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# DETERMINATION OF THIOCYANIDE IN HUMAN SALIVA USING A COLORIMETRIC REACTION

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Abstract

The reaction Fe3+ + CSN- <---> Fe(SCN)2+ is very simple and easy to observe, because Fe3+ has a slight yellow color, CSN- is colorless and Fe(SCN)2+ are deep blood-red (λmax = 447 nm), the determination of equilibrium constant of this reaction is presented in many laboratory manuals. When Fe3+ concentration is much higher than CSN- concentration, all thiocyanate ions are assumed to be converted to the Fe(SCN)2+ complex ions. The same calibration curve can be exploited in the quantitative analysis of SCN-. In the first part the equilibrium constant was determined . At the second part each student measures his or her saliva thiocyanate ion concentration with visible spectrophotometry. In the first part of this manuscript, the constant of equilibrium was determinate. At the second part, thiocyanide concentrations was determinate in human saliva. This laboratory practice was carried out in UNOESC at the first and the second semester of 2007. The equilibrium constants found were close to that reported in literature 93. The thiocyanide concentrations found in saliva had an average value of 1.51 mM for nonsmoker woman's.

Keywords - Thiocyanide, spectroscopy, laboratory practice, human saliva

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