

Immuno Tools ToolSpin D Universal

The ToolSpin D Universal kit contains all ingredients for DNA isolation from tissue, cell culture and whole blood as well as for plasmid DNA mini format. The kit contains spin columns, collection tubes (2 ml), buffers and reagents necessary for cell lysis, DNA binding to the matrix, removal of RNA (plasmid mini), and washing and elution of DNA extraction and purification as specified above. As a modern all-in-one toolbox, the kit is specially designed for the isolation of genomic and plasmid DNA.

The ToolSpin D Universal kit presents remarkable features of timesaving, easy, prompt and high yield DNA purification. The kit combines two fundamental technologies on silica membrane basis: i) the salting out method for plasmid DNA isolation in the mini yield format (<20 µg) and ii) Cation Complexation Technology (CCT) for genomic DNA isolation up to the midi yield format (<20-100 µg). The salting out method, used here for plasmid DNA isolation, relies on the effect of DNA binding to a silica membrane by charge compensation by a high guanidium salt concentration. CCT-based genomic DNA binding to a matrix with charge-active sites is brought about by a ionic interaction involving multivalent cations at low concentration. In both systems, low and high molecular weight cell constituents and salts are removed from the matrix by washing with specially developed buffers and 70 % ethanol. Finally bound DNA is eluted with a small volume of ddH₂O or 10 mM Tris-HCl (plasmid DNA) or TE (10 mM Tris-HCl, 1 mM EDTA; genomic DNA). DNA is purified in just 10 to 15 min with quantities suitable for downstream applications including PCR, hybridization, restriction analysis, cloning, sequencing, transfection etc.

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Examples of DNA purification

Plasmid DNA (of various sizes and copy numbers)
snails, deep sea mussels, clams, worms
mammalian tissue and mammalian tissue cell culture
ethanol-prserved tissue samples
whole human and animal blood samples

Name	Amount of starting material	Yield	Time for preparation
ToolSpin D Universal	Up to 200 mg tissue 10–200 µl blood up to 10 ⁷ cells 1 – 6 ml bacterial culture	Generally 100 µl	10 to 15 min Ratio A ₂₆₀ : A ₂₈₀ 1.7 – 2.0

Mini Spin Column DNA Purification Kit	Contents	Cat.No
ToolSpin D Universal Genomic DNA and plasmid mini	10 genomic and 10 plasmid mini spin columns, reagents, buffers, manual	71160101
	100 genomic and 100 plasmid mini spin columns, reagents, buffers, manual	71160002