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CYCLODEXTRIN BASED METAL ORGANIC FRAMEWORK CRYSTALLIZATION AND EVALUATION AS POTENTIAL DRUG CARRIER

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Metal-organic frameworks (MOFs) have been known for decades, and they continuously have gained interest because of their application potential increasing in the various fields – pharmacy, medicine, technology etc [1]. MOFs porous architecture and adjustable properties allow them to be considered as promising drug carriers. Modification of the properties of an existing active pharmaceutical ingredient (API) without changing its biological role can be much faster and more effective [2].

In this study different cyclodextrin based MOFs were crystallized using various methods and characterized by X-ray methods. At the results we obtained new crystal structures for α -CD-K MOF in crystallization using vapor diffusion method. New crystal structure for β -CD-K MOF using solvent exchange method. New crystal phase for γ -CD-K using fast crystallization. All crystal forms were compared and evaluated as potential drug carriers.

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References:

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- [2] Domingos S., André V., Quaresma S., Martins I. C. B., Minas da Piedade M. F., Duarte M. T. *J. Pharm. Pharmacol.* 2015, 67, 830–846.

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