

RGP Substrate Preparation for the SR-X™

Introduction

Quanterix™ has identified effects on assay performance related to the handling of the RGP substrate reagent prior to sample analysis on the SR-X instrument. During storage at 2–8°C, solubility of RGP decreases and crystallization can occur. Complete dissolution of RGP before every run improves assay performance and run to run reproducibility. By monitoring solution absorbance and performance on the SR-X instrument, we have found that shaking at temperatures above 25°C is most effective for ensuring RGP is completely in solution prior to use.

Recommendation

RGP vials from Simoa® assay kits or Simoa Homebrew kits should be placed on the Simoa microplate shaker while preparing sample plates to run on the SR-X. The shaker should be set to the temperature specified in the Kit Instructions or to any temperature between 25–35°C that is used for a custom assay. The minimum shake times at different temperatures are shown in Table 1.

The maximum recommended shake time is 4 hours. Note that even after up to 4 hours of shaking at a temperature between 25–35°C, the RGP will be stable at room temp or on the instrument for greater than 8 hours. After shaking for the minimum time, the RGP vial may be left at room temperature before placing it on the instrument. RGP vials should be discarded after use. Do not return RGP to 2–8°C storage after shaking and running on the SR-X.

Always ensure the cap on the RGP vial is well tightened prior to shaking. To secure the RGP vial to the shaker, you may position the vial horizontally inside the metal clips that are used to position plates. If shaking in this configuration, secure the vial with tape to ensure it does not shift out of position. Alternatively, you can use an SBS-footprint holder designed by Quanterix to hold up to 3 RGP vials in a vertical orientation on the Simoa microplate shaker.

Temperature (°C)	Minimum Shake Time (min)
25	60
30	30
35	25

Table 1: Minimum shake times for complete RGP dissolution.

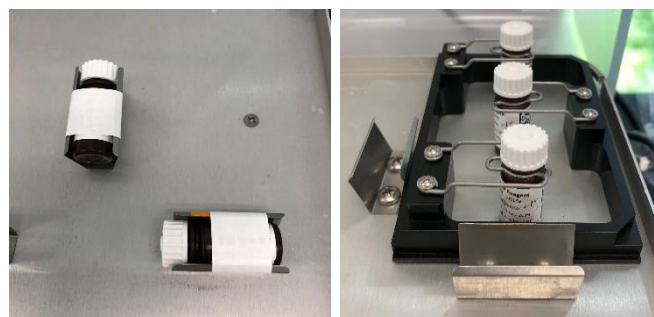


Figure 1: Securing RGP vials on the Simoa Microplate shaker.

Please direct any questions on this or any other issue with SR-X assays to techsupport@quanterix.com.