

Analytical system ARCHITECT i2000SR was verified according to requirements of ÚLBDL VFN and 1. LF UK laboratory in Prague. Repeatability, intermediate precision, and measurement uncertainty were determined as performance parameters for verification of analytical assays for testosterone, progesterone, luteinizing hormone, follicle stimulating hormone and prolactin. Results of Lyphochek control samples, which were measured, were consistent with values given by manufacture. Repeatability: coefficients of variation for testosterone Lyphochek 1 6,81%, for Lyphochek 3 6,40%, progesterone 2,4% and 1,8%, luteinizing hormone 5,38% and 1,89%, follicle stimulating hormone 5,12% and 3,24% prolactin 1,45% a 1,83%. Intermediate precision: coefficients of variation for testosterone Lyphochek 1 6,02%, Lyphochek 2 3,60%, Lyphochek 3 3,07%, progesterone 7,9%, 4,9% and 5,8%, luteinizing hormone 4,50%, 5,51% and 5,83%, follicle stimulating hormone 4,00%, 3,72% and 4,87%, prolactin 4,60%, 4,20% and 5,00%. Measurement uncertainty: testosterone 6,02%, progesterone 7,9%, luteinizing hormone 5,83%, follicle stimulating hormone 4,87%, prolactin 5,00%. Analytical System Architect i2000SR was compared with previously used ADVIA Centaur system to find out, whether it is possible to convert the method Centaur Testosterone, Progesterone, Luteinizing hormone, Follicle stimulating hormone and Prolactin to the System ARCHITECT i2000SR. For comparison, linear regression was used. Very good agreement was found between the values which were determined on both analyzers. Correlation coefficients ranged from 0.9840 to 0.9961 (testosterone $r = 0,9843$, progesterone $r = 0,9840$, luteinizing hormone $r = 0,9961$, follicle stimulating hormone $r = 0,9884$, prolactin $r = 0,9900$).