

# **RNA isolation and fractionation with compaction agents.**

Murphy JC, Fox GE, Willson RC.

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

A new approach to the isolation of RNA from bacterial lysates employs selective precipitation by compaction agents, such as hexamine cobalt and spermidine. Using 3.5 mM hexamine cobalt, total RNA can be selectively precipitated from a cell lysate. At a concentration of 2 mM hexamine cobalt, rRNA can be fractionated from low molecular weight RNA. The resulting RNA mixture is readily resolved to pure 5S and mixed 16S/23S rRNA by nondenaturing anion-exchange chromatography. Using a second stage of precipitation at 8 mM hexamine cobalt, the low molecular weight RNA fraction can be isolated by precipitation. Compaction precipitation was also applied to the purification of an artificial stable RNA derived from *Escherichia coli* 5S rRNA and to the isolation of an *Escherichia coli*-expressed ribozyme. Copyright 2001 Academic Press.

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