

# **Compaction agent clarification of microbial lysates.**

DeWalt BW, Murphy JC, Fox GE, Willson RC.

Department of Chemical Engineering, University of Houston, 4800 Calhoun Ave., Houston, TX 77204-4792, USA.

Recombinant proteins are often purified from microbial lysates containing high concentrations of nucleic acids. Pre-purification steps such as nuclease addition or precipitation with polyethyleneimine or ammonium sulfate are normally required to reduce viscosity and to eliminate competing polyanions before anion exchange chromatography. We report that small polycationic compaction agents such as spermine selectively precipitate nucleic acids during or after *Escherichia coli* lysis, allowing DNA and RNA to be pelleted with the insoluble cell debris. Analysis by spectrophotometry and protein assay confirmed a significant reduction in the concentration of nucleic acids present, with preservation of protein. Lysate viscosity is greatly reduced, facilitating subsequent processing. We have used 5mM spermine to remove nucleic acids from *E. coli* lysate in the purification of a hexahistidine-tagged HIV reverse transcriptase.

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