

# An impedance-based immunosensor for the detection of ovalbumin in white wine

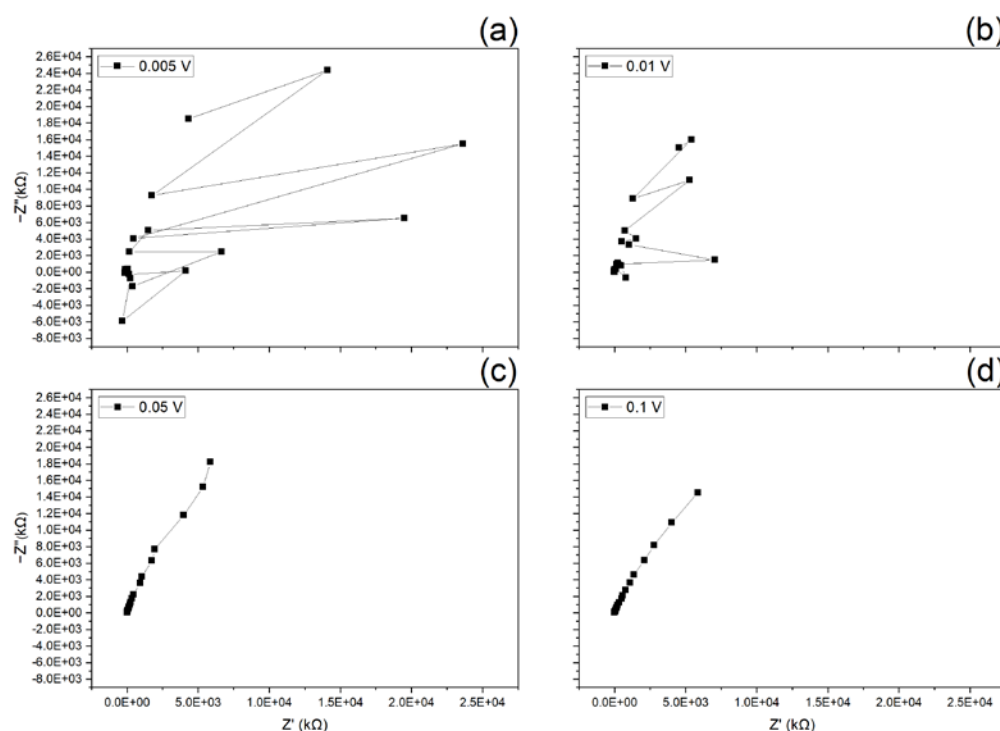
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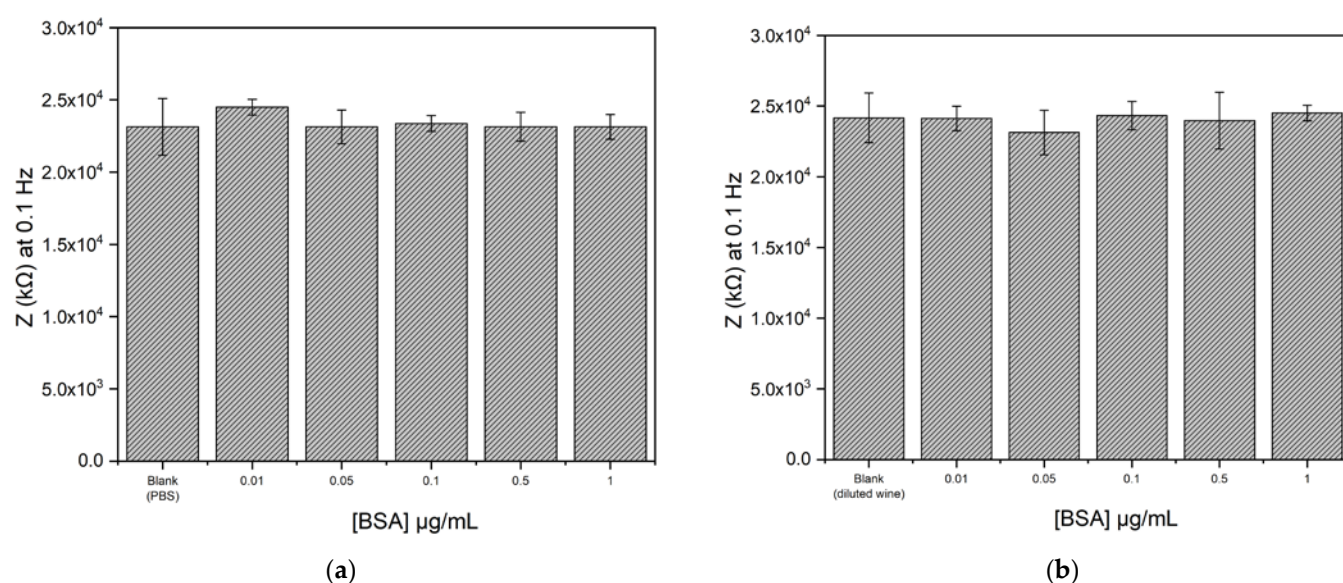
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**Figure S1.** EIS spectra acquired at different AC potentials in the frequency range of 0.1 to 100,000 Hz. The graph shows the impedance response of the immunosensor at 0.005 V (a), 0.01 V (b), 0.05 V (c), and 0.1 V (d). Linearity and the best signal-to-noise ratio were obtained at t 0.1 V.



**Figure S2.** Immunosenor BSA cross-reactivity. The figure shows the impedance response (Z) of the immunosenor exposed to increasing concentrations of BSA dissolved in PBS (a) and in diluted white wine (b).

**Table S1.** Immunosenor reproducibility data. The Relative Standard Deviation of each OVA measurement was calculated on six different immunosensors. The RSD data were pooled in two groups to highlight the reproducibility of the immunosenor when exposed to OVA dissolved in PBS and to diluted wine spiked with OVA.

[OVA] μg/mL	RSD (PBS OVA-spiked)	RSD (wine OVA-spiked)
0 <sup>1</sup>	7.3 %	8.4 % <sup>2</sup>
0.001	27.7 %	8.1 %
0.005	4.4 %	2.9 %
0.01	1.6 %	1.4 %
0.05	3.2 %	2.3 %
0.1	3.3 %	2.4 %
0.5	1.9 %	2.6 %

<sup>1</sup> Blank

<sup>2</sup> The blank measurement in the presence of PBS was performed after a 10 minutes-incubation with diluted white wine (not spiked) and extensive washing with PBS.

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