

Reviewer Comments to Author

The manuscript entitled: “Analysis of mouse blood serum in the dynamics of U87 glioblastoma by Terahertz spectroscopy and Machine learning” by Denis Vrazhnov, et al, created a prediction data model based on terahertz time-domain spectroscopy and machine learning which allows to differentiate cancer and healthy cells. The work is sound and the results are remarkable. However, the abstract should be checked thoroughly. Overall, the work is certainly publishable and contributes to research area of glioblastoma detection. It could be published in the special Issue "Applications of Millimeter-Wave and Terahertz Technologies" of *Applied Sciences* after minor revisions as follow.

- 1) Abstract should be rewritten. The information given in the abstract is correct and precise, but there is no connection between the sentences. This lack of connection provokes the loss of the reader throughout the text.
- 2) Reference number 15 is not mentioned throughout the text and in line 46 reference number 14 appears twice one after the other. Please, check it. I think that the second reference of number 14 in line 46 is actually the reference number 15. Review also line 216.
- 3) The material of the cuvette used for the experiments should be mentioned in section 2.2.
- 4) The first sentence of the Section 2.3 (lines 147 and 148) does not make sense. It should be rewritten.
- 5) In the explanation of Figure 4 “orange dot is a rare data, but still not an anomaly” is written, but there is not any orange dot in the figure. Which is the meaning of blue dots?
- 6) The quality of the images from Figure 6 is quite poor (specailly in the axis). Consequently, the monitoring of the experiment is hard for the reader. Exporting the graphics in “.tiff” mode could be a better option. Same explanation for the images from Figure 7.
- 7) The quality of the images form Figure 8 is correct, but I should increase the size of the letters from the axis for a better understanding.