

STUDY DISPERSION AND AVERAGE WEIGHT IN A SINGLE DOSE SPRAY FOR USE IN ENT PRACTICE.

Andreeva I.V., Hennuy Ismail
The National University of Pharmacy, Kharkiv, Ukraine
atl@nuph.edu.ua

Upper respiratory tract infection (VMD) is undoubtedly the most common diseases with which modern man is found throughout the period of life.

One of the urgent problems of modern pharmaceutical technology is creating a new generation of drugs for topical application, providing local and comparable ravnomirne release of active substances from the dosage form, creating high concentrations of therapeutic agents at the site of application without a significant increase of antimicrobial agents into the systemic circulation.

These drugs today are sprays that are used in the treatment of many inflammatory processes empty cavity and upper respiratory tract. In sprays, sprays having advantages, not disadvantages associated with the use of bottles under pressure increase and the use of propellant gas as a carrier.

The department supervisor developed in ATL combined spray composition for use in ENT practice.

We investigated some technological characteristics of the spray dvuma types of mechanical pumps from different manufacturers: JSC "Stoma" (Ukraine) and the company «Coster Technologic Special Spa» (Italy) - type 20DR 376/100/0-PT.

Because of the quality of the valve-spray system depends on the work of all aerosol packaging, we conducted a comparative study of several indicators of technological nature. We determined the average weight of the drug in a dose and dispersion.

An average weight was determined at $(20 \pm 2) ^\circ \text{C}$ by pressing on the valve stem spray 5-6 times to get dispersed current. Then spray bottle was weighed to the nearest 0,01 (m1), nazhymaly on the valve stem from 1 to 20 times and weighed again (m2).

To determine the dispersion of aerosol particles is fixed on a slide.

On the slide Apply a thin layer of petroleum jelly mixture of oil and vaseline (1: 1) to fix the aerosol particles. The drug nebulize by mechanical valve, pressing the valve stem until the aerosol cloud formed. He made particle test solution. The particle size determined by microscope in which the ocular insert special mesh size of 20 mm at magnification (10 x 8). Definition carried out in 25 fields of view. Particle size is determined along the longest axis.

The average weight of a single dose, which vychavlyuvalas two valves is about the same, but the deviation from the weight of the valve AO "Stoma" is 3%, and for the valve «Coster Technologic Special Spa» 0,6%.

To determine the dispersion, the results of experimental studies it appears that 60% and 70% are particles of dispersion, which is satisfactory for this purpose sprays. Dispersion of airborne particles less than 100 microns.

Based on the research results can be concluded that an advantage of valve-spray system imported. Nevertheless, both systems provide the required dispersion quality and cutting, and can be used in aerosol drug technology as a spray.