

November 19-20, 2018
Prague, Czech RepublicShikha Saha et al, Arch Chem 2018, Volume: 2
DOI: 10.21767/2572-4657-C4-011

A NOVEL LC-MS/MS METHOD FOR THE SIMULTANEOUS DETECTION OF TRICARBOXYLIC ACID CYCLE INTERMEDIATES IN BIOLOGICAL SPECIMENS

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The tricarboxylic acid (TCA) or Krebs' cycle represents a crucial metabolic pathway in almost all living organisms. A method for simultaneous qualitative and quantitative analysis of TCA cycle intermediates in body fluids, tissues and cultured cell lines of human origin was developed using LC-MS/MS technique. This LC-MS/MS method for profiling TCA cycle intermediates offers significant advantages including simple and fast preparation of a wide range of human biological samples. This method was established taking into consideration problems and limitations of existing techniques, and its application to different biological matrices will allow capturing metabolic changes at the tissue level but also systemically. We envisage that its application to different biological matrices will facilitate deeper understanding of the metabolic changes in the TCA cycle from *in vitro*, *ex vivo* and *in vivo* studies.

Biography

Shikha Saha has completed her PhD from Loughborough University and worked as a Research Associate at Sheffield University School of Medicine. She is the Senior Scientist at the Quadram Institute Bioscience Norwich. She has published more than 45 papers in reputed journals and has been serving as a Senior Analytical Scientist at the Food and Health Department since 2004. She has 19 years of work experience in analytical chemistry, especially chromatography (reversed phase, normal phase, chiral phase, mixed mode, and ion-exchange), spectroscopy (UV, fluorescence, IR, and NMR), liquid chromatography-mass spectrometry (LC-MS and LC-MS/MS) techniques.

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