

Plasmid Purification News

New wider-based guidelines for plasmid purification have been released by PhyNexus. The guidelines describe how to prepare samples to streamline the Lysate Direct PhyTip column method for Plasmid DNA purification starting from E. coli cell pellets. The new guidelines demonstrate completely automated, Direct-From-Pellet plasmid technology that can be used for medium and high copy plasmid construct to yield high-quality plasmid. Small volume cultures can be grown directly in a 96 well format with high efficiency for everyday laboratory needs such as transfection, sequencing and PCR.

The guidelines start with describing recommended procedures for growing the culture. The plasmid culture cells may be several different strains including DH5 α , DH10, TOP10, Mach 1, XL1-Blue, XL2-Blue or similar type cells that are suitable for transformation of plasmid and ligated material. Ultracompetent cells are also recommended for transformation of large clones.

Plasmids fall into three general categories: High, Medium and Low copy corresponding to the copy number per cell. Cloning vectors used may vary depending upon the cloning method and features of the plasmid including origin of replication and antibiotic resistance. Expression vectors will exhibit lower copy number and will be specific for the expression system. It is recommended that low copy plasmids be cloned to medium and high copy vectors to obtain higher yields when possible.

The guidelines also discuss the antibiotic resistance markers, inoculations procedures, culture plate seals, shaker, centrifuge conditions and media. The media in particular can be important to establish high growth conditions and plasmid yield.

Call PhyNexus at 408.267.7214 or email info@phynexus.com to request your copy of the Guidelines.