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(57) Abstract :

This invention relates to an electrode assembly for the electrochemical biosensing of heavy metals and a process for the preparation thereof. The low-cost electrode assembly is produced using micropipette tips and fungi-modified graphite paste for electrochemical biosensing of heavy metals. The electrode has been prepared from easily available materials including micropipette tips, copper wire, and unique conducting paste that result in a working electrode, useful for electrochemical studies, and biosensing of heavy metals. The unique composition of the paste comprises nano graphite, fungi cells, and mineral oil. The fungi cells are derived from a unique strain of *Penicillium johnkrugii*. IITISM-ANK2. The developed electrode can be used as a working electrode in three and four-electrode system electrochemical studies. The prescribed composition of paste can be used for developing low-cost sensors for heavy metals.

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