

Abstract

This thesis deals with the topic *The determination of content substances in lubrication gel by method of gas chromatography* and with lubrication gel Tea Tree Fantasy, which includes natural substance of tea tree oil. Tea tree oil has strong antiseptic, antimycotic and antifungal effects, and the terpinene-4-ol is its important germicidal component. This thesis is divided into eight chapters; its main part consists of chapters 3 - 6. The third chapter deals with the theoretical part, where the gas chromatography is described. This method is suitable for determination of terpinene-4-ol in lubrication gel. This chapter also deals with the validation of analytical method and with individual parameters and contains the characteristics of lubrication gel, tea tree oil and terpinene-4-ol. In the fourth chapter, there are worked out the search of used methods. The fifth chapter deals with the experimental part; all chemicals, instruments and conditions of isolation are written down there. The sixth chapter describes results and discussion from the development of analytical method, from the system suitability test and from the validation. The main goal of this thesis is the validation of gas chromatography method for the determination terpinene-4-ol in lubrication gel.