

SUMMARY

ASRI KARUNIAWATI. Research entitled “Determination of Retention Time of Medroxy Progesterone Acetate Under Storage Time Using High-Performance Liquid Chromatography” under the guidance of Prof. Dr. Mochamad Lazuardi, drh., M.Si. as supervisor and Suzanita Utama, drh., M.Phil., Ph.D. as Co-Supervisor.

The aim of this research to determine the retention time stability of chromatogram Medroxy Progesterone Acetate (MPA) dissolved in a solvent named Mobile Phase Eluent (MPE) after being stored for six, eight and 12 hours using High Performance Liquid Chromatography (HPLC). This research uses HPLC as a detection device of Medroxy Progesterone Acetate dissolved in MPE solvent. In this research using 3 treatments, (1) being stored in MPE solvent for 6 hours, (2) being stored in MPE solvent for 8 hours, (3) being stored in MPE solvent for 12 hours. There are six replicates in each treatment. This reserach carried out on February 2019. The research procedure of preparation of Medroxy Progesterone Acetate 1 ppm which is equal to 20 μ L of MPA diluted in MPE ad 1 mL and stored in room temperature depends on three treatments that being stored in six, eight and 12 hours. Spectrophotometer is set on 243 nm wavelenght for determine the optimum condition by inject 40 μ L MPE through the rheodyne universal injector. The result of injected MPE shows if there are no impurities means that they are not related to other substances. Inject the mixture after being

stored according to each treatment though rheodyne universal injector the see the result of the chromatogram.

This research is using Control Group Post-Test Only Design. The statistic test to process the data is using One-Way Anova with SPSS 21 for windows. Analyzed statistic result were obtained there is a differences in storage time at 12 hours. At 12 hours storage time were appeared irrelevant peaks caused of structure molecular of substance is broken and unstable. According to result study that carried out can be concluded MPA dissolved in Mobile Phase Eluent (MPE) at 12 hours showed retention time become unstable.

**DETERMINATION OF RETENTION TIME OF MEDROXY
PROGESTERONE ACETATE UNDER STORAGE
TIME USING HIGH-PERFORMANCE
LIQUID CHROMATOGRAPHY**

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ABSTRACT

The aim of this research was to determine the retention time of chromatogram Medroxy Progesterone Acetate (MPA) dissolved in a solvent named Mobile Phase Eluent (MPE) after being stored for six, eight and 12 hours using High Performance Liquid Chromatography (HPLC). This research used posttest-only control group design with three treatments and six replications. The three treatments were 6, 8 and 12 hours storage time. Data obtained were analyzed by One-Way Anova. The result showed retention time of MPA at 6 hours (T1) and 8 hours (T2) storage time were stable but were not for 12 hours (T3) storage time appeared irrelevant peaks indicates the substance where was starting to break down. Based on those result, it could be concluded that Medroxy Progesterone Acetate in Mobile Phase Eluent began to show instability at 12 hours of storage time.

Keywords: Medroxy Progesterone Acetate, stability, retention time, High Performance Liquid Chromatography (HPLC)