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*Editors*

Jelena **MILOVANOVIĆ**

Marko **RODIĆ**

Vuk **FILIPOVIĆ**

Života **SELAKOVIĆ**

Jelena **KESIĆ**

Mila **LAZOVIĆ**

Mihajlo **JAKANOVSKI**

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## Acetone effects on Briggs-Rauscher oscillatory reaction

Kristina Z. Stevanović<sup>1</sup>, Jelena P. Maksimović<sup>1</sup>, Bojan Božić<sup>2</sup>, Maja C. Pagnacco<sup>3</sup>

<sup>1</sup> University of Belgrade, Faculty for Physical Chemistry, Belgrade, Serbia

<sup>2</sup> University of Belgrade, Faculty of Biology, Belgrade, Serbia

<sup>3</sup> University of Belgrade, Institute of Chemistry, Technology and Metallurgy, National Institute of the Republic of Serbia, Belgrade, Serbia

In this work, properties of Briggs-Rauscher (BR) oscillatory reaction<sup>1</sup> in a presence of acetone, as a non-polar solvent, were investigated. The BR reaction itself is oxidation of malonic acid ( $\text{CH}_2(\text{COOH})_2$ ) using a mixture of hydrogen peroxide ( $\text{H}_2\text{O}_2$ ) and potassium iodate ( $\text{KIO}_3$ ), catalyzed by metal ion (usually  $\text{Mn}^{2+}$ ) in an acidic aqueous solution<sup>1</sup>. It is well-known that BR reaction, as a sensitive matrix, can be used for different analyte properties examination: concentration, antioxidant/antiradical and catalytic activity. As noted, BR reaction occurs in a water medium and therefore the application of these assays is limited to water-soluble samples. Here, the BR reaction is carried out in acetone–water mixture (20 vol%) with the aim to investigate how this non-polar solvent affects the course of the reaction. The influence of solvent can reflect complex phenomena involving many different intermolecular interactions, potentially affecting oscillatory dynamics. Obtained results could be used in a kinetics investigation of the BR reaction and the oscillatory reactions in general.

### References

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