Fluorescent Probe for Investigation of Influence of Ribonucleosides With D–Mannitol

Publisher: IEEE

Cite This



V. Shchodryi; N. Obernikhina; Ye. Shaydyk; O. Kachkovsky; Slominskiy Yu.; Z. Tkachuk All Authors

23 Full Text Views











Abstract

Document Sections

- Introduction
- II. Molecules and Methodology
- III. Spectral Measurements
- IV. Results and Discusion
- V. Conclusion

Authors

Figures

References

Keywords

Metrics

Abstract:

We have studied the interaction of ribonucleosides with D-mannitol and D-sorbitol using a fluorescent probe with fluorescent dye. Decreasing of intensity of fluorescence in solution during the titration of fluorescent dye with solutions of ribonucleosides (RN) and complexation of ribonucleosides with D-mannitol (RNM) were clearly observed. Fluorescence quenching in the RNM complex is less when compare with solution of ribonucleosides. We have shown these differences in spectral characteristics of ribonucleosides and complex RNM with a dye. The results may indicate the different interaction of D-mannitol with nucleosides. Such a different interaction is due to the structure of D-mannitol and D-sorbitol. Interaction is probably made with formation two hydrogen bonds between hydrogens of two parallel hydroxy (O-H) groups of D-mannitol and/or centers of hydrogen bonding in heterocyclic of nucleosides.

Published in: 2019 IEEE 39th International Conference on Electronics and Nanotechnology (ELNANO)

Date of Conference: 16-18 April 2019

Date Added to IEEE Xplore: 01 August

2019

▶ ISBN Information:

INSPEC Accession Number: 18934814

DOI: 10.1109/ELNANO.2019.8783955

Publisher: IEEE

Conference Location: Kyiv, Ukraine