345. THE DETERMINATION OF DEXAMETHASONE IN THE MIXTURE DEXAMETHASONE-CIPROFLOXACIN USING THE UV-VIS SPECTROPHOTOMETRIC METHOD

Mihaela Staver, Oxana Vislouh, Eugen Nicolai

Scientific adviser: Uncu Livia, PhD, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

Introduction: Otitis media, sometimes considered simply an infection or inflammation of the ear is the most common cause of ear pain. Although this condition is a common cause of pain in childhood and is often Associated with children, it can affect and adults.[2]

The research of the autochthonous and foreign pharmaceutical market showes the presence of a small number of combined drugs used for treating otitis media. It is considered appropriate to develop new combinations as solutions for the treatment of otitis. Based on this fact, the aim of our research was to study the compatibility of drug substances: dexamethasone and ciprofloxacin, using the UV-VIS spectrophotometric method [1].

Materials and methods: We studied the spectral behavior of the substances in the mechanical mixture. Dexamethasone and ciprofloxacin were studied individually in different solvents: distilled water, ethanol (96%), solution of HCl 0.1 M, ethanolic solution of H2SO4. Then the suitable solvent for simultaneous determination of the components in the mixture was selected. The best results were obtained in the solvent- distilled water, which was used for further research. The obtained spectrums were compared to the spectrums of reference standards.

Results and discussion: Exactly contoured maximums of absorption for dexamethasone were recorded at 246 nm and the optical density value was determined 0.49 and the amount of substance in the sample was determined 101%.

In order to appreciate the obtained results they were statistically processed, so the results show: RSD(relative standart deviation) - 0,523, Er%(relative error)- 1,383%

Conclusion: The developed work technique can be used for quantitative determination of dexamethasone and ciprofloxacin in the mixture and the determination of their compatibility in order to Associate them in a combined formulation for the treatment of otitis media.

Keywords: otitis, spectrophotometry, dexamethasone