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Synthesis, the structure of arylsalicylic amides, which have anthelmintic activity

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Abstract

For the first time, 11 new arylsalicylamides with higher anthelmintic activity were synthesized compared to fenasal [5-chloro-*N*-(2-chloro-4-throprophenyl)-2-hydroxybenzamide], for which, using modern physicochemical methods of analysis (IR, NMR spectroscopy, UV spectrophotometry, and chromium-mass spectrometry), their structure, purity by chromatographic methods, and the authenticity of colored and sedimentary reactions have been proved. A technological method for the synthesis of new acetoxy derivatives of aryl salicylamides was developed. Their acute toxicity (LD50) on white mice (males) was determined and it was shown that the newly synthesized derivatives of aryl salicylamides according to the Hodge and Sterner classification refer to low-toxic compounds. The association of anthelmintic activity with the structure of the new salicylamides obtained was established. It has been shown that aryl salicylamides obtained on the basis of 3,5-dichlorosalicylic acid have greater anthelmintic activity than the corresponding bromine-containing analogs; substitution of methyl for alkoxy group in the aromatic amine fragment of arylsalicylamides leads to a decrease in acute toxicity, and anthelmintic activity also increases for the propoxy derivative.

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