

# DEVELOPMENT OF SUPPOSITORIES COMPOSITION AND TECHNOLOGY WITH AN EXTRACT OF BROCCOLI

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**Introduction.** The lowest section of the intestinal tract is the 16-20 cm-long rectum, which is moistened by about 1-3 ml mucus and the pH value of which varies between 6.8-7.9. Anastomoses are found between the arteries and veins of the rectal area. The absorbed drug is transported by blood in two different directions. From the anal region the absorbed drugs enter the blood circulation bypassing the liver, which yields useful advantages in certain cases: on the one hand the onset of the effect is very rapid, it can equal even the speed of an intravenous injection, and on the other hand drugs enter the organism bypassing the first-pass metabolising effect of the liver, which can be a therapeutic advantage in the case of liver diseases and also in the case of drugs which are biotransformed by the liver into ineffective products. Consequently, an alternate route of administration to avoid or minimize the above side effects is preferred in form of suppositories.

**Aim.** The aim of our work was to investigate stability of modeling samples of ointment suppositories bases for preparation them with dry extract of broccoli.

**Materials and methods.** The objects of the study were examples of suppositories bases. Suppositories were made by the melting method. Accurately weighed amount of the respective bases were melted on the water bath and maintained at 55°. The extract was then added to the melted mass and thoroughly mixed. The melt was then poured into the 1 g suppositories moulds and set aside for cooling for 15 min. The suppositories formed were taken out from the moulds and stored in refrigerator.

**Results and discussion.** Prepared suppositories were further kept for freeze thaw and accelerated temperature conditions to study the stability of the prepared formulations. Suppositories with extract of broccoli were prepared by using water-soluble and oil soluble suppository bases. Release rate was good in water-soluble suppositories bases in comparison to oil soluble suppositories bases. When stability studies were performed on the prepared extract of broccoli suppositories it was found that suppositories made by water-soluble base had no significant changes while suppositories prepared by oil soluble bases, had some signs of instability.

**Conclusions.** In view of the fact that the melted (or dissolved) rectal suppository spreads in the rectum, the lower few centimetres of which are not separated sharply from the pelvic upper part with respect to blood paths either, if a drug is administered rectally into the body, the rate of a drug administered in the form of an intramuscular injection can be expected.