

For in vitro research use only



Liquid Control Set

quality control verification of impedance aggregometry

REF MP0720

2 x 4.0 ml Solution 1
1 x 2.0 ml Solution 2



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Intended use

For use as an assayed quality control verification of the resistance measure of impedance aggregometry.

Principle

The signal reaction of the Multiplate® analyzer is based on the detection of the change of electrical resistance during the measurement. Using artificial control material allows the quality assessment of the detection mechanism.

The liquid control set consists of two fluids, "Solution 1" and "Solution 2", of different ionic strengths.

Mixing of the fluids in various proportions results in a change of electrical conductivity, which is recorded as a change in impedance in the Multiplate® analyzer.

The set contains enough control material to test the level 1 and level 2 control in all channels of the Multiplate® analyzer.

Materials Provided

MP0720: Liquid Control Set
Solution 1: 2 x 4.0 ml
Solution 2: 1 x 2.0 ml

Materials required but not provided

1. Aggregometer test cells with stir bars
2. Pipettes – 100 µl to 1 ml required

Instrumentation

The Liquid Control will perform as described when used with the Multiplate® aggregometer. Follow the manufacturer's instructions.

Reagent Preparation

The reagents are provided in ready-to-use form.

Storage and stability

Liquid quality control solutions must be stored at 2-8°C. The set is stable until the expiry date printed on the tube label when stored under these conditions.

Note: Opened tubes must be used within 24 hours of opening.

Warnings and precautions

For in-vitro research use only. General precautions should be followed when handling all materials, e.g. wear gloves, minimize exposure of reagents to the skin. Dispose of all waste materials according to the local regulations.

Test procedure

Preheat the reagents for 20 min at 37°C in the preheating positions of the Multiplate® analyzer prior to use. Run measurements for level 1 and level 2 controls as follows:

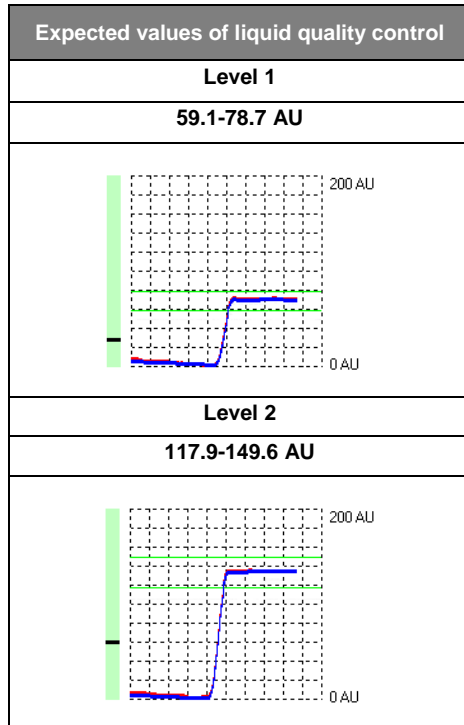
Test procedure for liquid quality controls	
Level 1	Level 2
Load all 5 channels with Multiplate® test cells	
Attach the sensor cables to the test cells	
Add 600 µl of "Solution 1" into each channel	
3 min incubation phase (select <F2:Start timer>)	
Select <F3: Start test> for all channels	
select <F2:Start timer> again, and wait for the first 3 min of measuring time	
Add 100 µl of "Solution 2" onto the surface of "Solution 1".	Add 200 µl of "Solution 2" onto the surface of "Solution 1".
Do not immerse the pipette tip into "Solution 1" to avoid air bubbles.	
Wait for the completion of 6 min test time	
Print out and compare aggregation results with expected values	

Note: It is important to precisely follow this procedure. The use of non-preheated solutions or shorter incubation times may skew results. It is important that "Solution 2" is pipetted onto the surface of "Solution 1".

When using the Multiplate® electronic pipette in auto mode follow the test instructions displayed by the Multiplate® software.

Expected values

Expected values for the liquid quality control analyses, which are marked by two horizontal green lines in the graphic window, are as follows:



If results of a liquid control analysis are not within the expected range, repeat the analysis. If a channel's results repeatedly fall outside of the expected range lock the appropriate channel in the Multiplate® software (menu Multiplate -> Channel administration) and contact the manufacturer or local Multiplate® representative for service.

Limitations

The liquid quality control is an artificial quality control of the Multiplate® analysis. The quality of the electronic parts and sensors of the Multiplate® system as well as the quality of the optional electronic pipette is assessed. The liquid control does not assess the appropriate stirring of the sample or the proper performance of aggregation reagents.

Literature

¹ Köppen K., Wittwer M., Calatzis A., Spannagl M.: External quality control of impedance aggregometry analysis: a feasibility study; poster abstract P-14-13; GTH congress, Society of Thrombosis and Haemostasis annual meeting, Wiesbaden 2008

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