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### DNA removal on different chromatography supports used for EPO purification by spike studies

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Chromatographic techniques are employed in the purification step of hr-EPO production process in order to obtain a reliable product with high purity. Anion exchange chromatography supports have proved high efficient in removing contaminants such as DNA. For that reason the DNA removal was determined by spike studies, on three anion exchange chromatographic supports: gel, membrane and monolithic column; used in intermediate purification stage. This study showed that, membrane and monolith columns have very good results in the removal of contaminants at this step. Log removal values (LRV) greater than 3.5 were obtained from DNA spike clearance studies. Monolithic column was determined as the best technological proposal, with more than four LRV and 7.72 mg DNA per mL of adsorbent. Scaling-up eightfold of this step using monolithic column resulted in good process performance and DNA clearance. The results of this study may be used in the selection of commercially available chromatography supports for intermediate purification steps for other recombinant protein.

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