

# Review of: "Effect of daylight and air oxygen on nanozymatic activity of unmodified silver nanoparticles: Shelf-stability"

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Manuscript entitled "Evaluating the effect of shelf-storage, daylight, and air oxygen on the peroxidase-like activity of unmodified silver nanoparticles" by Saeed Reza Hormozi Jangi in a brief way presents changes in the nanozymes activity depending on their storage conditions.

Despite the fact that article is written in quite good way, in my opinion some parts need corrections or clarifications. Please see my comments and questions listed below.

- In Introduction: "In addition, recently, employing the catalytic activity of these nanoparticles for practical applications was also attracted several researchers." – this sentence is quite poorly constructed and needs to be rewritten.
- Also in Introduction: "The new field of catalysis which was introduced as an alternative to enzyme-based catalysis is called enzyme-based catalysis." – is it not the same name?
- Names "*Artemisia scoparia*" and "*Laurencia daspica*" should be written in italics/
- Description of storage conditions as only "dark, daylight and open air" is quite too general. Except some residual information like: "exposing them to daylight/open air upon storage at ambient temperature" (what is exactly ambient temperature?), "nanozymes solutions were covered by foil (dark conditions) to eliminate the effect of daylight" (then how air could penetrate the sample?), "stored at 4 °C under dark conditions", we know nothing about the experiment conditions.
- In chapter 2.3: "[...] the absorbance of the oxidation product (blue-colored) was recorded at 658 nm" – but later, in Figure 1 and chapter 3.2 we could see absorption spectra for 400-800 range ("As shown in this figure, in the presence of TMB, the as-synthesized nanozymes catalyze the oxidation process of TMB by hydrogen peroxide to produce its corresponding blue-colored cation radical, TMB-ox with a shoulder 440-485 nm and a symmetric spectrum over 500-750 nm (max of 658 nm). Did Author measure the activity after storage as the whole spectra or only in one point? I also think, it is a good idea to show a spectrum of TMB before treatment, for comparison.
- In chapter 3.3 there is an unintentional jump of text to the next paragraph (after "[...] §! [...]").
- Later in chapter 3.3: "This reduction of activity can be contributed to particle aggregation of nanoparticles by light." – please add a relevant reference. Or maybe Author measured TEM of sample after each type of storage for comparison?
- In Figures 3-5, each point have marked standard deviation. How many times one point was measured for its calculation?

- Why for dark storage conditions, the stability was measured for 10 days, not as before – 7 days? Moreover, why the chart type was changed from scatter plot to bar chart?
- In References: What is the meaning of “a, b, c” and “^” before the references? Moreover, it is better to add DOI number instead of publication link, when referred manuscript does not have complete bibliographic data.