SIEMENS

Automatic QC System

One QC Batch for the Lifetime of Your Instruments

Answers for life.

AUTOMATIC QC (AQC) OVERVIEW

Fully automatic quality control

- No operator intervention required
- Three levels of QC in each AQC cartridge

Schedule is user-programmable

- Up to three QC levels per shift

No value assignment sheet

- Value assignments programmed into cartridge
- Eliminates QC batch changeover issues

AQC material follows the same fluidic path as patient samples.

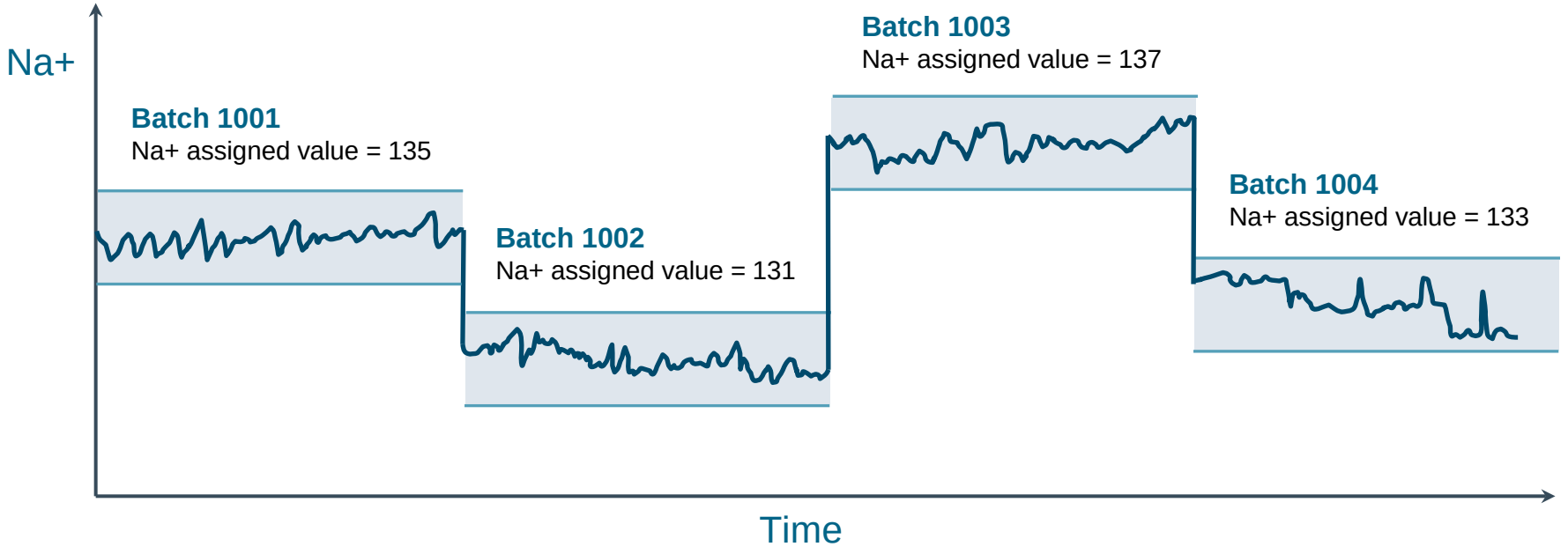
Traditional Quality Control

- Quality-control material is manufactured in batches.
- Each batch is tested and assigned values for all the analytes.
- The assigned values will show batch-to-batch differences.

Traditional Quality Control

Managing an instrument population requires knowledge of the assigned values for **every** QC batch at **each** level and **when** the QC batch changeovers occurred.

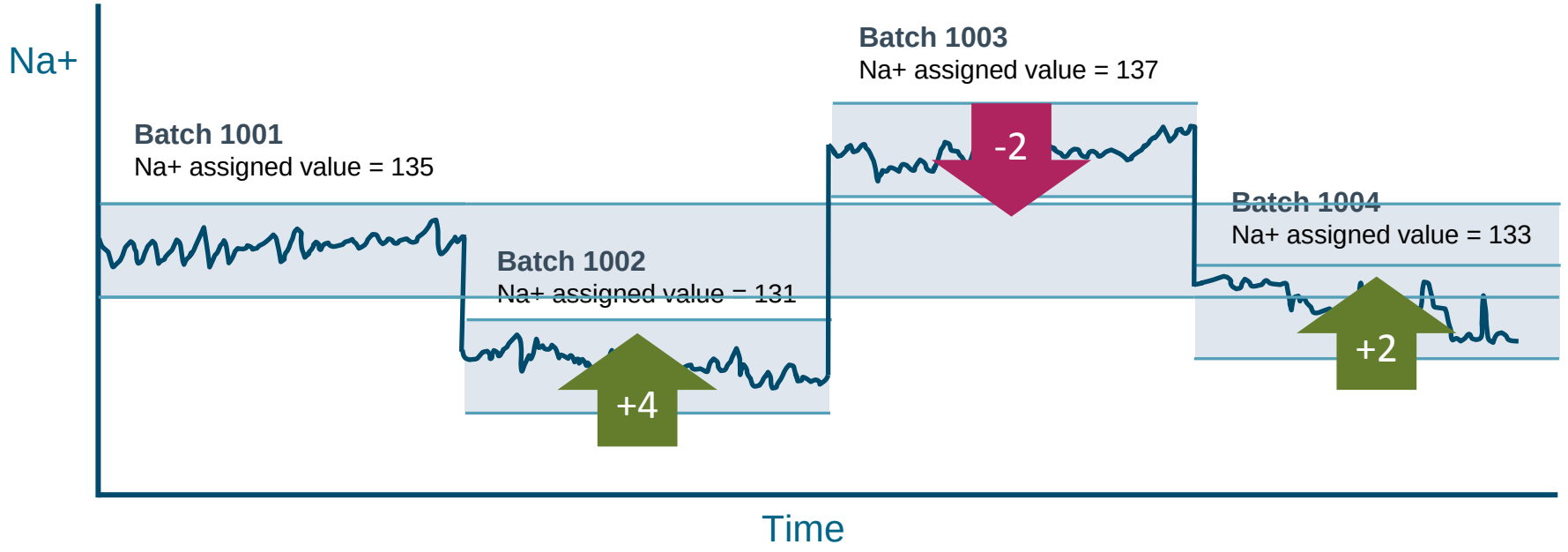
Traditional Quality Control



Traditional Quality Control

If you want to get an accurate picture of long-term performance, you must normalize the QC data.

Traditional Quality Control



SIEMENS AUTOMATIC QUALITY CONTROL

Unique approach eliminates matching QC batch changes to QC data, reduces waste, and makes any QC program easier to administer.

Siemens AQC Process

1

We mix each batch of reagent to precise analyte concentrations using accurate, state-of-the-art process equipment.

This produces AQC reagent with analyte values very close to the target value.

1. Mix 2. Calibrate 3. Value Assign 4. Calculate

Siemens AQC Process

2

Our blood-gas instrument pool is calibrated with reagents that are traceable to national standards.

1. Mix
2. Calibrate
3. Value Assign
4. Calculate

Siemens AQC Process

3

We value assign each batch by comparing it to a master batch using our blood-gas instrument pool for a total of 144 measurements providing over 2000 data points.

1. Mix
2. Calibrate
3. Value Assign
4. Calculate

Siemens AQC Process

4

We calculate the offset of the value assignment to the batch target and program that offset into the AQC cartridge memory chip.

1. MIX 2. CALIBRATE 3. VALUE ASSIGN **4. CALCULATE**

Siemens AQC in Use

1. When a customer installs an AQC cartridge, the offset values for all the analytes are read by the RAPIDPoint® 500 Blood Gas System.

2. When an AQC is analyzed, the measured values are compared to the assigned value, the offset is subtracted, and the AQC result reported.

Measured Value

Assigned Value

− Offset → AQC Result

3. The outcome is the same as the normalizing exercise we just saw, but it is performed for every result.

Siemens' Unique Approach to AQC

- Eliminates worry about matching QC batch changes to QC data.
- Reduces waste for institutions that throw away the remnants of a batch to ensure all their analyzers are using the same batch.
- Makes any QC program easier to administer.

It's like having only one batch of QC for the lifetime of your instruments.