

Quantitative Assessment of Periodontal Bacteria Using a Cell-Based Immunoassay with Functionalized Quartz Crystal Microbalance

Satit Rodphukdeekul ^{1,2}, Miyuki Tabata ², Chindanai Ratanaporncharoen ², Yasuo Takeuchi ³,
Pakpum Somboon ¹, Watcharee Boonlue ^{4,6}, Yuji Miyahara ^{2,*} and Mana Sriyudthsak ^{5,*}

¹ Biomedical Engineering Program, Faculty of Engineering, Chulalongkorn University, Bangkok 10330, Thailand; satit.rod@student.chula.ac.th (S.R.); pakpum.s@chula.ac.th (P.S.)

² Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University, Tokyo 101-0062, Japan; tabata.bsr@tmd.ac.jp (M.T.); r.chindanai@gmail.com (C.R.)

³ Department of Periodontology, Faculty of Dentistry, Tokyo Medical and Dental University, Tokyo 113-8510, Japan; takeuchi.peri@tmd.ac.jp

⁴ Department of Nutrition and Dietetics, Faculty of Allied Health Sciences, Chulalongkorn University, Bangkok 10330, Thailand; Watcharee.Bo@chula.ac.th

⁵ Department of Electrical Engineering, Faculty of Engineering, Chulalongkorn University, Bangkok 10330, Thailand

⁶ Biosensors and Bioanalytical Technology for Cells and Innovative Testing Device Research Unit, Chulalongkorn University, Bangkok 10330, Thailand

* Correspondence: miyahara.bsr@tmd.ac.jp (Y.M.); mana.S@chula.ac.th (M.S.)

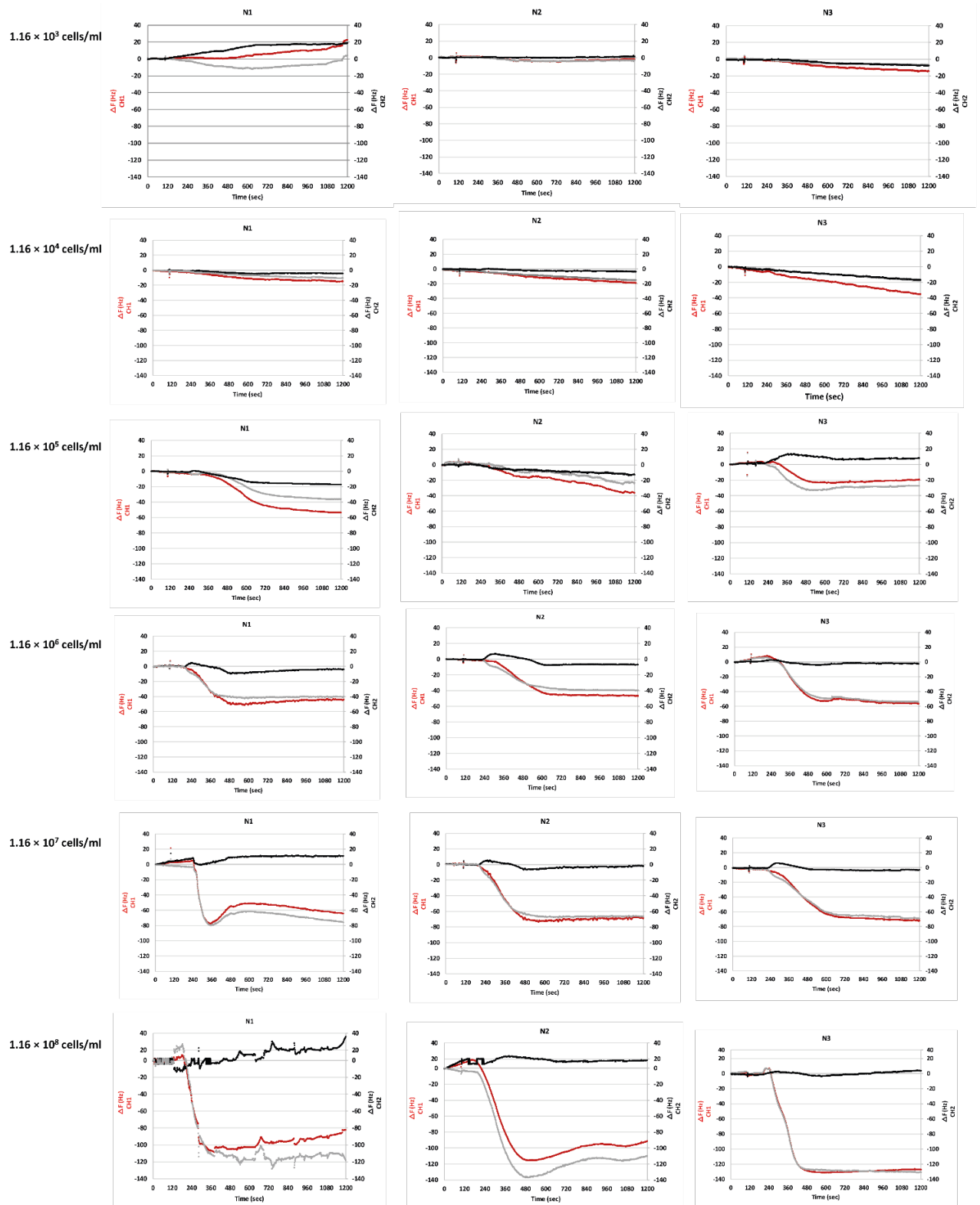


Figure S1 Response profiles of *A. actinomycetemcomitans* antibody-immobilized sensors for *A. actinomycetemcomitans* cells detection (red). Non antibody-immobilized sensors (black) were used as negative control.

The response of the QCM sensors to various concentrations of bacteria were recorded and each measurement was repeated three times (N1-3).