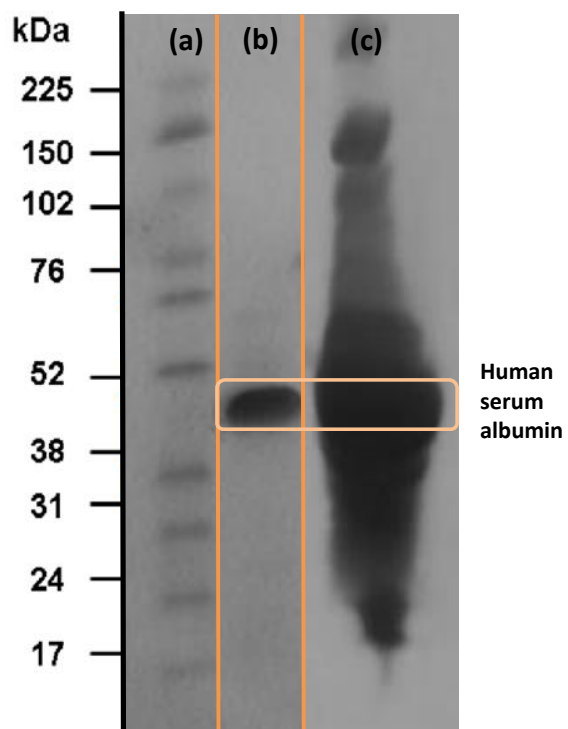
\*Corresponding author – e-mail: [maragfreire@ua.pt](mailto:maragfreire@ua.pt); [francisca.silva@ua.pt](mailto:francisca.silva@ua.pt)

## Tables

**Table S1.** Numerical data for depletion efficiency of high-abundance serum proteins ( $DE_{\text{PROT}}\%$ ), extraction efficiency of LDH ( $EE_{\text{LDH}}\%$ ), recovery yield of LDH ( $RY_{\text{LDH}}\%$ ) and relative error ( $RE\%$ ) across different compositions of the initial mixtures used to form ABS. Values are reported as mean  $\pm$  standard deviation ( $\sigma$ ) of independent replicates. In cases where all replicates yielded identical values, the standard deviation is not shown.

IL	Weight percentage composition / (wt %)		$DE_{\text{Prot}}\% \pm \sigma$	$EE_{\text{LDH}}\% \pm \sigma$	$RY_{\text{LDH}}\% \pm \sigma$	$RE\% \pm \sigma$
	IL	$\text{K}_3\text{C}_6\text{H}_5\text{O}_7/$ $\text{C}_6\text{H}_8\text{O}_7$ buffer solution				
[P <sub>4444</sub> ]Cl	30	60	33.10 $\pm$ 0.06	100	100	-
	30	60	100	100	82 $\pm$ 2	18 $\pm$ 2
	30	20	100	100	40 $\pm$ 1	60 $\pm$ 1
[P <sub>4444</sub> ]Br	30	40	100	100	65.5 $\pm$ 0.3	34.5 $\pm$ 0.3
	45	40	100	100	92 $\pm$ 2	8 $\pm$ 2
	15	40	100	100	32.3 $\pm$ 0.7	67.6 $\pm$ 0.7

## Figures



**Fig. S1.** SDS-PAGE analysis of serum proteins: (a) molecular weight marker; (b) HSA sample,  $1\text{g.L}^{-1}$ ; (c) human serum proteins precipitated at interphase of the IL-based ABS (diluted 2:1 in PBS buffer).