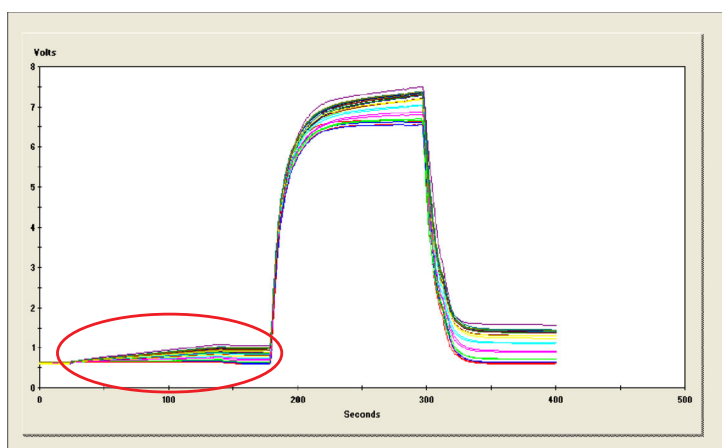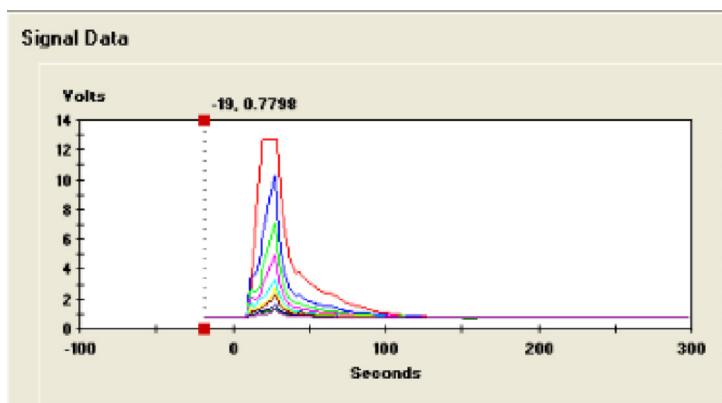# Injection Syringe Barrel Wash

An additional cleaning step is frequently necessary to avoid cross contamination when changing the material in the inject line or cleaning the syringe/line before and after a Kinetics Inject experiment. The injection pump syringe barrel and lines should be rinsed with KinExA® Cleaning Solution (2T7010). The cleaning solution is much more effective than H_2O or buffer to remove reagents adhered to the wall of the syringe barrel. Using the cleaning solution will also help reduce the amount of time needed to clean the syringe barrel when compared to using buffer alone.

The injection syringe is commonly used for the administration of secondary label. It can also be used to administer receptor when using the Kinetics Inject experiment. If the syringe barrel is not sufficiently cleaned, residual label can carry over to subsequent experiments (***Figure 1***). An easy way to tell if the label has been cleaned out of the barrel is to perform a rinse and examine the resulting traces. Residual label in the syringe barrel will exhibit an increase in voltage during the rinse traces (***Figure 2***). Follow the procedure below to effectively clean the syringe barrel.

Figure 1. *Kinetics Inject experiment demonstrating syringe barrel contamination. The steady increase in the baseline is due to residual label in the injection syringe.*

Figure 2. *Rinse screen showing label in the syringe barrel during each 1xPBS buffer rinse.*

Procedure for washing the injection syringe barrel

1. Open the rinse screen { }

2. Fill, then empty the injection syringe with KinExA Cleaning Solution twice by selecting the fill/empty inject button { }. Empty the liquid to waste between rinses.

3. Run two rinses with the cleaning solution, selecting only the Backflush, Inject, and Buffer.

4. Fill, then empty the injection syringe with the buffer of choice twice by selecting the fill/empty inject button { }. Empty the liquid to waste between rinses.

5. Run two rinses with the buffer of choice, selecting only the Backflush, Inject, and Buffer.

6. To ensure that the injection syringe barrel is clean, run three rinses with the buffer of choice, selecting all lines. Traces should look similar to the ones seen in **Figure 3B**.
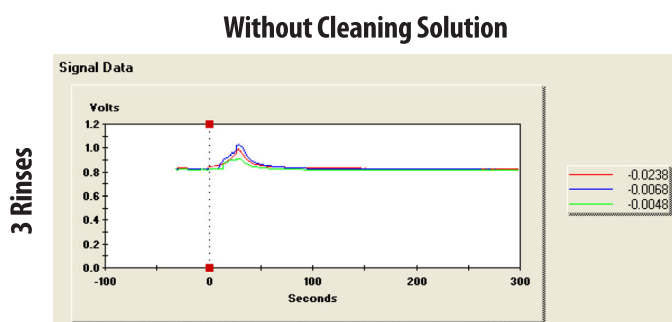
Without Cleaning Solution

Figure 3A. *Showing residual label.*
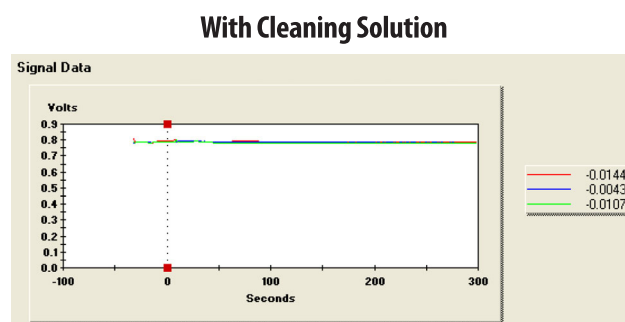
With Cleaning Solution
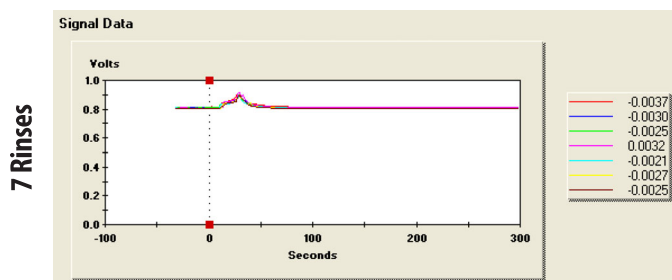

Figure 3B. *No residual label.*
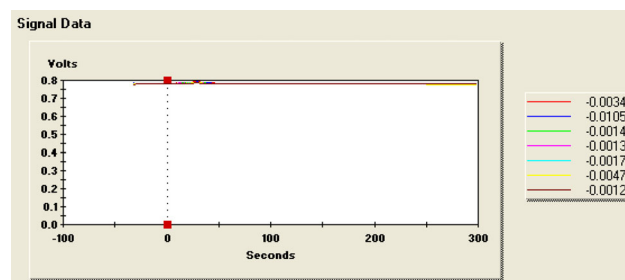

Figure 4A. *Shows a dirty injection syringe.*

Figure 4B. *Shows a clean injection syringe.*

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