EVALUATION OF PHYSICAL AND MECHANICAL PROPERTIES OF ALBENDAZOLE TABLETS USED IN VETERINARY PRACTICE

Usubbayev A.M.[1]
Usubbayeva Sh.M.[2]
Tashkent Pharmaceutical Institute, Tashkent city, Republic of Uzbekistan
e-mail: texnotab@gmail.com
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Relevance: This abstract describes the results of evaluating the physicomechanical properties of Albendazole tablets obtained from supramolecular complexes of albendazole with glycyrrhizic acid, its monoammonium and monopotassium salts.

The search for effective drugs based on local raw materials is a pressing issue in pharmaceutical science and practical healthcare. One of the new drugs is a modified supramolecular complex of albendazole, recommended as an effective antiparasitic agent for veterinary practice.

The scientifically substantiated composition and technology for producing modified Albendazole tablets were developed for the first time in collaboration with scientists from the Tashkent Pharmaceutical Institute and the Institute of Bioorganic Chemistry, Academy of Sciences of the Republic of Uzbekistan.

Objective of the study: The physicomechanical properties of tablets obtained using the recommended composition and developed technology were evaluated using generally accepted methods specified in the State Pharmacopoeia (SPh) XI, USP 23, and BP.

Research methods: Twenty tablets were visually inspected with the naked eye for tablet appearance. Deviations from the average tablet weight were determined using electronic scales using methods described in the literature. Tablet diameter and fracture strength were determined using an ERRWEKA instrument with a measurement range of 1-400 N, a tolerance of ±1 N, and a diameter of ±0.5 mm.

Tablet abrasion resistance was tested using an ERRWEKA PAR200 tablet abrasion tester with a metrological characteristic of 25 rpm and a tolerance of ±1 rpm.

Tablet disintegration was tested using an ERRWEKA-DT tablet disintegration tester with a metrological characteristic of 28-32 strokes/min.

Key results and conclusions: The tablets studied were white in appearance with a yellowish-siliceous tint. The average weight deviation was 3.5%, the height-to-diameter ratio was 2.9, the breaking strength of the resulting tablets was 65N, and the abrasion resistance was 99.7%. The disintegration time of the tablet samples produced using the recommended composition and technology was 225 seconds.

Thus, the experimental studies demonstrated that modified Albendazole tablets prepared using the recommended composition and the developed technology meet all quality parameters set by regulatory documents. This ensures the production of high-quality tablets using modern tableting machines.