

ISOLATION AND STUDY OF MYELOPEROXIDASE AND GLUTAMATE DEHYDROGENASE ENZYMES FROM TUMOUR PULMONARY TISSUE

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The research included the isolation of myeloperoxidase and glutamate dehydrogenase from tumour lung tissue using different biological techniques. These included: ammonium sulphate precipitation, dialysis, gel filtration chromatography on and Sephadex G-200. The results predicted that specific activity and the number of fold of purification were (42.59 U/ml) and (36.3) respectively for partially purified myeloperoxidase, While it was (22.69 U/ml) and (44.1) respectively for partially purified glutamate dehydrogenase. Furthermore, the comparative molecular weight of the partially isolated myeloperoxidase and glutamate dehydrogenase was (150.3 kDa) and (332.3 kDa) respectively using gel filtration chromatography. The study showed that the optimum conditions of myeloperoxidase were obtained at the first minute using sodium citrate (0.1 M) as buffer at pH (5.5), at a temperature (45 °C) and (14 mM) of o-Dianisidin as substrate. It was found that V_{max} and K_m have the values of (18.86 U/ml) and (2.69 mM) respectively. Finally, the optimum conditions of glutamate dehydrogenase were obtained using Tris-HCl (100 mM) as a buffer at pH (8.6), (40 °C) and (35 mM) of glutamate as a substrate. It was found that V_{max} and K_m have the values of (14.1 U/ml), (16.56 mM) respectively.

Biography

Mahmoud A. M. Fakhri has completed his PhD in Biochemistry (Clinical Chemistry) from Mosul University. He is a Lecturer in Biochemistry field (Biomolecules, Metabolism, Biotechniques, and Biostatistics) at Biophysics Department/ Science College/ Mosul University. He is the Supervisor of two Postgraduate students (Biochemistry and Clinical Chemistry field) in Science College / Mosul University. He has published more than 7 papers in reputed journals and has been serving as a Member in Iraqi Society of Nanotechnology.

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