Determination of Uric Acid in Human Saliva Using Capillary Electrophoresis

Manuel Centeno Duque[1], Dr. Naowarat Cheeptham[1] & Dr. Kingsley Donkor[1]

[1]Thompson Rivers University, Kamloops, Canada

Uric acid is a waste product found in all humans. Uric acid is created from the breakdown of purines and dissolves in the blood. Uric acid can crystallize on joints to cause arthritis, particularly gout or on kidneys to form kidney stones. As a result, there is the need for a rapid and simple method to determine uric acid so that fast diagnosis of gout can be achieved. An analytical method to determine the amount of uric acid in human saliva samples using capillary electrophoresis was developed. By using capillary electrophoresis, the method utilizes small sample volumes and quick analysis times to provide accurate, sensitive, and precise results. The developed method was validated using intraday and interday precision, percent recovery, limits of detection and quantitation, and linearity of the calibration curve. This study serves useful in the quantification of uric acid for diagnostic purposes in medical research using capillary electrophoresis.