

## Known SW Anomalies

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*i-control™ V1.7 Service Pack 1 (for Infinite® F50, Infinite 200, Infinite 200 PRO, Infinite 500, Infinite M1000)*

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# 1. Purpose

This document describes Release Notes for the following released software package and related hardware and firmware.

Module	Version
<b>i-control</b>	<b>1.7.1.12</b>
.NET Framework	2.0
Firmware F50 (FW-Package 2.01)	MAI(V2.01)
Firmware F200 (FW-Package 2.70)	MAI (V2.12), FIL (V2.04), HCP (V2.02), LUM (V2.00)
Firmware M200 (FW-Package 2.60)	MAI (V2.12), HCP (V2.02), LUM (V2.00), MEM (V2.12), MEX (V2.13)
Firmware F200Pro (FW-Package 1.2)	MAI (V3.14), FIL (V2.06), HCP (V2.02), LUM (V2.00)
Firmware M200Pro (FW-Package 1.2)	MAI (V3.14), HCP (V2.02), LUM (V2.00), MEM (V2.12), MEX (V2.13)
Firmware F500 (FW-Package 1.50)	MAI (V1.30), FIL (V1.10), ADC (V1.00), LUM (V2.10)
Firmware Connect Stacker (1.30)	MAI (1.30)
Firmware M1000 (FW-Package 1.23)	MAI (V1.34), ABS (V1.00), FPO (V1.01), LUM (V2.10), MEM (V1.20), MEX (V1.20), TCAN (V1.00)
Infinite F50	Series
Infinite M200	Series
Infinite F200	Series
Infinite M200	Series
Infinite F200	Series
Infinite F500	Series
Connect Stacker	Series
Infinite M1000	Series

## 2. Known Anomalies

The following section shows a structural overview of the known anomalies.

### 2.1. Software Anomalies


#### 2.1.1. Infinite F500: Kinetics with Luminescence

##### Issue:

Luminescence kinetic measurement scripts containing plate movement during the kinetic cycles – also during >Pause and Continue<- may lead to incorrect measurement results.

This restriction concerns only the Infinite F500 reader and luminescence kinetic measurements with plate movement. The other instruments of the Infinite series are not affected..

##### Example:


**Kinetic Cycle**

**Cycles**

☒ Number of cycles:


☐ Duration:  (hh:mm:ss)

**Kinetic Interval**

☐ Use kinetic interval

☒ Time:  (hh:mm:ss)

☐ Time:  ms


**Luminescence**

**Parameter**


Attenuation:

Integration time:  ms

Settle time:  ms


**Label**

Name:


**Kinetic Condition**

**Condition**


Execute commands at cycle:


**Move Plate**

**Move plate**

☐ In

☒ Out


**User Request**

**Text:**

### Workaround:

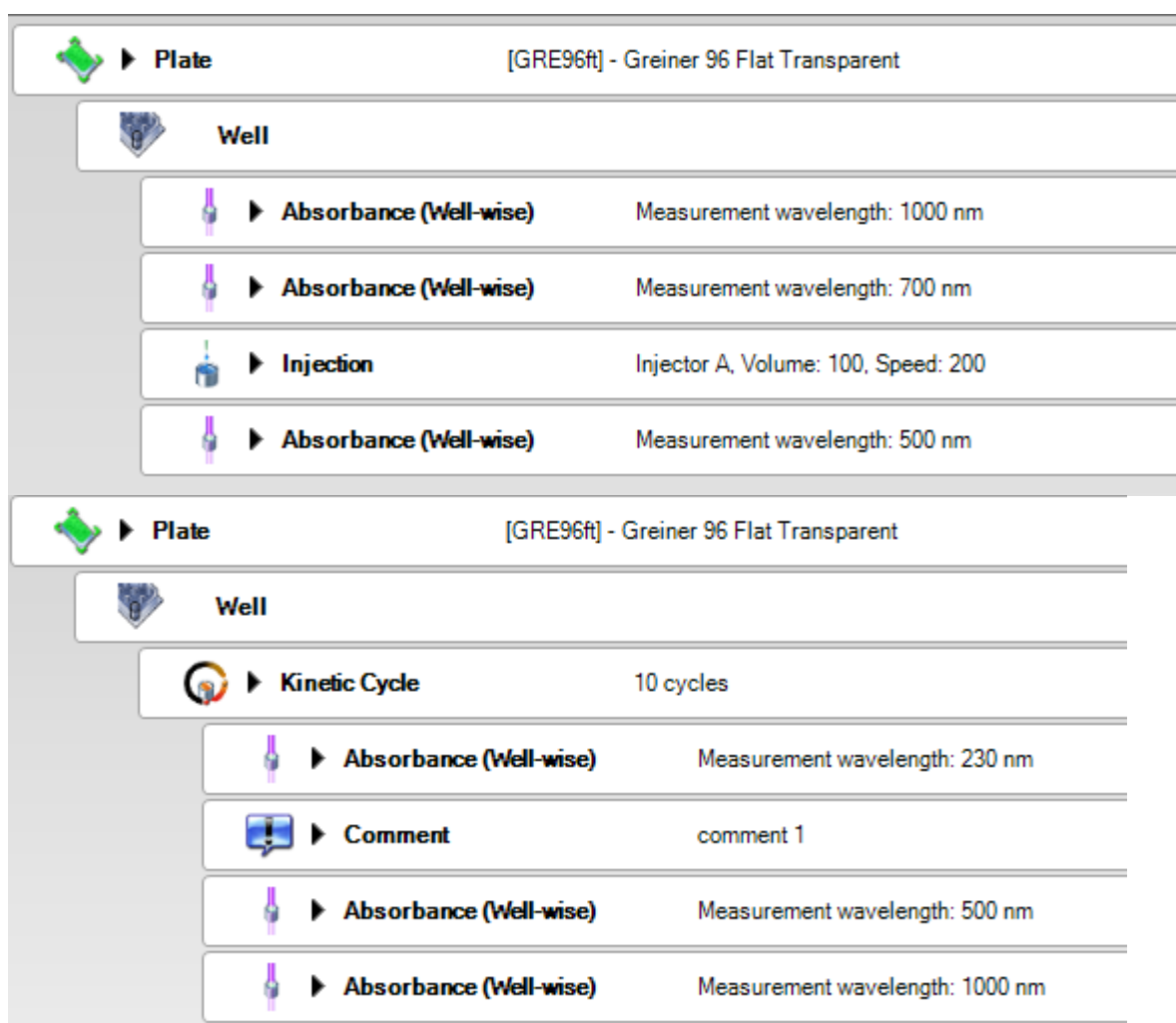
It is not recommended to use the plate out and in command during luminescence kinetic measurements.

## 2.1.2. Infinite M1000 Well-wise Absorbance Measurements Restriction

### Issue:

The use of three or more absorbance stripes within a **well-wise endpoint or kinetic** measurement in combination with an action stripe may lead to incorrect measurement results or abort the measurement.

This behaviour occurs whenever at least two absorbance stripes are inserted above or below the respective action stripe. Please refer to the following example:



The screenshot displays two measurement sequences in the Tecan i-control software interface. Both sequences are for a [GRE96ft] - Greiner 96 Flat Transparent plate.

**Top Sequence:**

- Well**
  - Absorbance (Well-wise)** Measurement wavelength: 1000 nm
  - Absorbance (Well-wise)** Measurement wavelength: 700 nm
  - Injection** Injector A, Volume: 100, Speed: 200
  - Absorbance (Well-wise)** Measurement wavelength: 500 nm

**Bottom Sequence:**

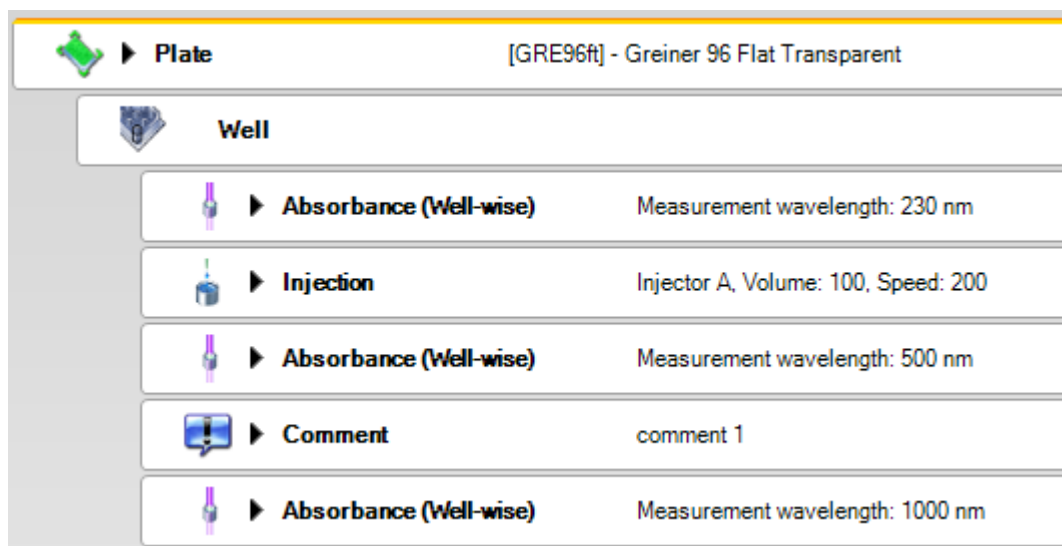
- Well**
  - Kinetic Cycle** 10 cycles
  - Absorbance (Well-wise)** Measurement wavelength: 230 nm
  - Comment** comment 1
  - Absorbance (Well-wise)** Measurement wavelength: 500 nm
  - Absorbance (Well-wise)** Measurement wavelength: 1000 nm

The following actions are affected: Inject, Shake, Temperature, Plate Movement, Comment, User Request, Wait for Temperature, Wait (Timer), Incubate

Measurements with two absorbance stripes are not affected, independently of whether or not they are interrupted by the actions mentioned above. Moreover, the problem does not occur when all absorbance stripes are separated by actions, or when the actions are executed before or after the absorbance measurements (e.g., Comment – Abs – Abs – Abs – Shake).

### Workaround:

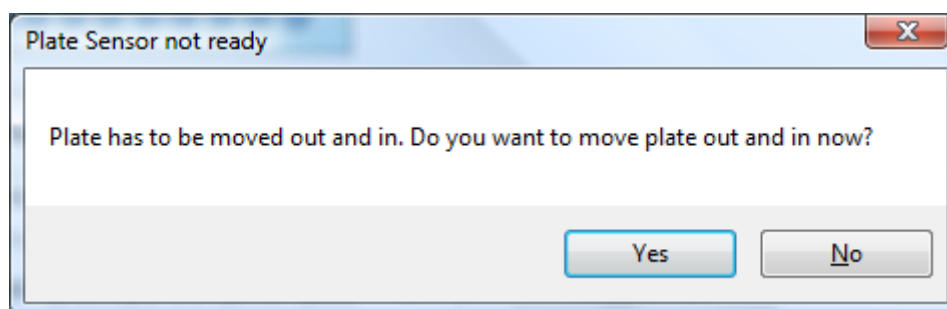
If the application requires a stripe combination similar to the one quoted above (e.g., injection after the first absorbance stripe) it is recommended to separate directly sequenced absorbance stripes by a Comment stripe which will not affect the measurement. See the following example:



### 2.1.3. Infinite F500: Inject or dispense – Plate Sensor not ready

#### Issue:

If the reader is connected via i-control and the plate transport is not moved (out and in) at all and a script with inject or dispense is started the following error occurs:



i-control will inform you that the plate sensor is not ready. This sensor is used to check if a plate is actually in the reader before starting an injection to avoid contamination of the reader. The system has to be reset to resolve the situation.

### Workaround:

Move the plate transport out and in before you start a script that contains inject or dispense. It is not necessary to move the plate before every script since once the plate sensor has been initialized (by moving the transport) the sensor is ready until the next connection.

#### **2.1.4. M1000: Inject or dispense in well-wise kinetics**

**Issue:**

If the volume of the piston is not sufficient for the entire plate the piston is refilled during the process. In detail- before each injection the reader checks if it can inject the defined volume and if too little volume is left in the piston it refills. This can lead to different reading times between the wells.






**Workaround:**

If time-accuracy over all well is not critical for your application, the issue described above does not affect you. If it is important to your application that all wells are measured and injected at the same time interval, it is recommended to calculate the number of wells that can be processed without refilling the piston and perform the measurements using only that number of wells.

## 2.1.5. F500: FI Top kinetics Dropout Error with 1 and 2 flashes per well

### Issue:

A FI Top kinetic measurement with 1 or 2 flashes per well in combination with a plate movement (e.g. Plate Out/User Request/Plate In) results in a *Dropout Error* in Well A1 in the second kinetic cycle. This behavior occurs only with 1 and 2 flashes per well, not with a higher flash numbers.

 <b>Kinetic Cycle</b>	
<b>Cycles</b> <input checked="" type="radio"/> Number of cycles: <input type="text" value="5"/> <input type="radio"/> Duration	<b>Kinetic Interval</b> <input type="checkbox"/> Use kinetic interval
 <b>Move Plate</b>	
<b>Move plate</b> <input type="radio"/> In <input checked="" type="radio"/> Out	
 <b>User Request</b>	
<b>Text:</b> <input type="text" value="Ready?"/>	
 <b>Move Plate</b>	
<b>Move plate</b> <input checked="" type="radio"/> In <input type="radio"/> Out	
 <b>Fluorescence Intensity</b>	
<b>Wavelength</b> Excitation: <input type="text" value="485 (20) nm"/> Emission: <input type="text" value="535 (25) nm"/>	<b>Read</b> Number of flashes: <input type="text" value="1"/> Settle time: <input type="text" value="0"/> ms
<b>Mode</b> <input checked="" type="radio"/> Top <input type="radio"/> Bottom	<b>Gain</b> <input type="radio"/> Manual <input checked="" type="radio"/> Optimal: <input type="text" value="100"/> % RFU <input type="radio"/> Calculated from well <input type="checkbox"/> Use gain regulation
<b>Integration</b> Lag time: <input type="text" value="0"/> $\mu$ s Integration time: <input type="text" value="20"/> $\mu$ s	<b>Z-Position</b> <input type="radio"/> Manual <input checked="" type="radio"/> Calculated from well: <input type="text" value="A1"/> <input type="radio"/> Same as
<b>Mirror</b> Mirror: <input type="text" value="Automatic"/>	<b>Label</b> Name: <input type="text" value="Label1"/>
<b>Multiple Reads per Well</b> <input type="checkbox"/> Multiple reads per well	

### Workaround:

It is recommended to run a FI top kinetic measurement script with at least 3 flashes per well in combination with a plate movement (1 or 2 flashes per well shall be avoided). If no plate movement is used in the script the measurement is performed correctly without any error messages.

#### 2.1.6. F500: FP with plate-wise filter switching and 1 flash

### Issue:

An FP measurement with plate-wise filter switching performed with 1 flash will result in missing or at least incomplete data output into the Excel results file.





**▼ Plate**

Plate definition: [GRE96ft] - Greiner 96 Flat Transparent  
☐ Plate with cover    ☐ Read Barcode


**▼ Part of Plate**

	1	2	3	4	5	6	7	8	9	10	11	12
A												
B												
C												
D												
E												
F												
G												
H												

[Details...](#)


**▼ Fluorescence Polarization**

Wavelength  
Excitation: 485 (25) nm  
Emission: 535 (25) nm

Read  
Number of flashes: 1  
Settle time: 0 ms

Mirror  
Mirror: Automatic

Gain  
☒ Manual: 32  
☐ Optimal  
☐ Calculated from well

Measurement  
Blank range: None [Change...](#)

G-Factor  
☒ Manual: G-Factor: 1,000  
Uncalibrated G-Factor  
☐ Calibrate

Z-Position  
☒ Manual: 20000  $\mu$ m  
☐ Calculated from well  
☐ Same as

Label  
Name: Label1

Measurement  
☒ Plate wise

[► Show Details](#)



**Workaround:**

It is recommended to use at least 3 flashes for plate-wise FP measurements.

**2.1.7. Interruption of measurement during gain optimization****Issue:**

If a measurement is interrupted during the gain optimization, the error message "*Cannot insert data into Excel.*" appears that cannot be closed. The measurement can only be aborted with the Stop button.

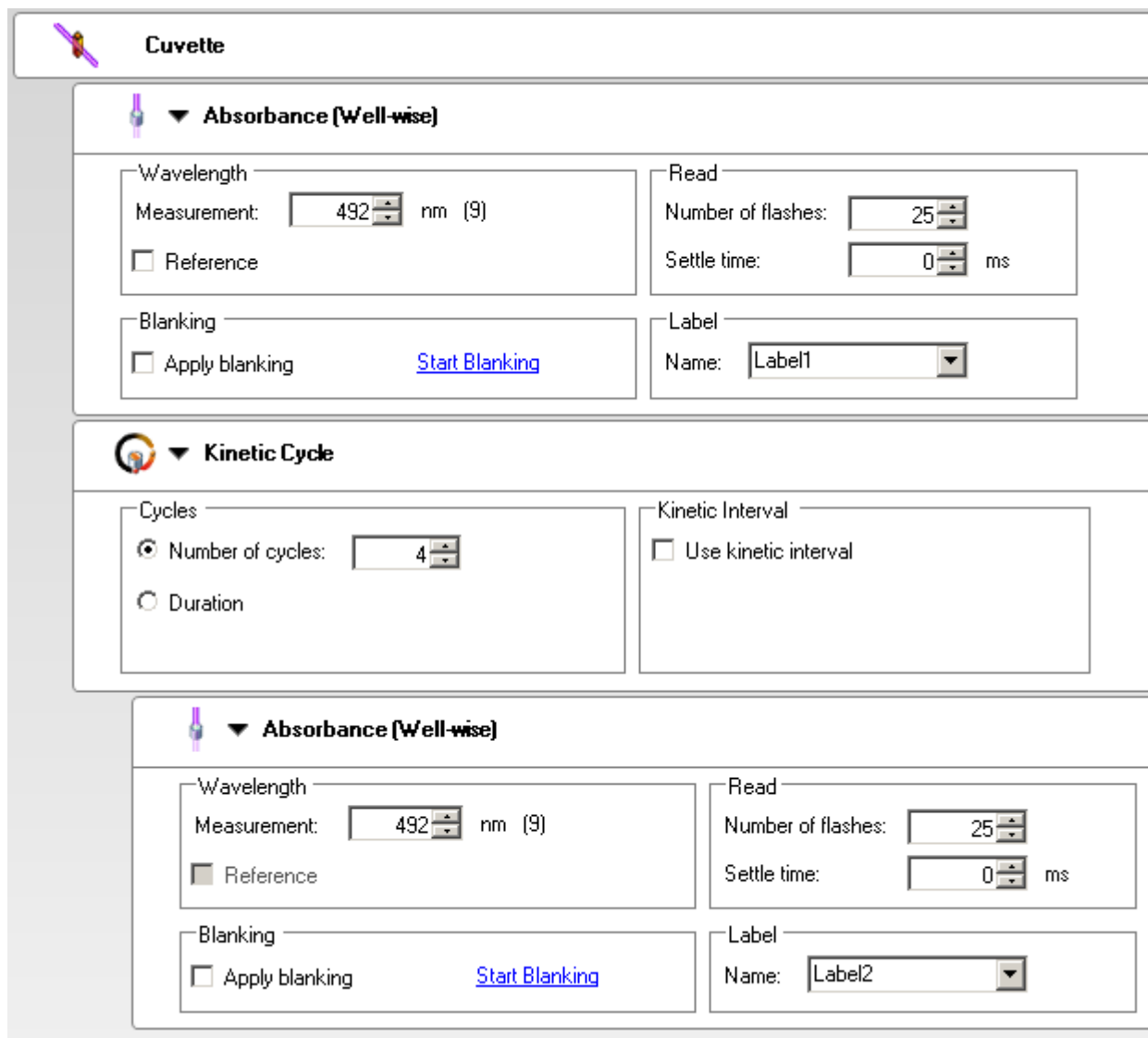
**Workaround:**

It is recommended that the measurement not be aborted during this gain optimization process. No problem occurs if the measurement is aborted after the gain optimization. The interruption is then performed correctly.

### 2.1.8. Measurement exception with absorbance measurement in cuvette

#### Issue:

A cuvette measurement with an endpoint absorbance measurement prior to a kinetic absorbance measurement results in a “Measurement Data Output Exception” error in the second (kinetic) absorbance label.



**Cuvette**

**▼ Absorbance (Well-wise)**

Wavelength  
Measurement: 492 nm (9)

☐ Reference

Read  
Number of flashes: 25  
Settle time: 0 ms

Blanking  
☐ Apply blanking [Start Blanking](#)

Label  
Name: Label1

**▼ Kinetic Cycle**

Cycles  
☒ Number of cycles: 4  
☐ Duration

Kinetic Interval  
☐ Use kinetic interval

**▼ Absorbance (Well-wise)**

Wavelength  
Measurement: 492 nm (9)

☒ Reference

Read  
Number of flashes: 25  
Settle time: 0 ms

Blanking  
☐ Apply blanking [Start Blanking](#)

Label  
Name: Label2

#### Workaround:

If the endpoint measurement (first absorbance label) is removed from the script and only the kinetic measurement is done, the measurement is performed correctly without any error messages.

### 2.1.9. Interruption of well-wise kinetics

#### Issue:

Interruption of well-wise measurements might result in an error message (e.g. “Unhandled measurement inner exception - Thread was being aborted.”). The anomalous behavior is dependent on when the measurement is interrupted.

**Workaround:**

No workaround available. If an error occurs after a measurement has been halted the software and hardware are not affected in any way and can be used as if the error did not occur.

**2.1.10. Incorrect graph in detail window for kinetic FRET measurement**
**Issue:**

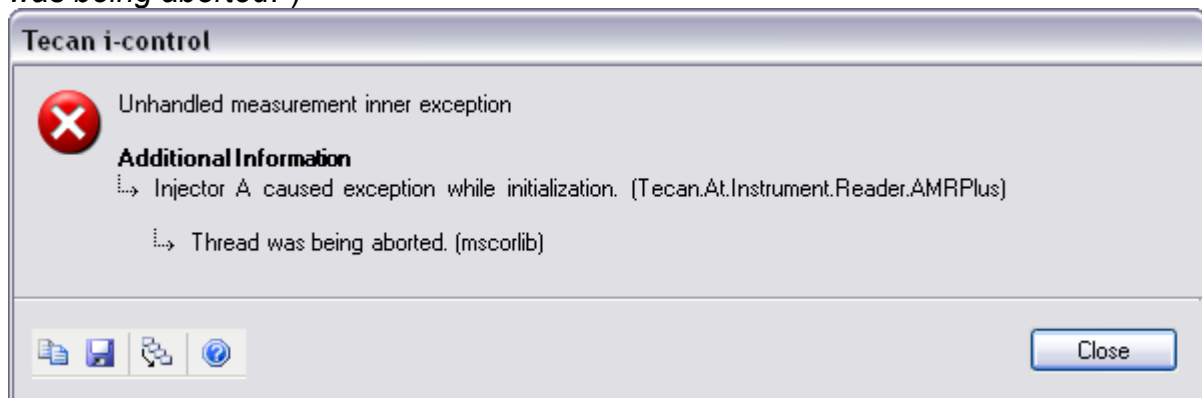
When performing a FRET kinetic measurement the graph in the details window might not scale the x axis for the wells A1 to D1 correctly.

**Workaround:**

The visualization of the measured data should only be used to view the general development of the kinetic. It is recommended that you only use the values exported into the Excel result sheet to draw any conclusions.

**2.1.11. Infinite M200PRO: Measurement abort during injection**
**Issue:**

If a measurement is aborted during an injection, an error message appears (*“Unhandled measurement inner exception...Injector A caused exception while initialization...Thread was being aborted.”*)



If the measurement is aborted during the refill procedure, the following error message appears:


**Workaround:**

If an interruption of an injection /refill is necessary, one of these error messages appear; however after closing the message, i-control can be used as if no error occurred at all.

#### **2.1.12. Wait for injection not functional**

**Issue:**

If “Wait for injection” is used as a kinetic condition, the injection takes 2 sec, wait 10 sec.

Normal wait: 12800 ms interval time

Wait for injection: 12500 ms interval time

The difference should be 2000 ms, not 300 ms.

If “Wait for injection” is used independently of a kinetic condition, the measurement cannot be started, but results in the error “*Value out of range: RefTimeID*”.

**Workaround:**

Unfortunately, there is no workaround currently available.

#### **2.1.13. Results presentation for well-wise multilabel kinetics**

**Issue:**

When performing a well-wise multilabel kinetic measurement, the results block in the Excel sheet is shifted down by one row at every last measurement of each well which leads to a space between the data blocks for each label. For example, the results of the second label that is measured in a 96-well plate would appear 96 rows below the first results block.

**Workaround:**

All measurement results are correct and complete. Only the position of the results is affected.

#### **2.1.14. Combination of Tecan Software**

**Issue:** When using various combinations of Tecan software on one computer and one is uninstalled, it is possible that the PDFX files might be uninstalled as well. i-control might no longer be able to display PDFX files in the plate selection stripe.

**Workaround:**

Re-install i-control, so all PDFX files will be re-installed as well.