

THE DEVELOPMENT AND SUBSTANTIATION OF THE OPTIMAL TECHNIQUE FOR QUANTITATIVE DETERMINATION OF RESORCINOL IN THE DOSAGE FORM

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Resorcinol – 1,3 – dihydroxybenzene – antiseptic, disinfectant which is used in the treatment of skin diseases (itching, eczema, sycosis, seborrhea, fungal infections of the skin). Resorcinol is used in low concentrations (0.25–2.0%), being a keratoplastyc (necrotic, healing) medicine, as a component of lotions and ointments. Higher concentrations of resorcinol (5.10% ointment) have specific keratolytic (promotes rejection of the horny layer) and cauterizing properties. In cases of higher concentration of resorcinol (30-50%) the cauterizing effect is more pronounced.

In accordance with the pharmacopoeial requirements it is recommended to use the bromatometry method for the quantitative determination of resorcinol in the substance. Quite often, resorcinol is used in combination with salicylic acid, and in this case by the bromatometry method both components are titrated simultaneously. For the purpose of economical expenditure of the dosage form and reduce the time to analyze the task of our research has become the development of spectrophotometric technique, allowing to quantify both components in the same sample, as well as its validation.

For the development of technique the investigation of UV – absorption of resorcinol, salicylic acid and in their joint presence at the concentration $2.0 \cdot 10^{-5}$ g / ml in the solution of 70% alcohol has been carried out. The acidity or basicity of the solution significantly affects on the absorbance at the wavelength of 300 nm (salicylic acid). Therefore, it has been proposed to carry out the quantitative definition with the help of addition of aluminum chloride 1% solution to the analytical solution. The aluminum cation together with salicylic acid forms the stable complex compound, which has the maximum absorption at the wavelength of 314 nm. According to the developed method for the quantitative determination of resorcinol it is necessary to measure the optical density of the analytical solution at the maximum at the wavelength of 282 nm, for the quantitative determination of salicylic acid - 314 nm, relative to the solvent - 70% alcohol.

For the developed technique for the quantitative determination of resorcinol in the presence of salicylic acid the process of validation has been conducted. The following parameters have been taken into consideration: robustness, linearity, accuracy, precision and reproducibility. These results meet the criteria of acceptance.