**Reviewer’s report**

**Title:** Point-of-Care Measurement of Activated Clotting Time for Cardiac Surgery as measured by the Hemochron Signature Elite and the Abbott i-STAT: Agreement, Concordance, and Clinical Reliability

**Version:** 0  **Date:** 25 Jul 2019

**Reviewer:** Reviewer 2

**Reviewer's report:**

PEER REVIEWER ASSESSMENTS:

**OBJECTIVE** - Full research articles: is there a clear objective that addresses a testable research question(s) (brief or other article types: is there a clear objective)?

Yes - there is a clear objective

**DESIGN** - Is the current approach (including controls and analysis protocols) appropriate for the objective?

Yes - the approach is appropriate

**EXECUTION** - Are the experiments and analyses performed with technical rigor to allow confidence in the results?

Yes - experiments and analyses were performed appropriately

**STATISTICS** - Is the use of statistics in the manuscript appropriate?

Yes - appropriate statistical analyses have been used in the study

**INTERPRETATION** - Is the current interpretation/discussion of the results reasonable and not overstated?

Yes - the author's interpretation is reasonable
OVERALL MANUSCRIPT POTENTIAL - Is the current version of this work technically sound? If not, can revisions be made to make the work technically sound?

Probably - with minor revisions

PEER REVIEWER COMMENTS:

GENERAL COMMENTS: The manuscript is very well written and structured. The experiments were carried out according to appropriate methodologies, as well as statistical analyses. The authors' conclusions are well based on the results presented. The main limitation is that the assays performed with these "point-of-care" devices were not compared with a reference method performed in the laboratory, but this point is addressed by the authors in the discussion. I have only a few minor comments, which are as follows:

- The graphical presentation of the results obtained with each device for each of the intraoperative times points (before, after CPB and after protamine) could be interesting in order to assess possible differences in each range of values.

- Concerning the 2nd paragraph of the results on measurements with Hemochron devices, the authors could adopt a more neutral presentation by limiting themselves to indicating quantitative values, the terms "only" (5 occurrences) and "worse" not appearing indispensable.

- Figures 1C and 1E: values >1000 with one of the two devices evaluated must strongly contribute to the lower performance of the comparison. Have these values been verified in a second analysis, which would also be clinically justified when values >1000 are not expected?

- The quality of the figure could be improved, it is very difficult to read, unless it comes from a pdf conversion problem.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes
Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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