

**S1 Table. Effect of oxygen on the formation of ribose 5 phosphate.**

<b>SI</b>	<b>Reagents*</b>	<b>Ratio of R5P concentration formed under aerobic vs. anaerobic environment</b>
1	400 $\mu$ M 6PG, 150 $\mu$ M Fe <sup>2+</sup> and 150 $\mu$ M Cys	3.05
2	400 $\mu$ M 6PG and 150 $\mu$ M Cys	1.11
3	400 $\mu$ M 6PG and 150 $\mu$ M Fe <sup>2+</sup>	2.5
4	400 $\mu$ M 6PG alone	1

\* Reagents were dissolved in phosphate solution 50 mM pH 5.0. The reaction mixture was heated at 70 °C for 3h under respective environments (ambient or anaerobic chamber). 6PG: 6-phosphogluconate, R5P: ribose 5-phosphate.