



AMPiScreen 測定マニュアル

Charles River社

Celsis Rapid Microbial Detection

- このマニュアルは簡易マニュアルです。各施設で確立されたSOPがある場合はそちらにしたがってください
- マニュアルの内容や製品に関するお問い合わせは下記までお願いいたします

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準備するもの

・試薬・器具

商品コード	商品名
CLSAS1210	AMPiScreen
CLSAS4210	100 test
CLSAS1310	400 test
	800 test
CLS1290142N	Daily Wash & Rinse Kit
CLS1291483	ATP Positive Control Kit
CLS1280052	Priming cuvettes
CLS1280139	Cuvettes

・その他

品名
液体培地
培養用の容器
振盪培養器
ピペッター・ピペットチップ
電子天秤
ガラスビーズ（真菌を検出する場合のみ）



Day 1

- 前培養

- ① 液体培地 99mLにサンプルを1 gまたは1 mL加える
- ② 振盪培養器にセットし、培養する
 - 30~32℃、24時間、250 rpm(旋回振盪)
 - コントロール用として、液体培地のみ(=検体が入っていない)のサンプルも同じ条件で培養する

- 真菌の破碎

- ① 前培養後、培養したサンプルにガラスビーズを加える
- ② 振盪培養器にセットし、破碎処理をおこなう
 - 30分、250 rpm (往復振盪)



Day 2

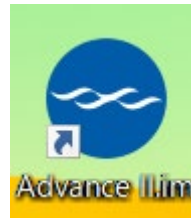
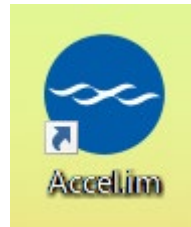
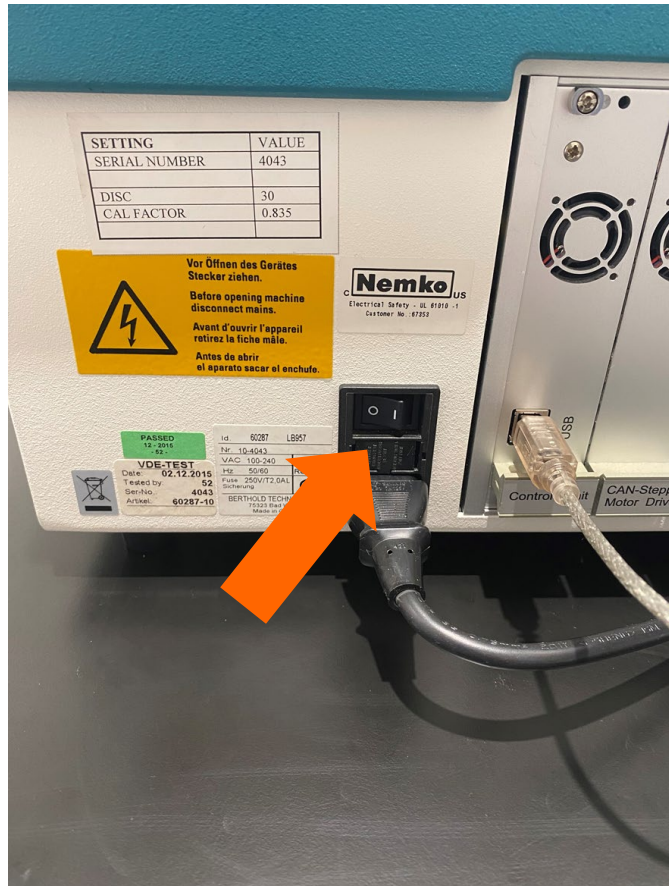
1. AMPiScreen試薬の準備

- ・ 冷蔵庫から試薬を取り出して調製する

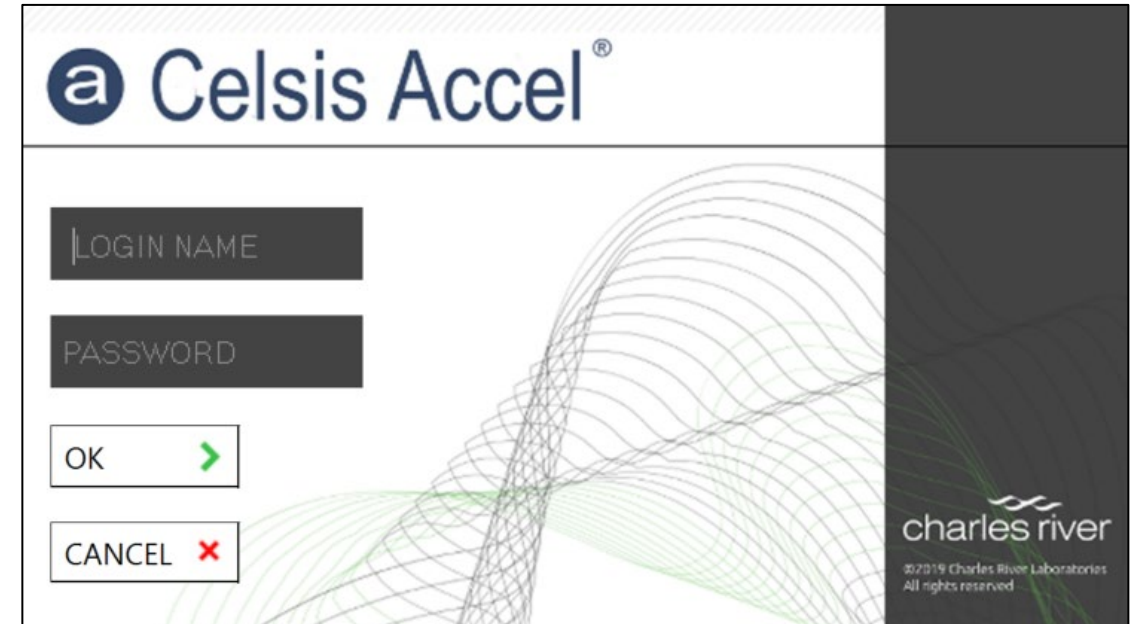
試薬	調製方法
LuminAMP	常温に戻るまで30分程度静置する
LuminEX	常温に戻るまで30分程度静置する
LuminATE	LuminATE Buffer全量をLuminATEのバイアルに加え、おだやかに混合する。 完全に溶解し、常温に戻るまで30分程度静置する
ATP Positive Control	ATP Buffer全量をATP Positive Controlのバイアルに加え、おだやかに混合し、完全に溶解するまで静置する。分注して冷凍し、使用前に都度解凍する ※冷凍したATP Positive Control溶液の有効期限は4週間 ※冷凍したATP Positive Control溶液は解凍後によく混合する ※一度解凍したATP Positive Control溶液の再冷凍は不可

2. 機器とソフトウェアの立ち上げ

① 機器の電源を入れ、アイコンをクリックしてソフトウェアを開く

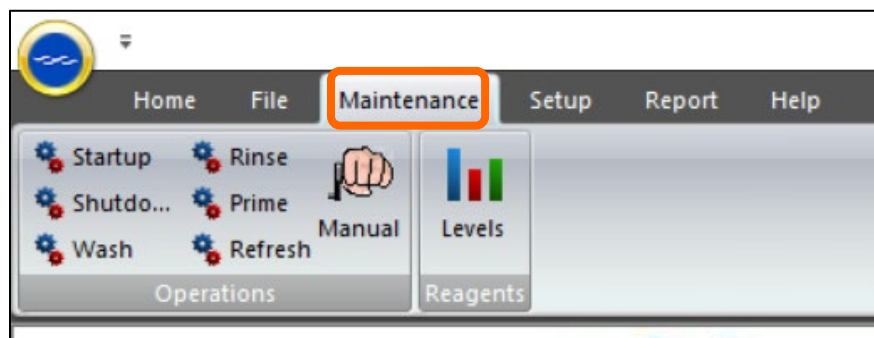


② [LOGIN NAME]と[PASSWORD]を入力してログインする

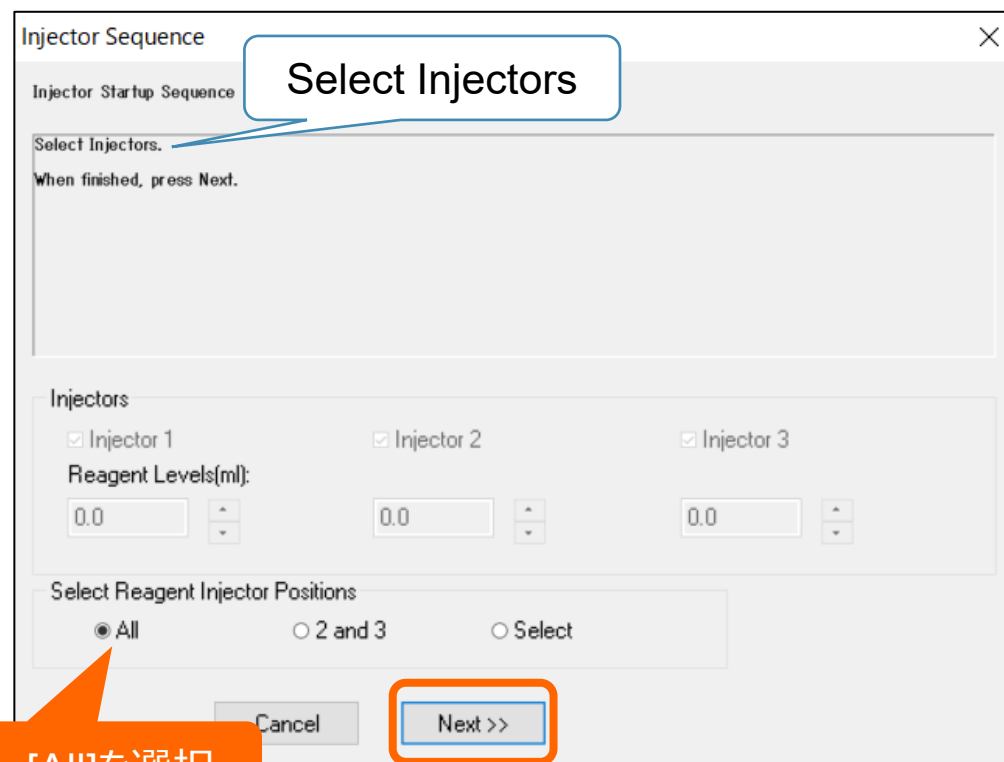


3. StartUp

①メニューバーから[Maintenance]>[Start up]をクリックする



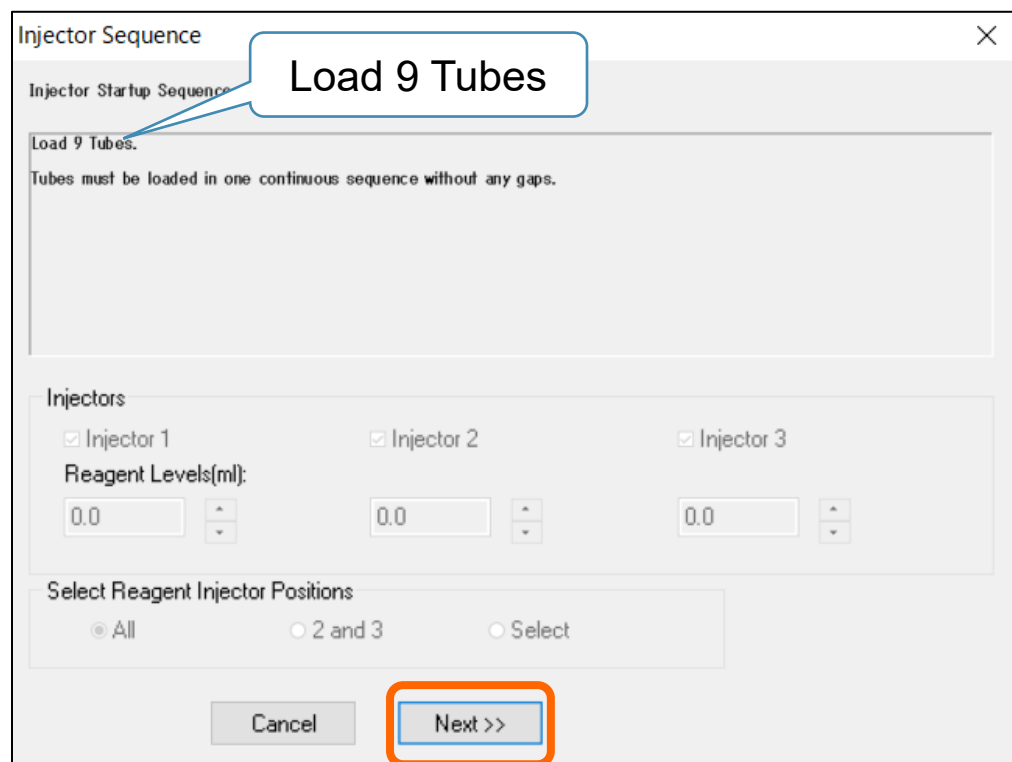
②Reagent Injector Positionsは[All]を選択し、[Next]をクリックする



[All]を選択

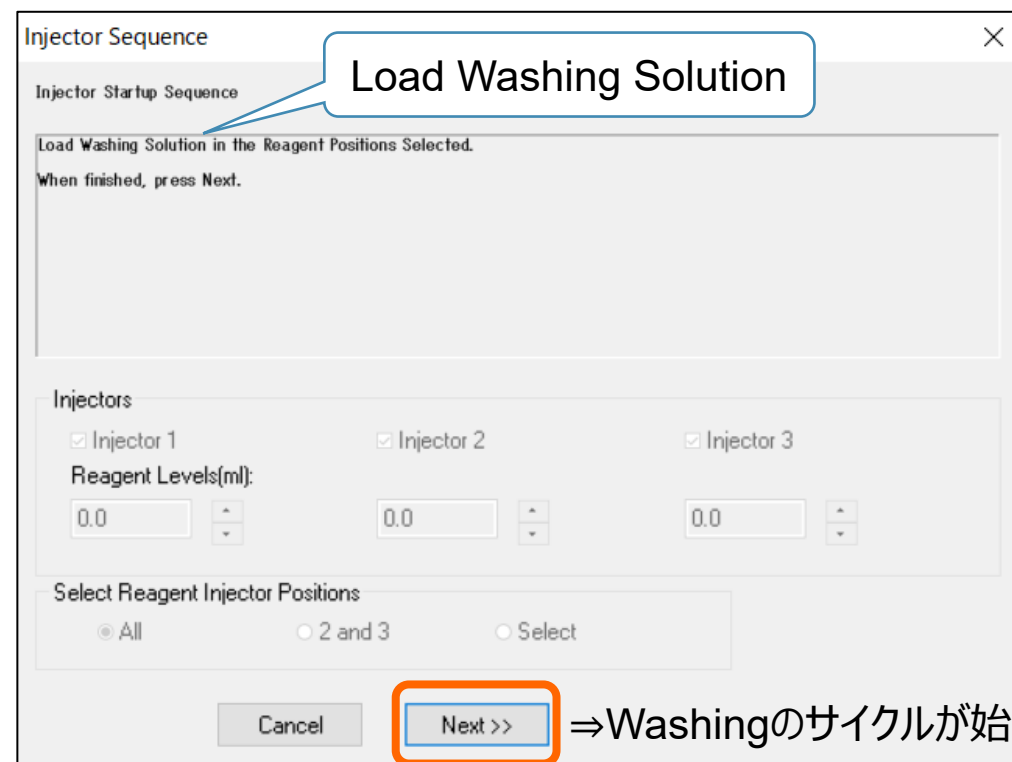
3. StartUp

③9本のプライミングキュベットを間隔を空けずに設置し、[Next]をクリックする



The dialog box is titled "Injector Sequence". It contains a section "Injector Startup Sequence" with the text "Load 9 Tubes." and "Tubes must be loaded in one continuous sequence without any gaps." Below this is a section "Injectors" with three checkboxes for "Injector 1", "Injector 2", and "Injector 3", all of which are checked. Under each checkbox is a "Reagent Levels(ml):" field with a value of "0.0" and a small up/down arrow. At the bottom is a section "Select Reagent Injector Positions" with three radio buttons: "All" (selected), "2 and 3", and "Select". At the very bottom are "Cancel" and "Next >>" buttons. A blue callout bubble points to the "Load 9 Tubes." text, and an orange box highlights the "Next >>" button.

④Washing Solutionをすべてのインジェクターに取り付け、[Next]をクリックする



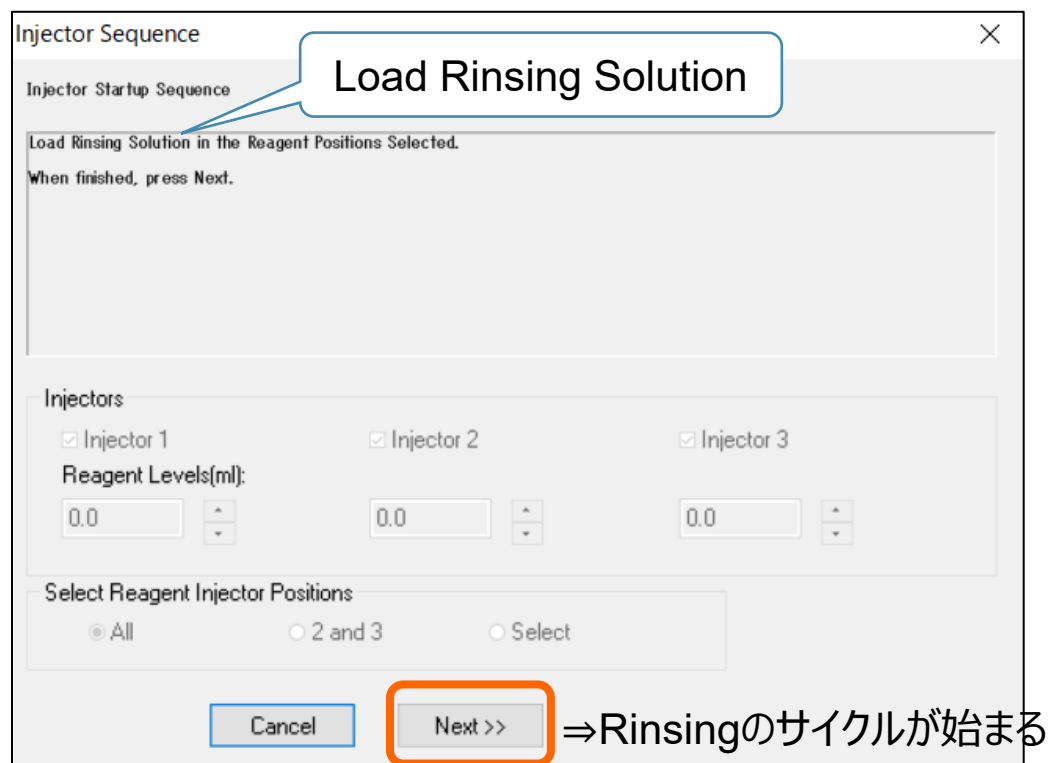
The dialog box is titled "Injector Sequence". It contains a section "Injector Startup Sequence" with the text "Load Washing Solution in the Reagent Positions Selected." and "When finished, press Next." Below this is a section "Injectors" with three checkboxes for "Injector 1", "Injector 2", and "Injector 3", all of which are checked. Under each checkbox is a "Reagent Levels(ml):" field with a value of "0.0" and a small up/down arrow. At the bottom is a section "Select Reagent Injector Positions" with three radio buttons: "All" (selected), "2 and 3", and "Select". At the very bottom are "Cancel" and "Next >>" buttons. A blue callout bubble points to the "Load Washing Solution in the Reagent Positions Selected." text, and an orange box highlights the "Next >>" button.

⇒Washingのサイクルが始まる

Celsis Accelの場合は必ず1番のポジションから並べる

3. StartUp

⑤Washingの終了後、Rinsing Solutionに付け替え、[Next]をクリックする

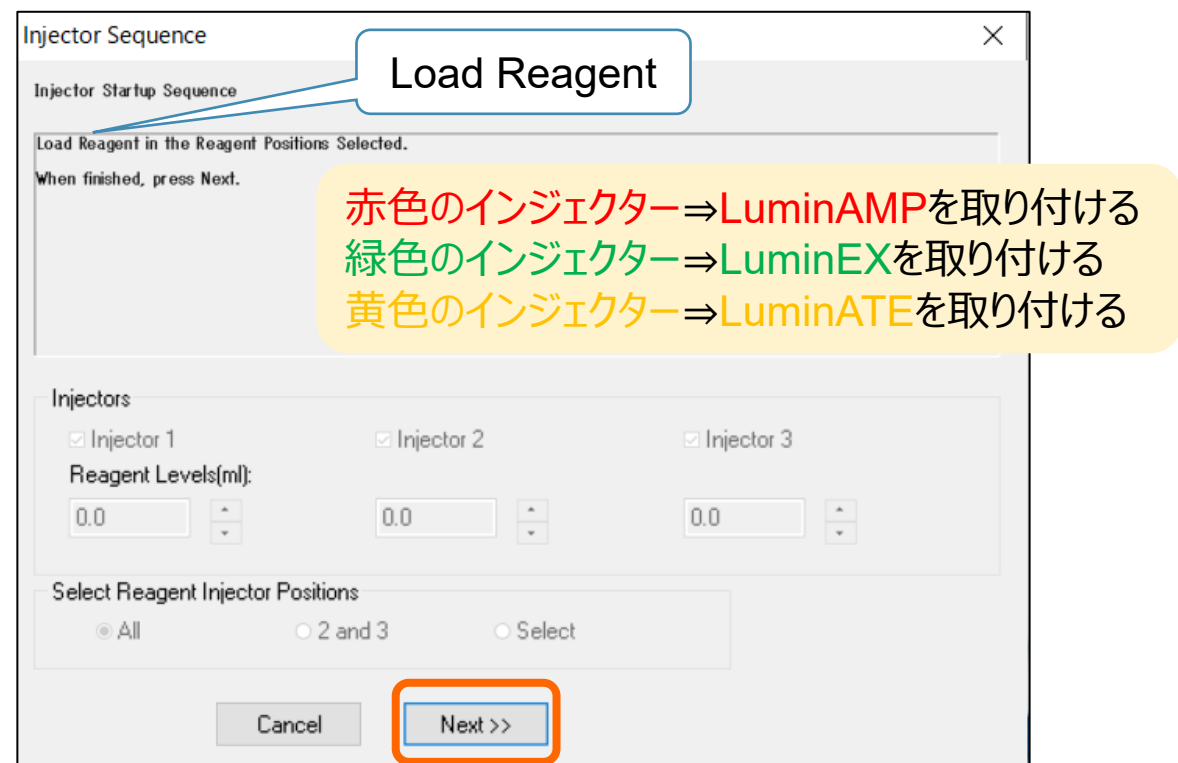


The dialog box is titled "Injector Sequence" and contains the following elements:

- Injector Startup Sequence**: A section with the text "Load Rinsing Solution in the Reagent Positions Selected." and "When finished, press Next." A callout bubble points to this section with the text "Load Rinsing Solution".
- Injectors**: A section with three checkboxes labeled "Injector 1", "Injector 2", and "Injector 3", all of which are checked. Below each checkbox is a "Reagent Levels(ml):" field with a value of "0.0" and a spin button.
- Select Reagent Injector Positions**: A section with three radio buttons: "All" (selected), "2 and 3", and "Select".
- Buttons**: "Cancel" and "Next >>" buttons at the bottom. The "Next >>" button is highlighted with an orange box.

⇒Rinsingのサイクルが始まる

⑥Rinsingの終了後、AMPiScreen試薬に付け替え、[Next]をクリックする



The dialog box is titled "Injector Sequence" and contains the following elements:

- Injector Startup Sequence**: A section with the text "Load Reagent in the Reagent Positions Selected." and "When finished, press Next." A callout bubble points to this section with the text "Load Reagent".
- Injectors**: A section with three checkboxes labeled "Injector 1", "Injector 2", and "Injector 3", all of which are checked. Below each checkbox is a "Reagent Levels(ml):" field with a value of "0.0" and a spin button.
- Select Reagent Injector Positions**: A section with three radio buttons: "All" (selected), "2 and 3", and "Select".
- Buttons**: "Cancel" and "Next >>" buttons at the bottom. The "Next >>" button is highlighted with an orange box.

赤色のインジェクター⇒LuminAMPを取り付ける
緑色のインジェクター⇒LuminEXを取り付ける
黄色のインジェクター⇒LuminATEを取り付ける

3. StartUp

⑦試薬の残量を入力し、[Next]をクリックする

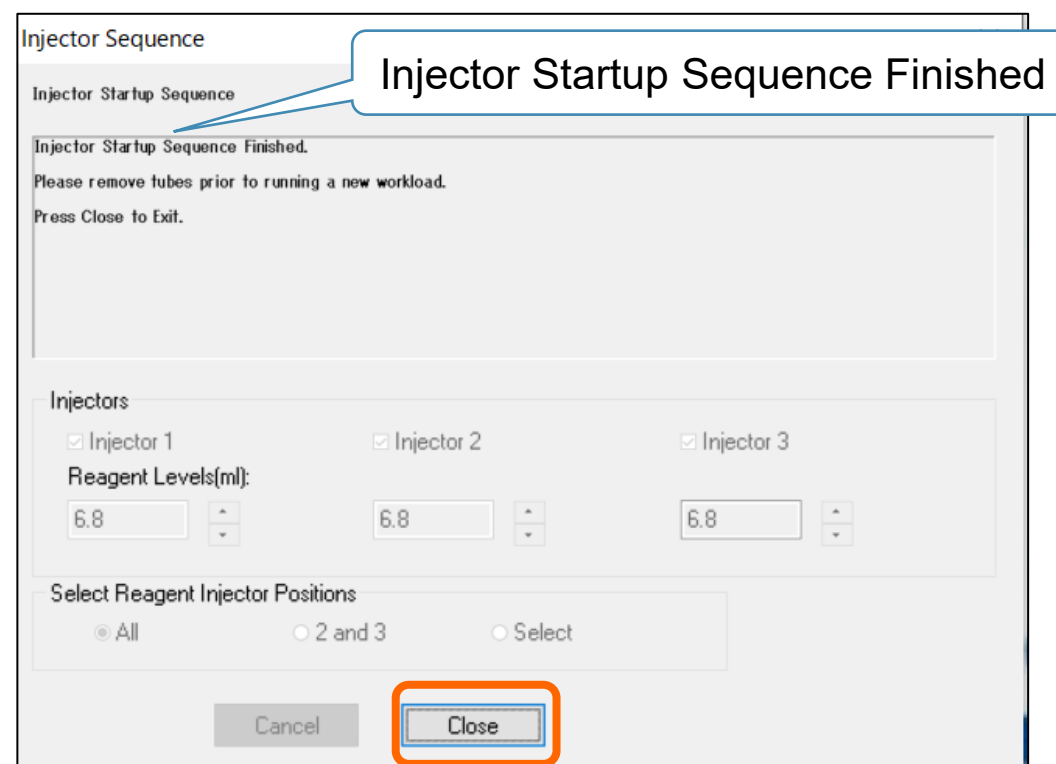


The dialog box is titled "Injector Sequence" and contains the following elements:

- Injector Startup Sequence**: A section with the text "Enter Reagent Volume Actually Loaded." and "When finished, press Next". A callout bubble points to this section with the text "Enter Reagent Volume".
- Injectors**: A section with three checkboxes for "Injector 1", "Injector 2", and "Injector 3", all of which are checked.
- Reagent Levels(ml)**: Three input fields for each injector. The values are 8.6, 8.6, and 8.6. A callout bubble points to these fields with the following text:
 - 前回の使用後の残量が自動で入力される
 - 新しいバイアルを開封したときや試薬を継ぎ足したときは残量を手入力する
 - 未開封時の液量はバイアルに記載
- Select Reagent Injector Positions**: A section with three radio buttons: "All" (selected), "2 and 3", and "Select".
- Buttons**: "Cancel" and "Next >>" buttons. The "Next >>" button is highlighted with an orange box.

⇒Primingのサイクルが始まる

⑧Primingの終了後、[Close]をクリックし、プライミングキュベットを取り出して廃棄する



The dialog box is titled "Injector Sequence" and contains the following elements:

- Injector Startup Sequence**: A section with the text "Injector Startup Sequence Finished." and "Please remove tubes prior to running a new workload. Press Close to Exit." A callout bubble points to this section with the text "Injector Startup Sequence Finished".
- Injectors**: A section with three checkboxes for "Injector 1", "Injector 2", and "Injector 3", all of which are checked.
- Reagent Levels(ml)**: Three input fields for each injector. The values are 6.8, 6.8, and 6.8.
- Select Reagent Injector Positions**: A section with three radio buttons: "All" (selected), "2 and 3", and "Select".
- Buttons**: "Cancel" and "Close" buttons. The "Close" button is highlighted with an orange box.

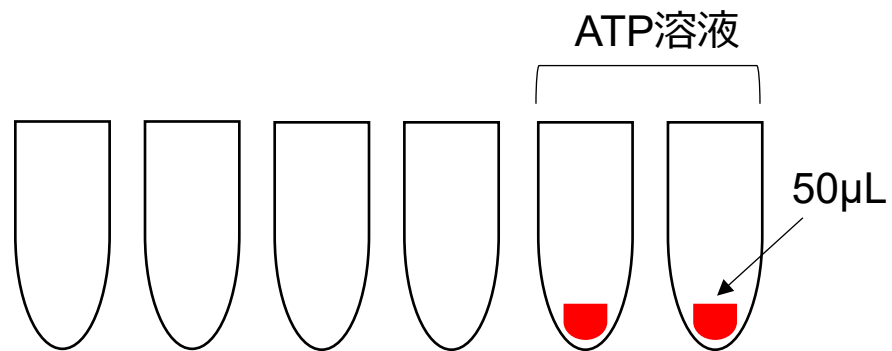
4. Daily Control

- 測定前に必ず実施し、すべての項目が規格値を満たすことを確認する

項目	内容	規格値
Instrument Blank	- 空のキュベットのRLU値を測定する試験 - 非特異的な光の影響がないかどうかを確認する	< 100 RLU
Reagent Blank	- AMPiScreen試薬のみが入っているキュベットのRLU値を測定する試験 - 試薬がコンタミしていないかどうかを確認する	< 1000 RLU
ATP Positive Control	- AMPiScreen試薬とATP Positive Control溶液が入ったキュベットのRLU値を測定する試験 - ATPを検出できるかどうかを確認する	> 50000 RLU

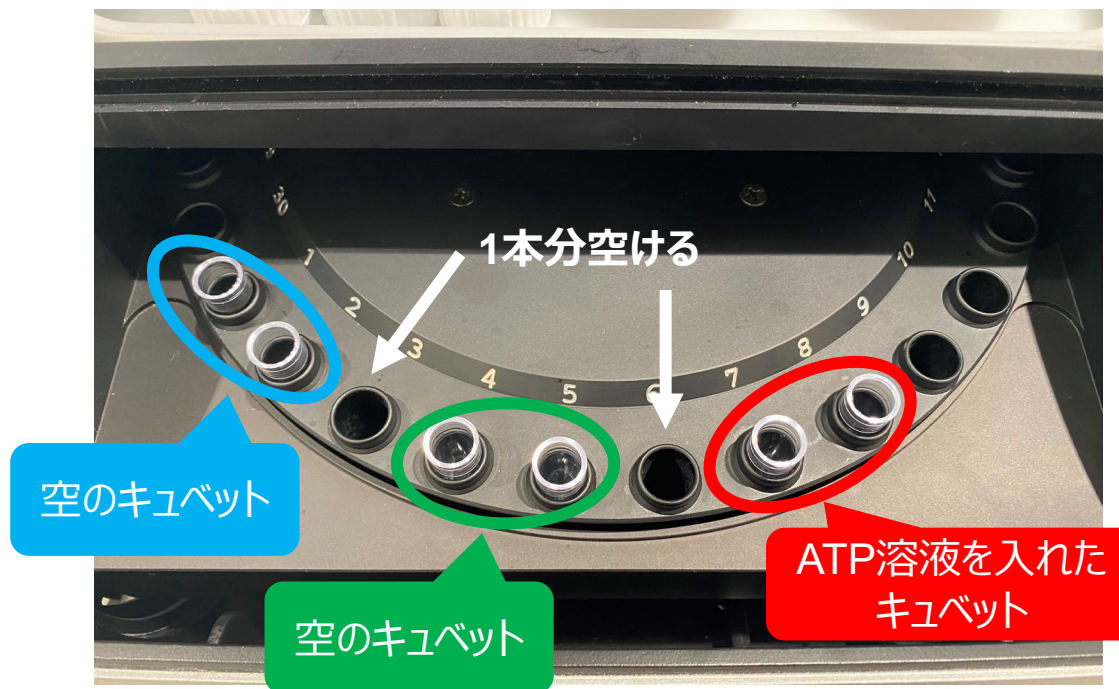
4. Daily Control

① キュベットを6本用意し、2本にATP Positive Control溶液を50 μ Lずつ加える



- キュベットの底に確実に添加する
- 壁に溶液が付かないように注意する

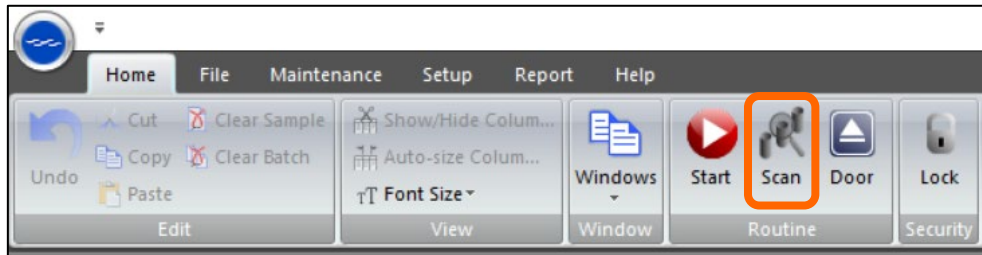
② 機器にキュベットを設置する



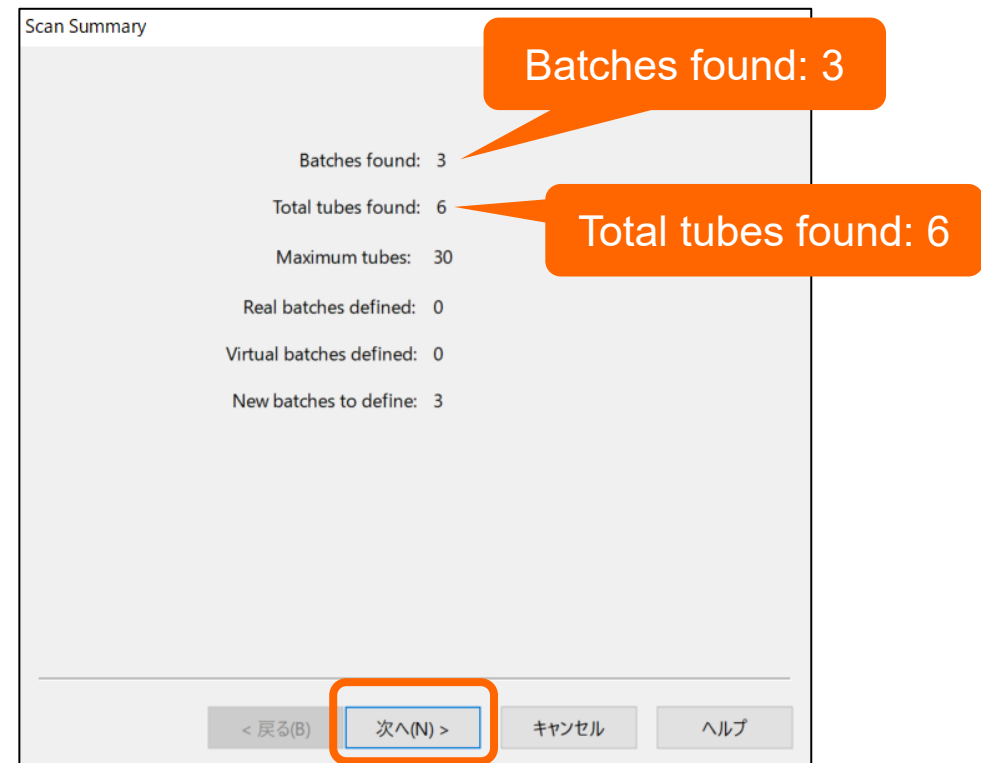
連続して並べたキュベットは1つのBatchとみなされる
⇒Daily Controlは3つのBatchで試験をおこなう

4. Daily Control

③メニューバーから[Home]>[Scan]をクリックする

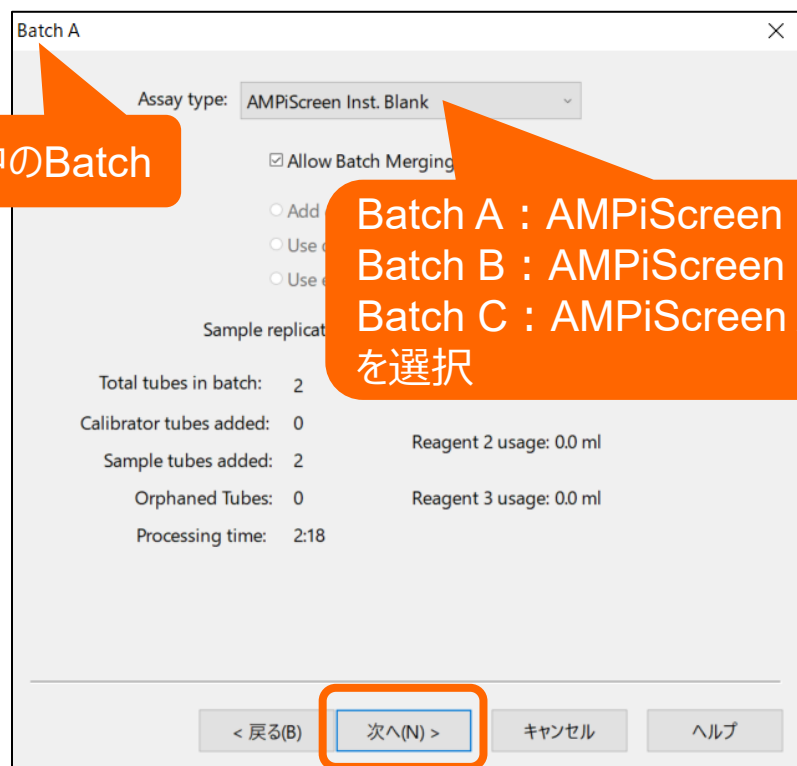


④バッチ数とキューベット数が表示されるので誤りがないか確認し、[次へ]をクリックする



4. Daily Control

⑤各BatchにAssay typeを割り当てる。
[次へ]をクリックする



Batch A

Assay type: AMPiScreen Inst. Blank

☒ Allow Batch Merging

☐ Add
☐ Use
☐ Use

Sample replicat

Total tubes in batch: 2
Calibrator tubes added: 0
Sample tubes added: 2
Orphaned Tubes: 0
Processing time: 2:18

Reagent 2 usage: 0.0 ml
Reagent 3 usage: 0.0 ml

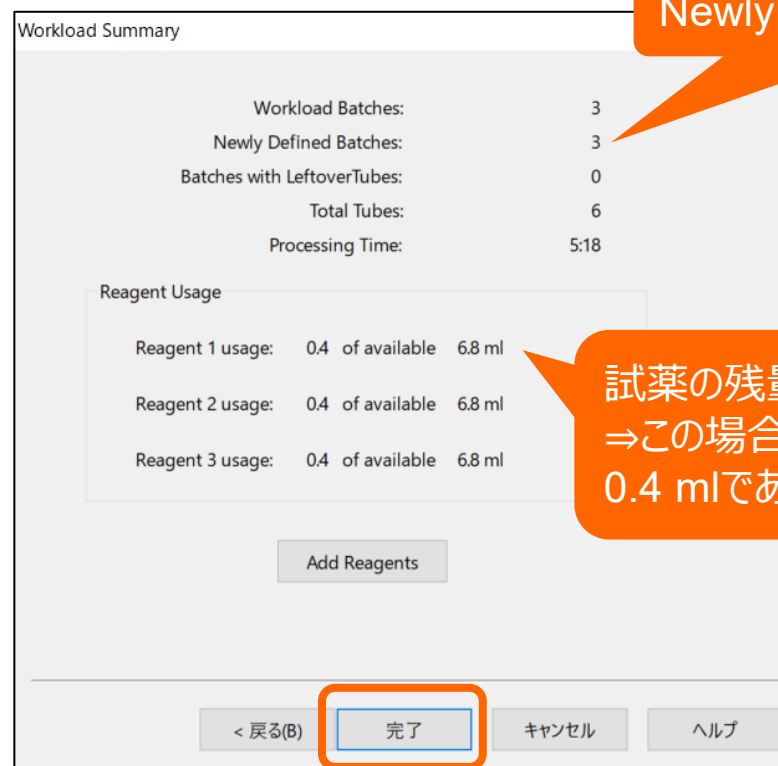
< 戻る(B) **次へ(N) >** キャンセル ヘルプ

選択中のBatch

Batch A : AMPiScreen Inst. Blank
Batch B : AMPiScreen Reag. Blank
Batch C : AMPiScreen ATP Pos. Cont.
を選択

次のBatchの画面に移動

⑥表示された情報を確認し、[完了]をクリックする



Workload Summary

Workload Batches: 3
Newly Defined Batches: 3
Batches with Leftover Tubes: 0
Total Tubes: 6
Processing Time: 5:18

Reagent Usage

Reagent 1 usage:	0.4 of available	6.8 ml
Reagent 2 usage:	0.4 of available	6.8 ml
Reagent 3 usage:	0.4 of available	6.8 ml

Add Reagents

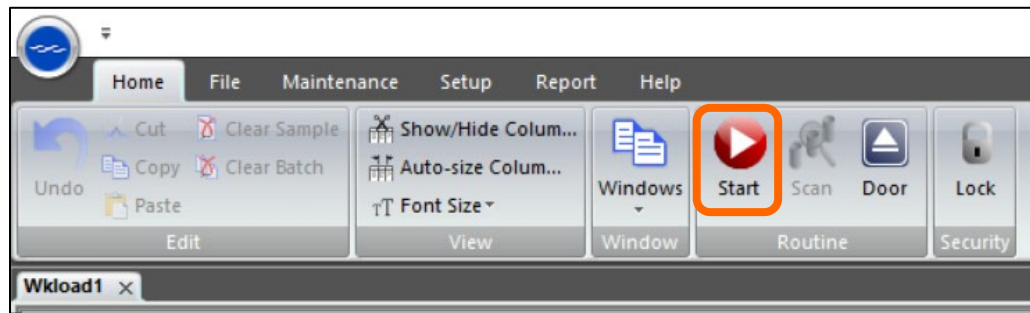
< 戻る(B) **完了** キャンセル ヘルプ

Newly Defined Batches: 3

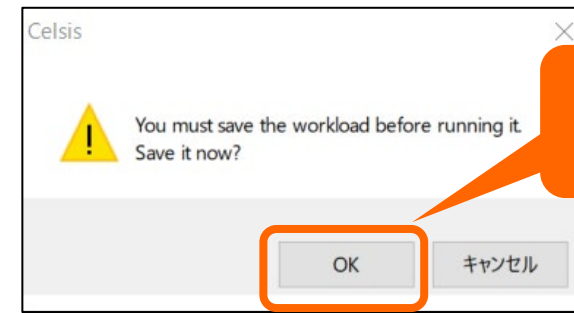
試薬の残量と使用量
⇒この場合、残量6.8 ml・使用量
0.4 mlであることを示している

4. Daily Control

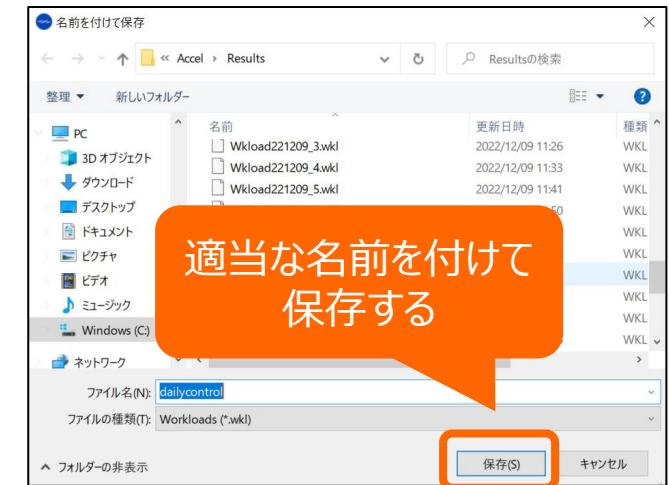
⑦メニューバーから[Home]>[Start]をクリックする



⑧workloadに名前を付けて保存する



“測定を始める前に保存が必要です”と表示されるので[OK]を選択する



適当な名前を付けて保存する

⇒保存すると測定が開始する

4. Daily Control

- 結果の確認

Batchの切替

RLU : RLU1とRLU2の平均値
RLU1 : 1本目のキューベットの測定値
RLU2 : 2本目のキューベットの測定値

Batch A Batch B Batch C

Assay: AMPiScreen Inst. Blank Batch Status: Done
☐ Allow Batch Merging

Sample	Chain Pos	Sample ID	Sample Type	Repls	Status	Result	Notification	RLU	RLU1	RLU2	CV Pct	Bkgnd	Read Date	Read Time	Location	Product	Lot
1	1		Normal	2	Done	Negative		30	30	29	2	4	2024/07/03	10:29:02			

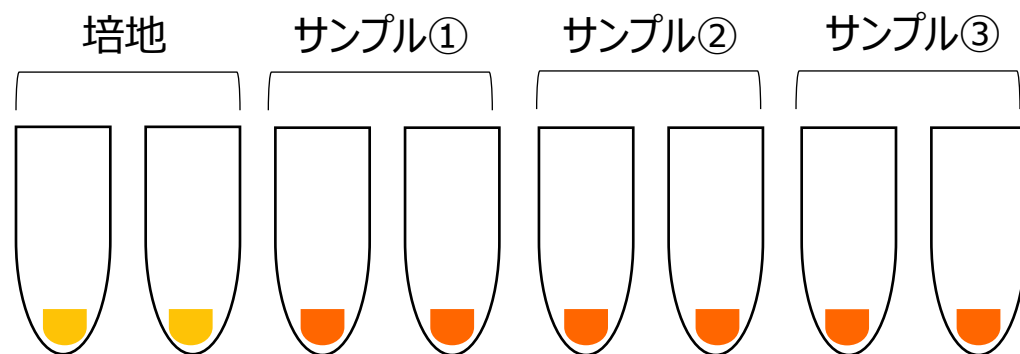
Batch A、B、Cのすべてが規格を満たしていることを確認する

Batch A (AMPiScreen Inst. Blank)	< 100 RLU
Batch B (AMPiScreen Reag. Blank)	< 1000 RLU
Batch C (AMPiScreen ATP Pos. Cont.)	> 50000 RLU

Reagent Levels 1 00.0 ml 2 00.0 ml 3 00.0 ml Time 11:59

5. Assay

①コントロール用の培地と培養したサンプルを、2本のキュベットに50 μ Lずつ加える



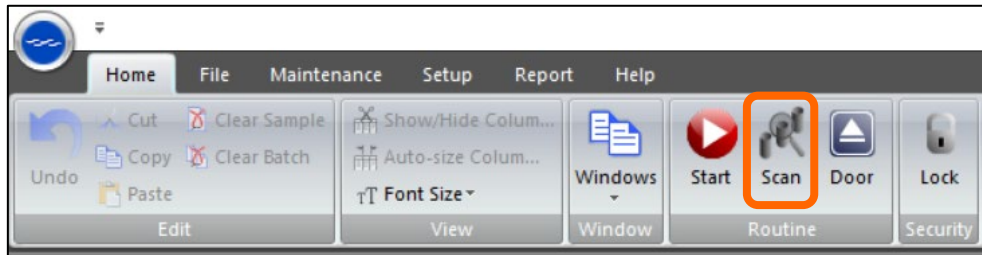
- キュベットの底に確実に添加する
- 壁に溶液が付かないように注意する

②機器にキュベットを設置する

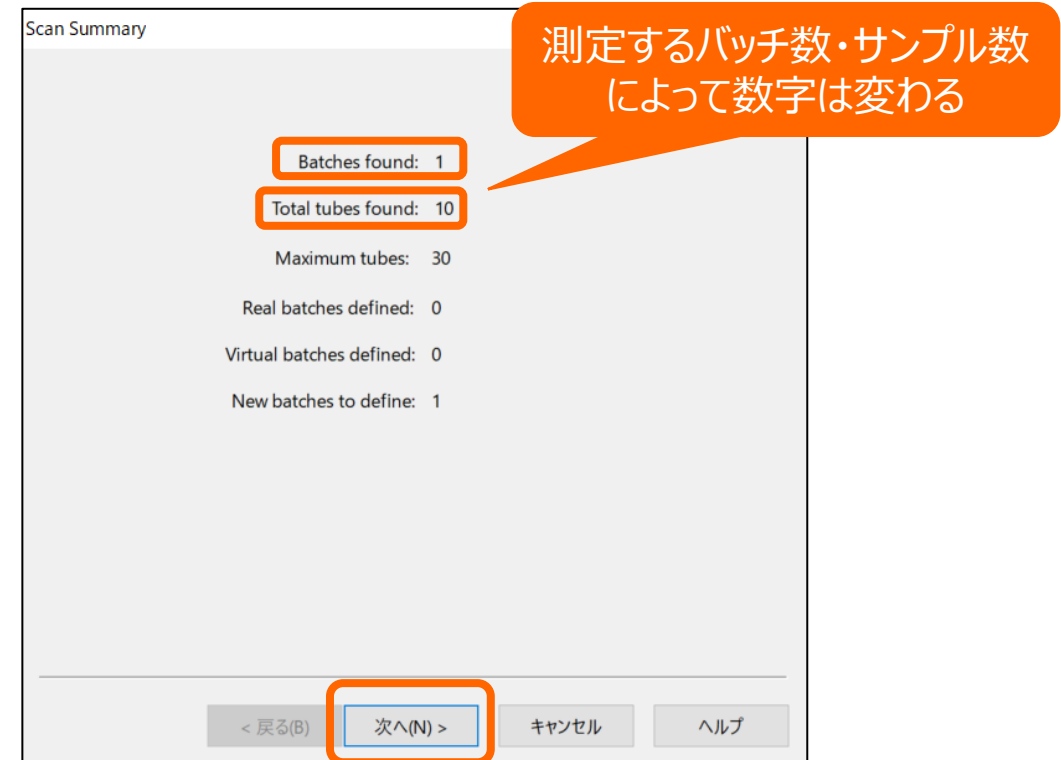


5. Assay

③メニューバーから[Home]>[Scan]をクリックする

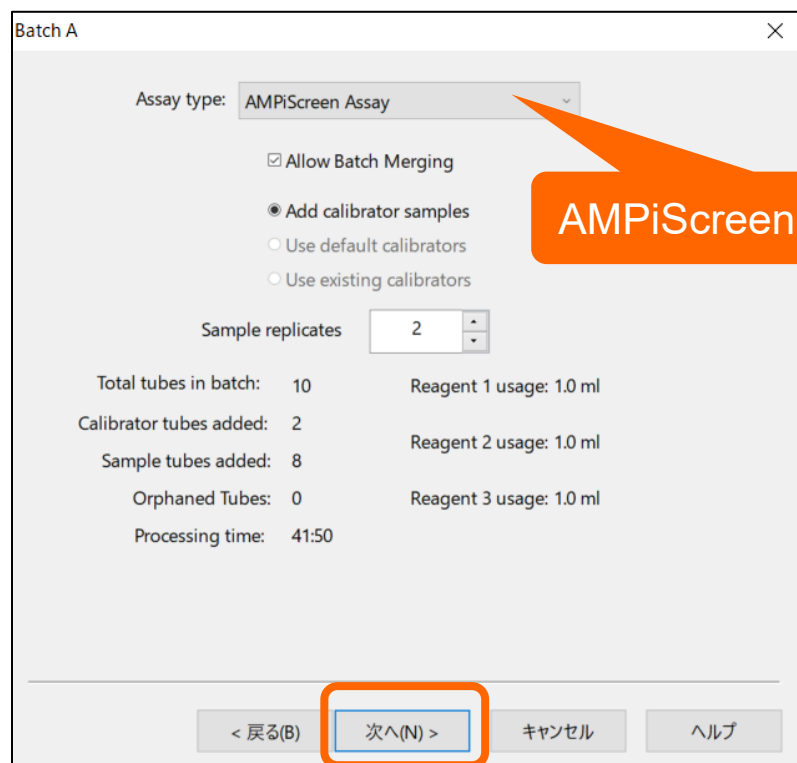


④バッチ数とキューベット数が表示されるので誤りがないか確認し、[次へ]をクリックする



5. Assay

⑤ BatchにAssay Typeを割り当てる。[次へ]をクリックする



Batch A

Assay type: AMPiScreen Assay

☒ Allow Batch Merging

☒ Add calibrator samples

☐ Use default calibrators

☐ Use existing calibrators

Sample replicates: 2

Total tubes in batch: 10 Reagent 1 usage: 1.0 ml

Calibrator tubes added: 2 Reagent 2 usage: 1.0 ml

Sample tubes added: 8 Reagent 3 usage: 1.0 ml

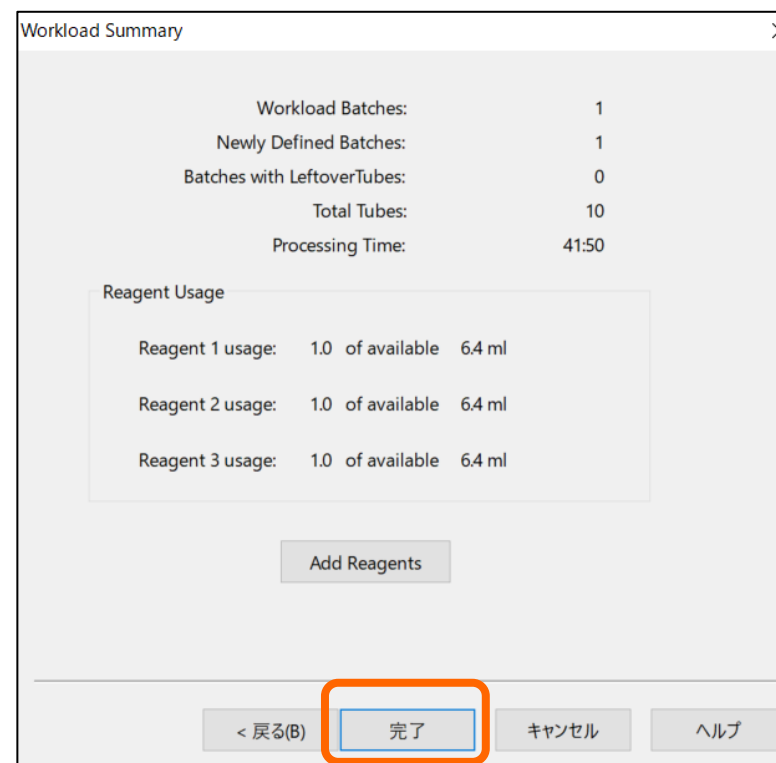
Orphaned Tubes: 0

Processing time: 41:50

< 戻る(B) **次へ(N) >** キャンセル ヘルプ

AMPiScreen Assayを選択

⑥ 表示された情報を確認し、[完了]をクリックする



Workload Summary

Workload Batches: 1

Newly Defined Batches: 1

Batches with Leftover Tubes: 0

Total Tubes: 10

Processing Time: 41:50

Reagent Usage

Reagent 1 usage: 1.0 of available 6.4 ml

Reagent 2 usage: 1.0 of available 6.4 ml

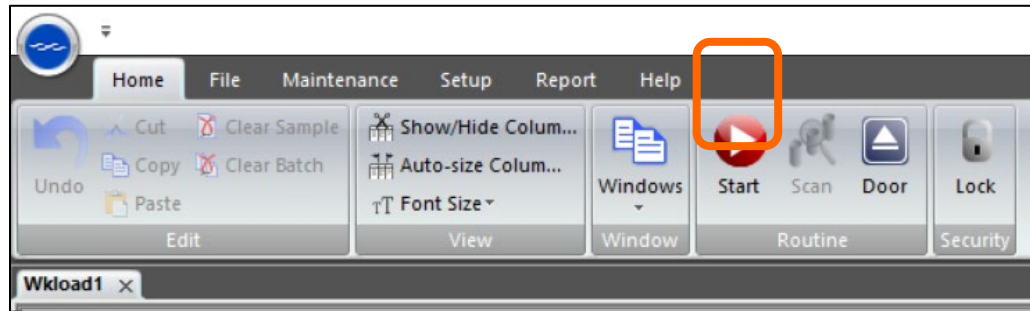
Reagent 3 usage: 1.0 of available 6.4 ml

Add Reagents

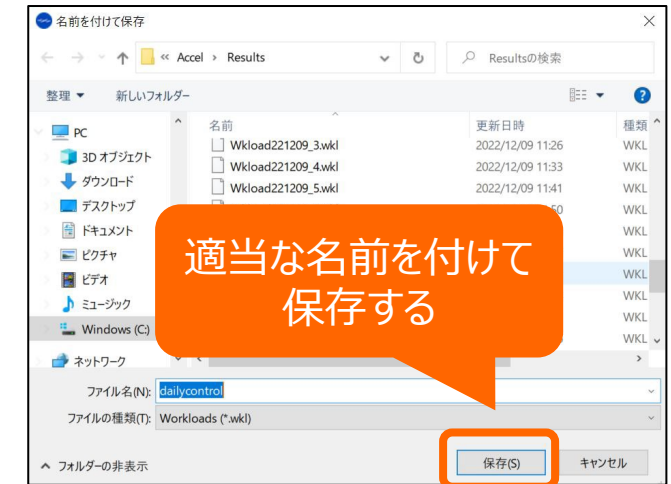
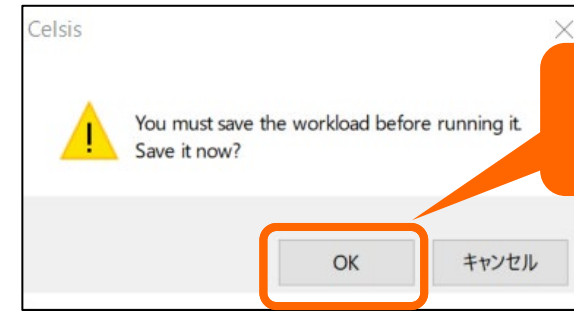
< 戻る(B) **完了** キャンセル ヘルプ

5. Assay

⑦メニューバーから[Home]>[Start]をクリックする



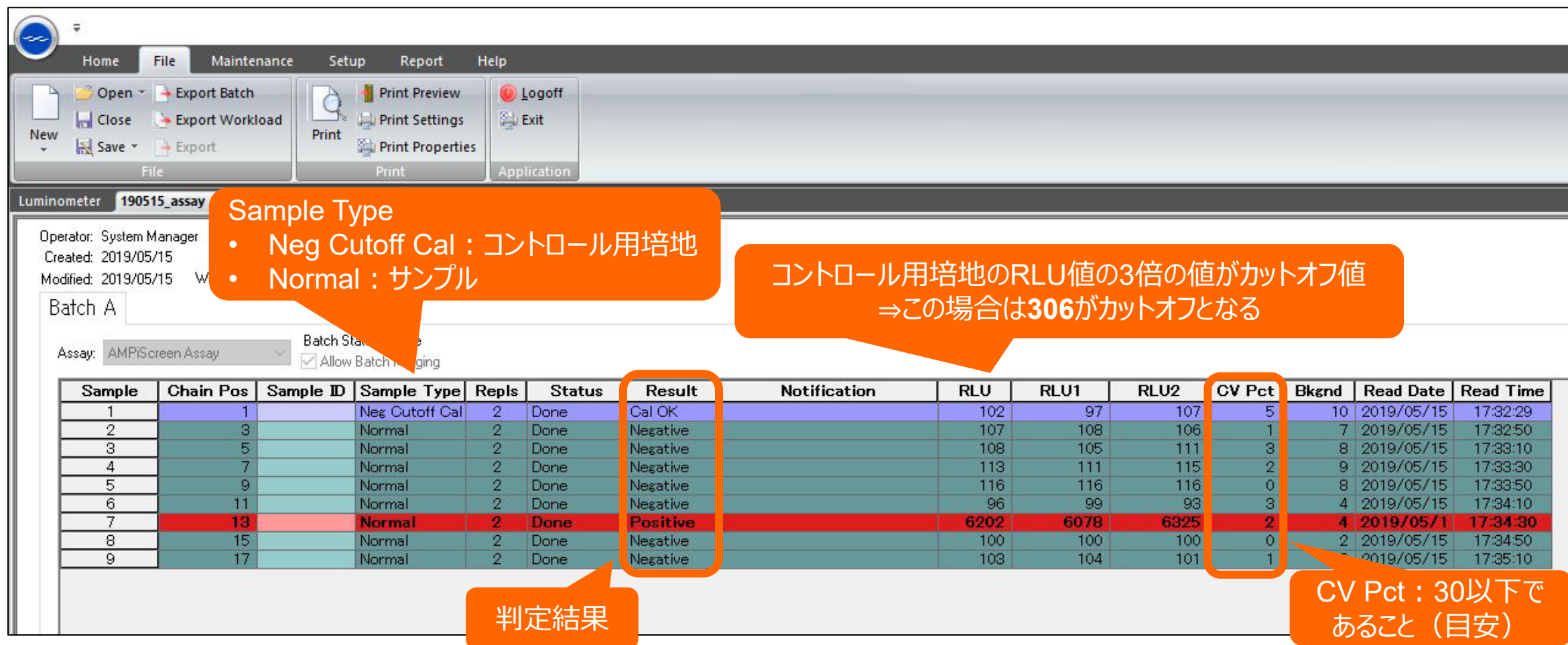
⑧workloadに名前を付けて保存する



⇒保存すると測定が開始する

5. Assay

- 結果の確認
 - 陽性の場合、[Result]の欄にPositiveと表示される



Sample Type

- Neg Cutoff Cal : コントロール用培地
- Normal : サンプル

コントロール用培地のRLU値の3倍の値がカットオフ値
⇒この場合は**306**がカットオフとなる

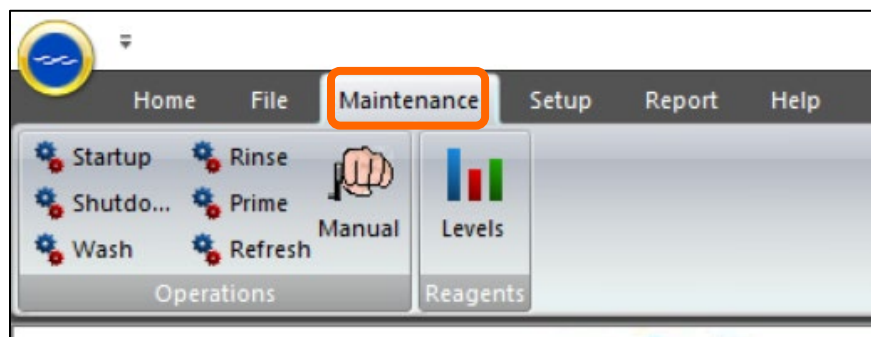
CV Pct : 30以下であること (目安)

判定結果

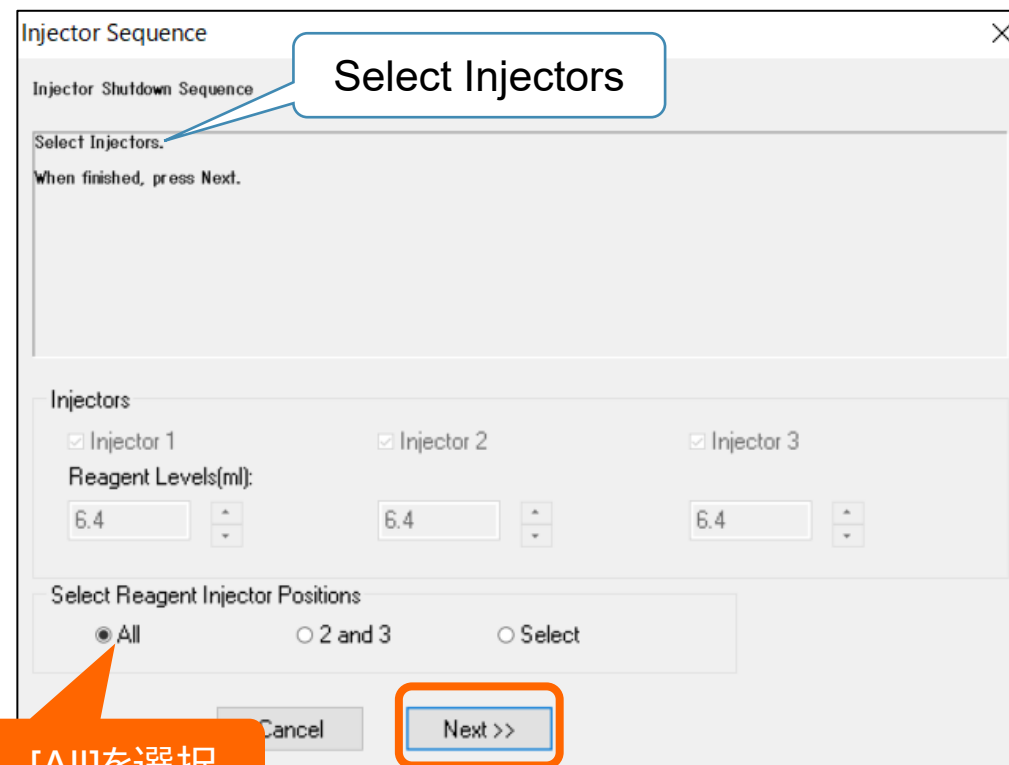
Sample	Chain Pos	Sample ID	Sample Type	Repls	Status	Result	Notification	RLU	RLU1	RLU2	CV Pct	Bkgnd	Read Date	Read Time
1	1		Neg Cutoff Cal	2	Done	Cal OK		102	97	107	5	10	2019/05/15	17:32:29
2	3		Normal	2	Done	Negative		107	108	106	1	7	2019/05/15	17:32:50
3	5		Normal	2	Done	Negative		108	105	111	3	8	2019/05/15	17:33:10
4	7		Normal	2	Done	Negative		113	111	115	2	9	2019/05/15	17:33:30
5	9		Normal	2	Done	Negative		116	116	116	0	8	2019/05/15	17:33:50
6	11		Normal	2	Done	Negative		96	99	93	3	4	2019/05/15	17:34:10
7	13		Normal	2	Done	Positive		6202	6078	6325	2	4	2019/05/15	17:34:30
8	15		Normal	2	Done	Negative		100	100	100	0	2	2019/05/15	17:34:50
9	17		Normal	2	Done	Negative		103	104	101	1	2	2019/05/15	17:35:10

6. Shutdown

①メニューバーから[Maintenance]>[Shutdown]をクリックする



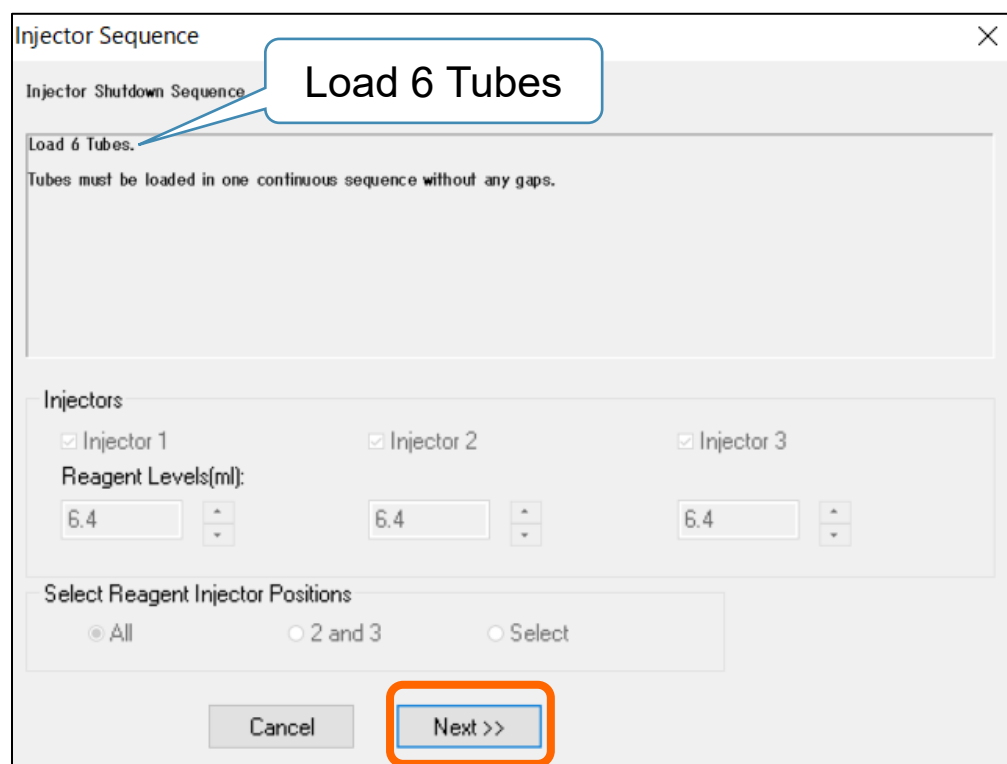
②Reagent Injector Positionsは[All]を選択し、[Next]をクリックする



[All]を選択

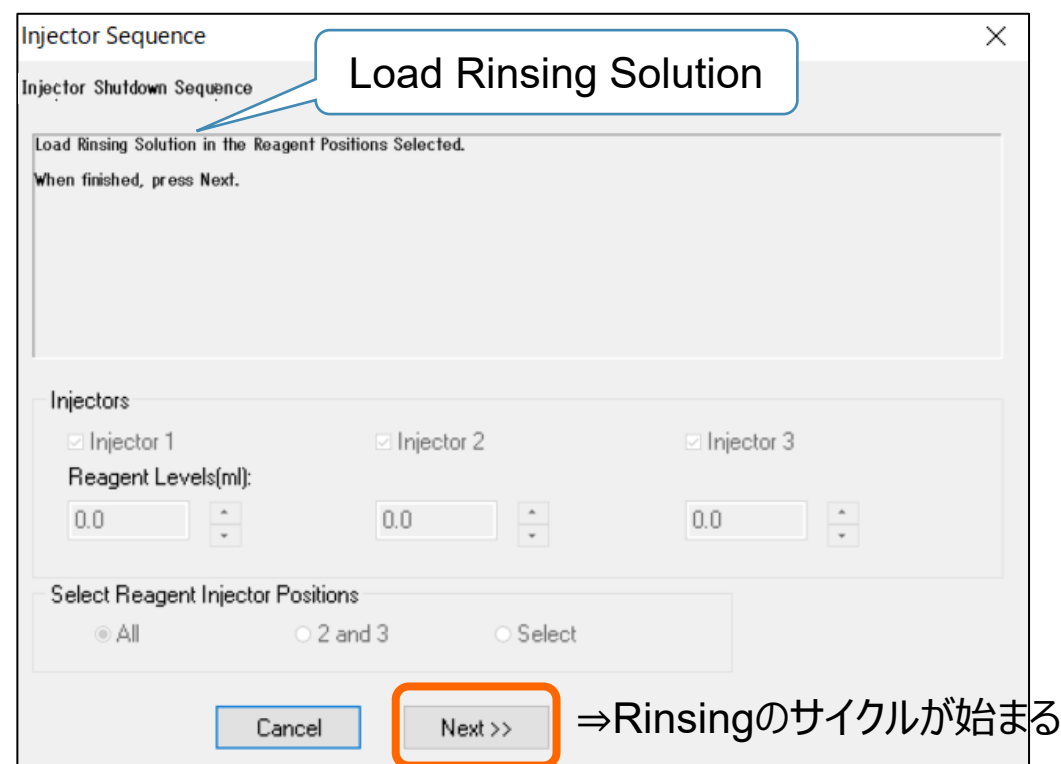
6. Shutdown

③6本のプライミングキュベットを間隔を空けずに設置し、[Next]をクリックする



The dialog box is titled "Injector Sequence" and has a close button (X) in the top right corner. It contains a section "Injector Shutdown Sequence" with a text area that says "Load 6 Tubes." and "Tubes must be loaded in one continuous sequence without any gaps." Below this is a section "Injectors" with three checkboxes: "Injector 1", "Injector 2", and "Injector 3", all of which are checked. Under each checkbox is a "Reagent Levels(ml):" label and a text input field with a value of "6.4" and up/down arrow buttons. At the bottom is a section "Select Reagent Injector Positions" with three radio buttons: "All" (selected), "2 and 3", and "Select". At the very bottom are two buttons: "Cancel" and "Next >>". A blue callout bubble points to the "Load 6 Tubes." text with the label "Load 6 Tubes". An orange box highlights the "Next >>" button.

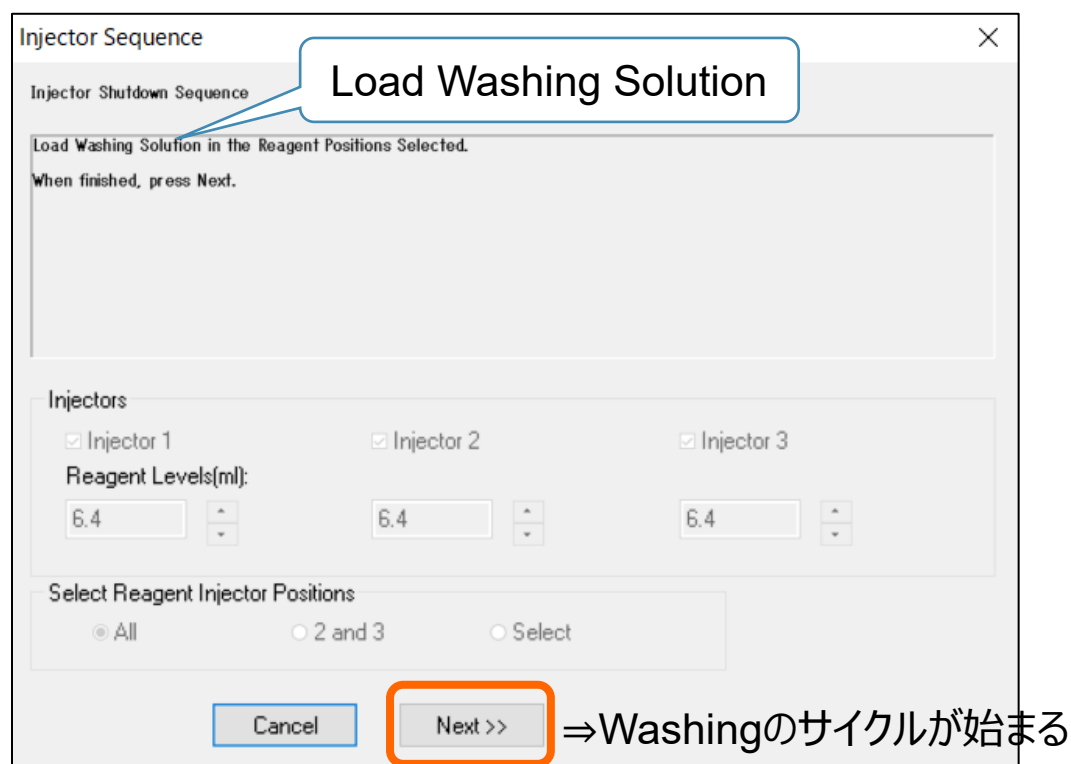
④Rinsing Solutionに付け替え、[Next]をクリックする



The dialog box is titled "Injector Sequence" and has a close button (X) in the top right corner. It contains a section "Injector Shutdown Sequence" with a text area that says "Load Rinsing Solution in the Reagent Positions Selected." and "When finished, press Next." Below this is a section "Injectors" with three checkboxes: "Injector 1", "Injector 2", and "Injector 3", all of which are checked. Under each checkbox is a "Reagent Levels(ml):" label and a text input field with a value of "0.0" and up/down arrow buttons. At the bottom is a section "Select Reagent Injector Positions" with three radio buttons: "All" (selected), "2 and 3", and "Select". At the very bottom are two buttons: "Cancel" and "Next >>". A blue callout bubble points to the "Load Rinsing Solution in the Reagent Positions Selected." text with the label "Load Rinsing Solution". An orange box highlights the "Next >>" button. To the right of the dialog box, the text "⇒Rinsingのサイクルが始まる" is displayed.

6. Shutdown

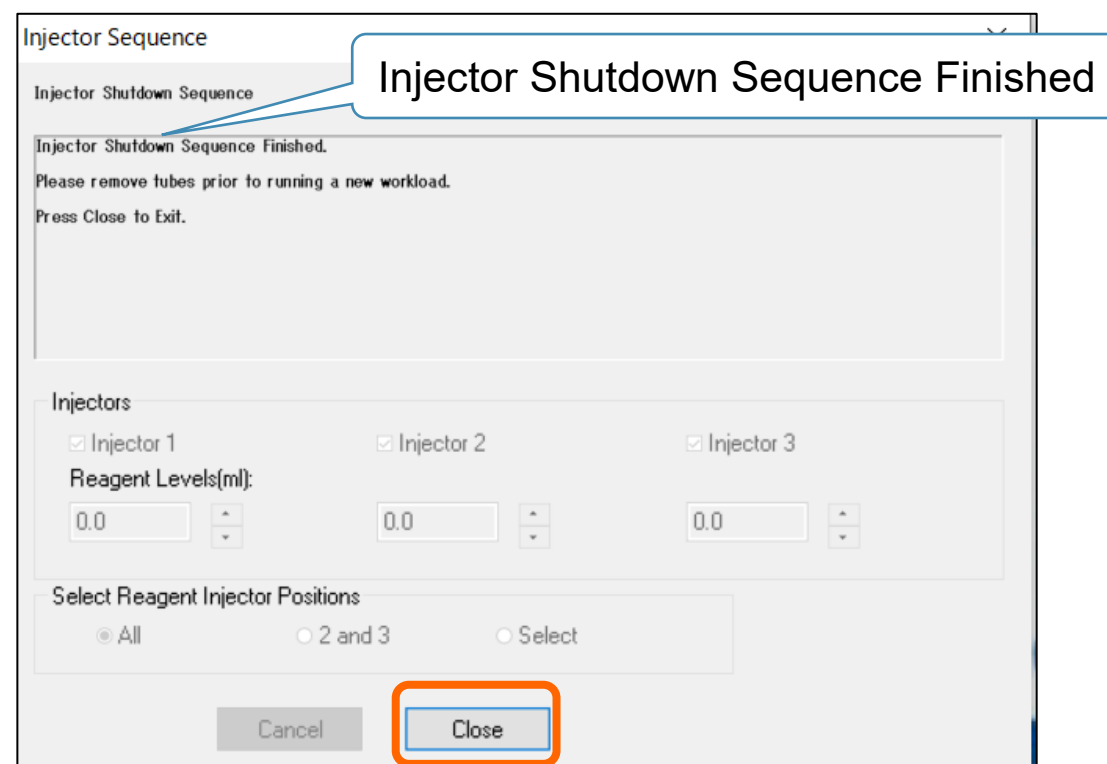
⑤Rinsingの終了後、Washing Solutionに付け替え、[Next]をクリックする



The dialog box is titled "Injector Sequence". It has a tab labeled "Injector Shutdown Sequence". The main text area says "Load Washing Solution in the Reagent Positions Selected. When finished, press Next." A callout bubble points to the text "Load Washing Solution". Below the text area, there is a section for "Injectors" with three checkboxes: "Injector 1", "Injector 2", and "Injector 3", all of which are checked. Under each checkbox is a "Reagent Levels(ml)" input field, all containing the value "6.4". Below this is a "Select Reagent Injector Positions" section with three radio buttons: "All" (selected), "2 and 3", and "Select". At the bottom, there are two buttons: "Cancel" and "Next >>". The "Next >>" button is highlighted with an orange rectangle.

⇒Washingのサイクルが始まる

⑥Washingの終了後、[Close]をクリックし、プライミングキュベットを取り出して廃棄する



The dialog box is titled "Injector Sequence". It has a tab labeled "Injector Shutdown Sequence". The main text area says "Injector Shutdown Sequence Finished. Please remove tubes prior to running a new workload. Press Close to Exit." A callout bubble points to the text "Injector Shutdown Sequence Finished". Below the text area, there is a section for "Injectors" with three checkboxes: "Injector 1", "Injector 2", and "Injector 3", all of which are checked. Under each checkbox is a "Reagent Levels(ml)" input field, all containing the value "0.0". Below this is a "Select Reagent Injector Positions" section with three radio buttons: "All" (selected), "2 and 3", and "Select". At the bottom, there are two buttons: "Cancel" and "Close". The "Close" button is highlighted with an orange rectangle.

6. Shutdown

- ⑦ Washing Solutionは次回使用時まで取り付けておく
- ※ Washing SolutionとRinsing Solutionは1週間に一度交換する

