Technical Update

RADIOMETER

from Radiometer Medical ApS

☐ **Mandatory Field Action**

☑ **Recommended Field Action**

Product: **AQT90 FLEX**

Scope: Release of Software V8.4.30

Background: We have released a new software version for the AQT90.

The following corrections have been implemented in the software:

Buffer Overflow in Main Board
A buffer overflow may occur on the Main Board during a flush, which takes place when the AQT90 has been idle for more than 6 hours.
The overflow could cause the analyzer to enter into an error stage with different error messages and would require a restart of the analyzer to proceed. This stage is known as the "USB software error".
In some situations the analyzer would lose current calibrations requiring a recalibration.
This means that the temporary workaround described in the Technical Bulletin – to restart the analyzer when it has been idle for more than six hours – is no longer necessary.

Internal communication failures
Different issues with the internal communication, which may cause the Analyzing Unit (AU) to freeze and lose ongoing sample measurements. The temporary fix was to restart the analyzer.

Hct error codes
15 new error codes have been added to replace existing error codes 1222, 1223, and 1224 for Hct determination error and Hct sensor error process checks, please refer to page 3.

Pipette error 425
After software upgrade the analyzer could fail during startup with pipette error 425. It was then necessary to adjust the Pipette PCB to get the analyzer to work.

Composed by: Mogens Thomasen
Senior Specialist,
Technical Product Support

Date: November 14, 2012

Ref.: TU0098

Action:

We recommend that the following actions are performed:

1. Continue the roll-out of the V8.4.22 software as per TU0087 using V8.4.30 instead of V8.4.22.
2. Upgrade AQT90 FLEX analyzers with V8.4.22 to V8.4.30.
3. Translate the customer information letter into your local language and print it on your company paper
4. Hand over a copy of the customer information letter to the customer upon upgrade to V8.4.30

Completion Date:

The confirmation fax relating to TU0087 must be returned by **March 31, 2013** to confirm that the actions stated in TU0087 have been completed.

Tools:

Software
933-272, AQT90 FLEX Analyzer Application software V8.4.30
A separate email including a link for download of the software has been distributed. Furthermore, the software will become available on CD.

Customer information letter

Inquiries:

Please refer all inquiries related to this Technical Update to RMED Technical Support:

Email: technical.support@radiometer.dk or

Telephone: +45 40108827

TU0098 Customer Letter.docx

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(Note as received from our Supplier)

Error Code	User level message	User and Manager level Strings	Proces check	Comment
1252	HCT sensor error	Error in system determining Hct values.	HCT_DC_VOLTAGE	The measured high-frequency voltage during calibration of the measuring circuit over the maximum limit (0.5 Volt)
1253	HCT sensor error	Error in system determining Hct values.	HCT_CAL_F1_VOLTAGE	The measured low-frequency voltage during calibration of the measuring circuit is outside limits (1.5 til 2.3 Volt)
1254	HCT sensor error	Error in system determining Hct values.	HCT_CAL_F2_VOLTAGE	The measured voltage during calibration of the measuring circuit is outside limits (1.5 til 2.3 Volt)
1255	HCT sensor error	Error in system determining Hct values.	HCT_SAMPLE_TEMP	The temperature measured by the HCT circuit during sample measurement is outside limits (15-40 deg. Celsius)
1256	HCT sensor error	Error in system determining Hct values.	HCT_ASSAY_TEMP	The temperature measured by the HCT circuit during the assaybuffer measurements is outside limits (15-40 deg. Celsius)
1257	HCT determination error	Hct value cannot be correctly determined	HCT_SAMPLE_COUNT	Too few measurements in determined range for the conductivity difference signal
1258	HCT sensor error	Error in system determining Hct values.	HCT_ASSAY_CONDUCTIVITY_F1	Assaybuffer low-frequency conductivity differs more from the RP "tag-value" than allowed (+/-1.5 mS/cm)
1259	HCT sensor error	Error in system determining Hct values.	HCT_ASSAY_CONDUCTIVITY_F2	Assaybuffer high-frequency conductivity differs more from the RP "tag-value" than allowed (+/-1.5 mS/cm)
1260	HCT determination error	Hct value cannot be correctly determined	HCT_SAMPLE_ADC_SIGNAL_F1	A/D converter out of range during sample low-frequency measurement
1261	HCT determination error	Hct value cannot be correctly determined	HCT_SAMPLE_ADC_SIGNAL_F2	A/D converter out of range during sample high-frequency measurement
1262	HCT sensor error	Error in system determining Hct values.	HCT_ASSAY_ADC_SIGNAL_F1	A/D converter out of range during assaybuffer low-frequency measurement
1263	HCT sensor error	Error in system determining Hct values.	HCT_ASSAY_ADC_SIGNAL_F2	A/D converter out of range during assaybuffer high-frequency measurement
1264	HCT determination error	Hct value cannot be correctly determined	HCT_SAMPLE_CELL_NOT_EMPTY_LOW	The low-frequency sample conductivity is suspiously high in the beginning of the measuring time compared to the median of the conductivity in the selected range, which indicates dilution with assaybuffer
1265	HCT determination error	Hct value cannot be correctly determined	HCT_SAMPLE_CELL_NOT_EMPTY_HIGH	The low-frequencysample conductivity is suspiously high in the end of the measuring time compared to the median of the conductivity in the selected range, which indicates sample transport problems.
1266	Hct determination shows very high value.Please perform measurements on plasma sample	Hct value determined to be >62 %	HCT_VALUE	Measured HCT out of range (0.00 - 0.62)