

Figure S1. Image of vertical flow set-up built from a series of layers.

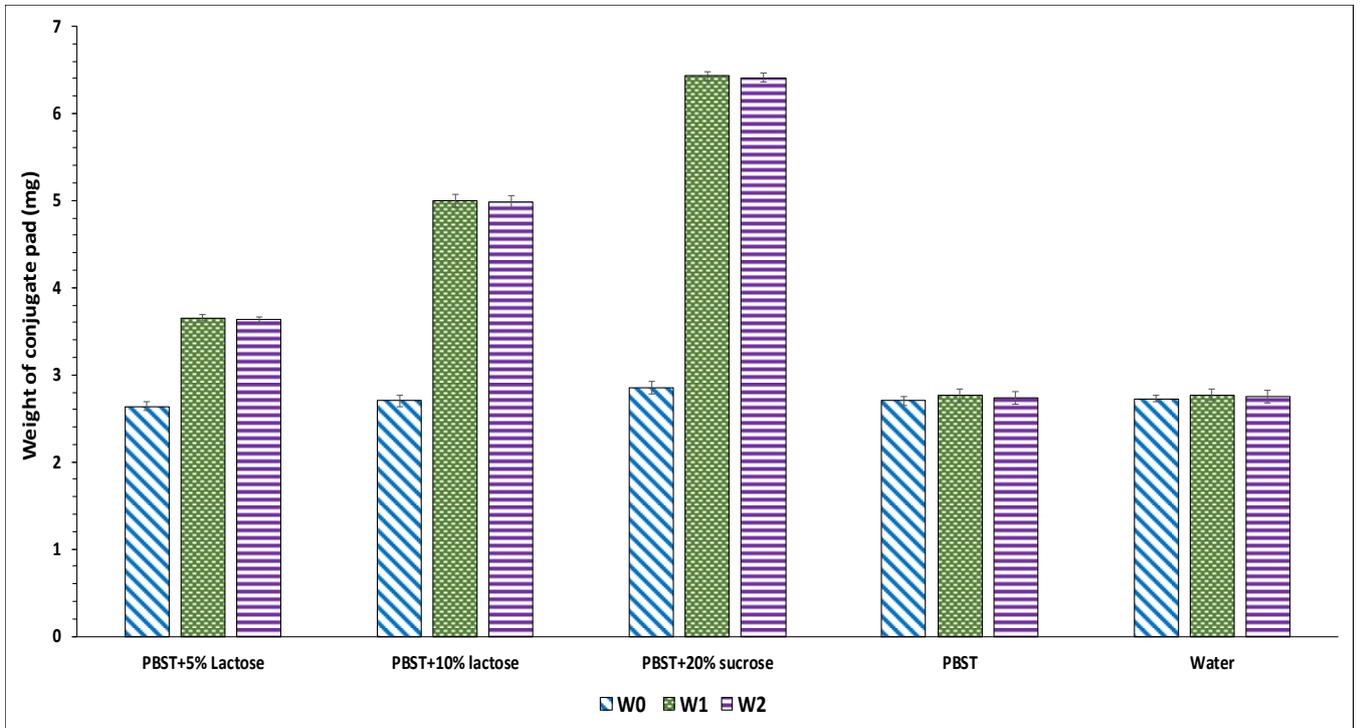
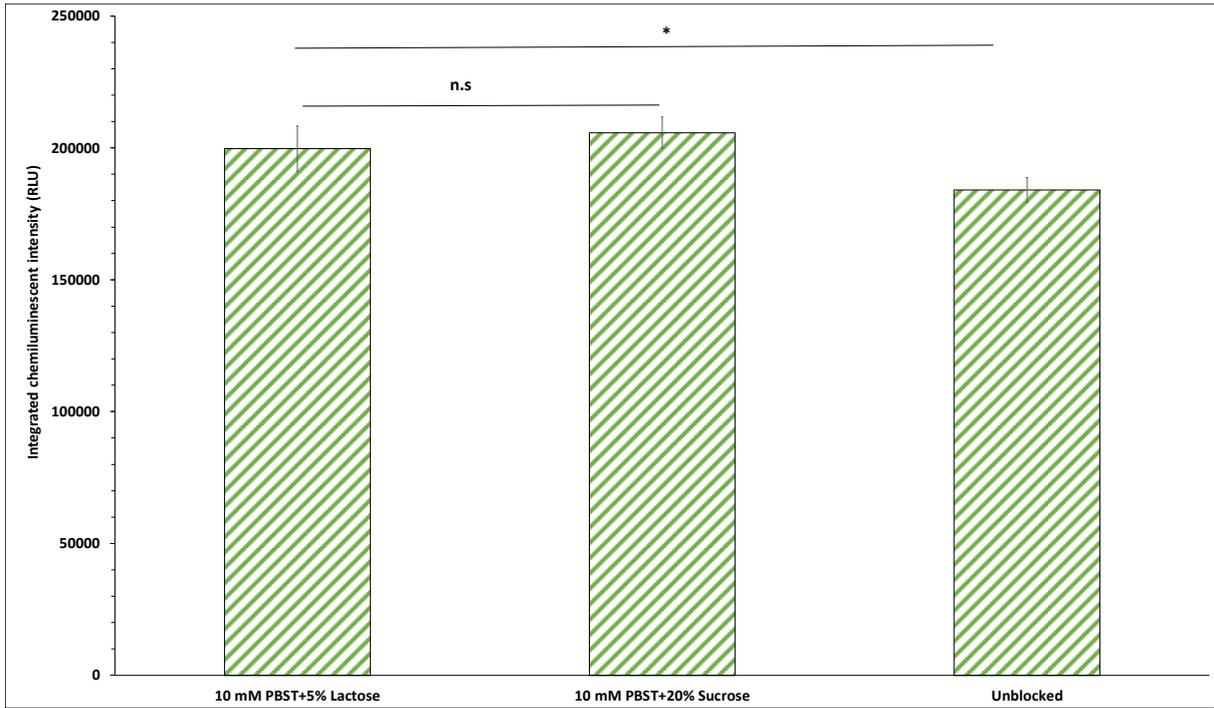
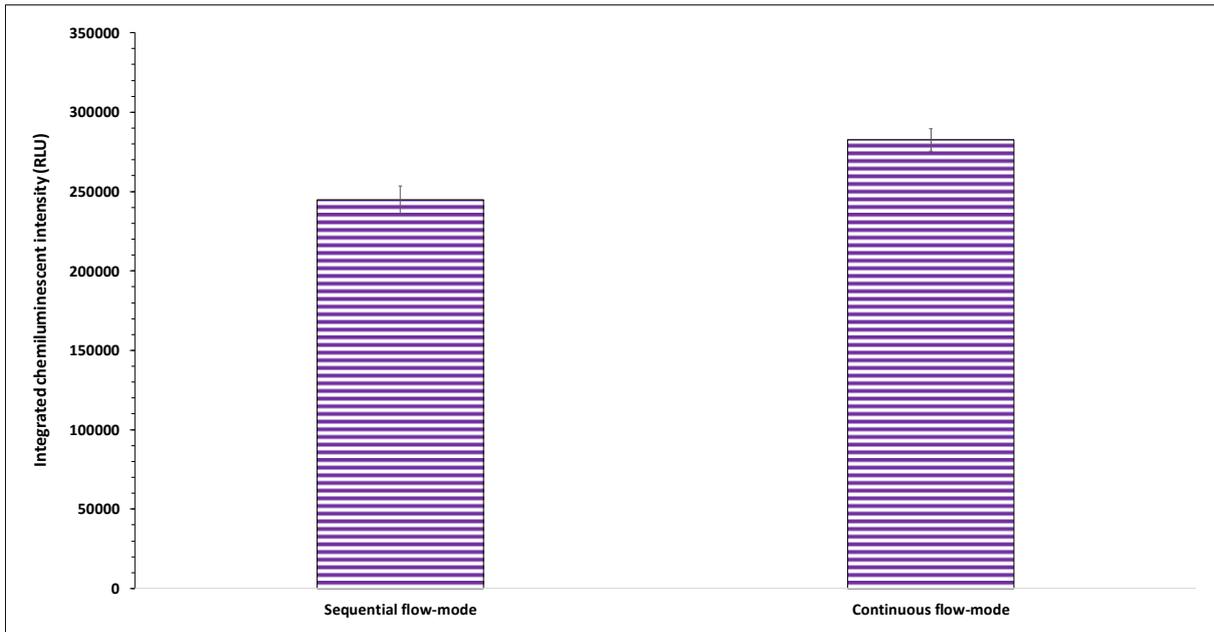


Figure S2: Depiction of the efficacy of air-drying process based on the dry-weight of conjugate pads.



**Figure S3.** Effect of conjugate pad blocking on the integrated chemiluminescent intensity of VFIA platform (\*  $p < 0.05$ , by ANOVA, n.s.- not significant).



**Figure S4.** Effect of different types of sample addition modes on the integrated chemiluminescent intensity of VFIA platform.