ABSRACT

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Title of rigorous thesis: Analysis of body fluids on the automatic analyzer XT – 4000i

This rigorous thesis focuses on the cytologic analysis of body fluids, which are analyzed in hematology laboratory OKH in the Pardubice regional hospital, a.s. These are the cerebrospinal fluid, pleural, pericardial and abdominal fluid, peritoneal dialysate and synovial fluid.

From the measured data during the analysis of body fluids has been to focus on quality control and determine precision, truthfulness, linearity measurements, and the stability of peritoneal dialysate in the laboratory (21.7 °C) and cooler temperatures (6.9 °C).

Statistical evaluation of the measured data showed that the analyzer provides the valid values. Graphic processing has been shown, that the measurement actually conducted linearly. The experiment confirmed, that greater stability shows a sample of peritoneal dialysate, that has been kept at a cooler temperature (6.9 °C).

In this rigorous thesis were performed correlation analysis results of analysis the body fluids in the automatic analyzer XT – 4000i and microscopic method, which used a Fuchs – Rosenthal counting chamber. Statistical evaluation of the results has shown that the best correlation have results of CSF. It is also apparent that the correlation is weak in high cell samples of serous effusion (RBC-BF and MN). Samples of peritoneal dialysate in a given period of at least analyzed. Statistic evaluation was not objective and need a larger set of examinations.

Examination of body fluids using an automatic analyzer XT - 4000i is one of the new methods for the analysis of body fluids. Therefore, it is necessary to deal with this issue continue to monitor new trends and try to unify information that would facilitate greater transparency in the cytological examination of body fluids.