Title:

An improved process for separation of biomolecules using demixing technique of aqueous phases generated in bioreactors

Abstract: The present invention relates to "An improved process for separation of biomolecules using demixing technique of aqueous phases generated in bioreactors." The process uses "A field assisted process for enhanced separation/ demixing of aqueous two phase systems." The process relates to a new method to enhance the demixing of equilibrated dispersions of Aqueous Two Phase Systems (ATPS), generated by adding phase forming macromolecules in combination polysaccharides and or anionic salts ranging from univalency to tetravalency. The process uses microwave irradiation for demixing of two aqueous phases, process lies in its efficacy in enhancing the migration velocity of the dispersed phase droplets by decreasing the viscosity of the continuous phase. This uniqueness allows two important improvements: first, a higher rate of phase demixing; second, elimination of expensive equipment (centrifuge) normally used for phase demixing.