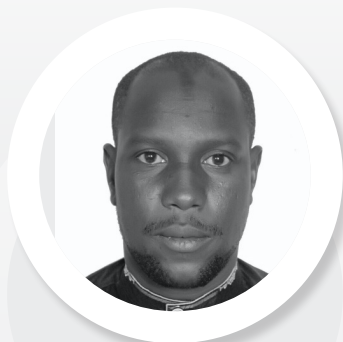


World Food Science & Technology Congress

October 15-16, 2018 Athens, Greece



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Best solvent system for rapid determination of resveratrol using simple thin layer chromatography TLC (silica gel coated)

Resveratrol has been ranked as the most biologically important class of stilbenoids found in plants. Postulations suggest that; consumption of resveratrol from red wine explain the fact that French people have a comparatively low occurrence of coronary heart disease (CHD), though their regular diets are high in saturated fat; an occurrence termed “The French Paradox”. Resveratrol has been proven to have antioxidant, anticancer, anti-inflammatory, vaso-relaxer, anti-diabetic, anti-aging and general antimicrobial activities. Determination of resveratrol both qualitative and quantitative is time-consuming. This study aims to establish the best solvent system (of mobile phase) for fast and efficient detection of resveratrol in different extracts of (grape) seed and skin, by investigating qualitative means which can also be made quantitative by simple modification of established (reported) procedures. Seventy different combinations of polar/nonpolar solvent systems involving 12 different organic solvents of different ratios were used for ethanolic, aqueous and ethanol/water extract of the grape’s seed and skin. Aluminum silica gel coated TLC plates were used, and standard cis and trans-resveratrol were used for reference. N-Hexane: ethylacetate: ethanol (8:0.5:1), and chloroform: ethanol: acetonitrile (3:1:1.5) were found to give the best separation with constant relative RF values within the same or similar experimental condition, with each of the extracts. First of its kind, this research can help researchers and even individuals in analyzing resveratrol more efficiently from any mixture when this compound is suspected.

Biography

Yusuf Ibrahim Ibrahim has completed his Master’s degree from Firat University Elazig, Turkey. He is a Post-graduate Researcher at Firat University, and has completed his academics in Kano State Polytechnics, Kano Nigeria. He is a Manager of Instrumentation Laboratory at School of Technology, Kano. He has published more than five papers in reputed journals and attended several international conferences.

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