

Chromatographic-based separation of interferon alpha 2b using supported ionic liquids

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Abstract: Biopharmaceuticals are being increasingly applied in clinics for the treatment of several human pathologies. Interferon α -2b is a glycoprotein that, due to its antiviral, antiproliferative and immunomodulatory properties, has been used for more than 30 years in the treatment of various diseases, such as hepatitis B and hairy cell leukemia. Despite the superior clinical importance of interferon α -2b, the cost of producing this interferon is still relatively high, mostly due to the lack of cost-effective purification technologies. In view of the above, this work aims the synthesis of novel supported ionic liquids (SILs) and their application as stationary phases for the chromatographic purification of interferon α -2b produced recombinantly in *E. coli*. The preliminary results indicate that the supports work both in conditions that preferentially promote electrostatic or hydrophobic interactions. Using an increasing NaCl gradient, interferon α -2b is recovered with a high-purity degree, confirming the suitability of using ionic liquids ligands in preparative liquid chromatography.

Hashtag: Biopharmaceuticals; Purification; Supported Ionic Liquids

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