

Electrical Characterization of Nitrocellulose Membranes towards Bacterial Detection in Water ⁺

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Table S1. Results from the fitting of impedance data (Figure 5) to the simple electrical equivalent model used for the parallel-plate setup. All fit were accurate ($R^2 < 0.2$). Mean (μ) \pm standard deviation (s. d.) on twelve measurements from two independent experiments.

Saline solution C_{NaCl} [mol/L]	RNC [Ω]	C _{Nc} [pF]	C _{baking} [pF]
	Mean (μ) \pm s. d. (σ)	Mean (μ) \pm s. d. (σ)	
10^{-5} M	$202\ 923 \pm 4855$	9.028 ± 0.071	100
10^{-4} M	$191\ 393 \pm 2426$	8.336 ± 0.024	100
5×10^{-4} M	$164\ 160 \pm 7400$	8.819 ± 0.123	100
10^{-3} M	$105\ 279 \pm 3813$	10.32 ± 0.13	100
5×10^{-3} M	$55\ 512 \pm 322$	11.85 ± 0.051	100
10^{-2} M	$23\ 422 \pm 2096$	16.08 ± 0.397	100
10^{-1} M	2165 ± 76	19.75 ± 0.431	100

Table S2. Results from the fitting of impedance data (Figure 6) to the simple electrical equivalent model used for the parallel-plate setup. All fit were accurate ($R^2 < 0.2$). Mean (μ) \pm standard deviation (s. d.) on twelve measurements from two independent experiments.

Biological solution	RNC [Ω]	C _{Nc} [pF]	C _{baking} [pF]
	Mean (μ) \pm s. d. (σ)	Mean (μ) \pm s. d. (σ)	
PBS:1000	$156\ 313 \pm 1580$	8.223 ± 0.025	100
B. thuringiensis 10^8 CFU/mL	$118\ 317 \pm 2426$	9.312 ± 0.018	100