

- 20-116 DETERMINATION OF ERYTHROCYTE GLUTATHIONE PEROXIDASE ACTIVITY AND ITS REFERENCE RANGE IN CHINESE ADULTS. S.L.Yeh\*, S.J.Wu, M.J. Shieh and K.J.Hsiao. Dept.Med.Res., Veterans General Hospital and School of Nutrition and Health Sci. Taipei Medical College, Taipei, R.O.C.

Glutathione peroxidase (GSH-PX) is a selenoenzyme, it may be used as a tool to assess the Se status of the human body. The determination of GSH-PX activity in human erythrocyte was studied. The reaction was measured by continuously monitoring the decrease of NADPH at 340 nm. The erythrocyte GSH-PX activity was determined at 37 °C, pH 7.5 (0.1M Tris buffer) by using one of the substrate, t-butyl hydroperoxide, to start the reaction and glutathione reductase as the coupling enzyme. The enzyme was stable at -20°C or -70°C for at least 5 months. The within-run and between-run coefficients of variation for our method were 3.3-4.9% and 3.0-7.1%, respectively. The reference range of erythrocyte GSH-PX in healthy Chinese adults was estimated to be 28.6-87.8 U/g hemoglobin, and there was no significant difference between males and females. The reference range in our study is higher than others reported in Caucasian. This may be explained by different sample population and/or the optimized assay condition used in our study.

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