

**Fig. S3** The effect of varying cell number densities on the spike frequency for <sup>31</sup>P in a 60 s measurement at 10  $\mu$ L min<sup>-1</sup> (*i.e.*, 10  $\mu$ L). Y error bars were calculated from the RSD of the number of spikes for <sup>31</sup>P; X error bars were calculated from the RSD of the number of spikes for <sup>31</sup>P; X error bars were calculated from the RSD of the number of cells per 10 $\mu$ L of each suspension.