

# Extracta Plus DNA

## Rapid extraction and purification of high-quality total DNA from cultured cells or tissue

### FEATURES AND BENEFITS:

- High yield – Obtain large quantities of high quality DNA, free from PCR inhibitors
- Versatility in sample types – Rapid purification of fresh or frozen tissue, cells, blood or bacteria
- Lab friendly – Silica based column eliminates toxic organic chemicals such as phenol/chloroform
- Downstream compatibility – Ideal for sensitive applications such as endpoint PCR, qPCR and next generation sequencing

### DESCRIPTION:

Extracta Plus DNA kits offer rapid purification of total DNA from a variety of sample sources. Genomic, mitochondrial and pathogenic DNA can be collected from fresh/frozen animal cells, tissue, blood, and bacteria. The Extracta Plus Spin Column workflow enables simultaneous processing of multiple samples into purified DNA suitable for PCR, Southern blotting, RAPD, AFLP and next generation sequencing applications.

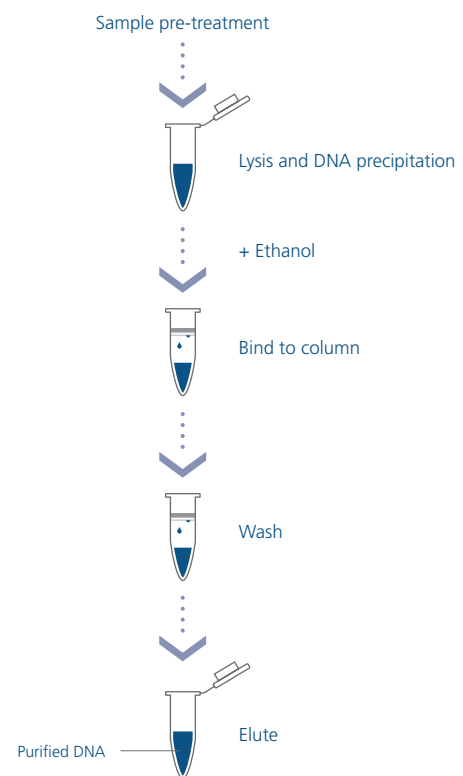
### High yielding gDNA extraction from multiple sources

Extracta Plus DNA allows high yielding extraction of total DNA (e.g. genomic, mitochondrial and pathogen) from various tissues as well as cultured cells and blood samples.

Sample source	Input amount	Expected DNA yield (µg)
Mammalian Blood	100 µl	3–6
Bird Blood	5 µl	9–15
Mouse tail tip	1.2 cm	10–25
Rat tail tip	0.6 cm	20–40
Lymphocytes	5 x 10 <sup>4</sup> cells	15–25
Cultured cells (e.g. HeLa)	5 x 10 <sup>4</sup> cells	15–25
Tissue (e.g. Brain/Liver/Heart/Lung)	25 mg	5–30
Spleen	10 mg	5–30

**Table 1** Typical yields from various input samples.

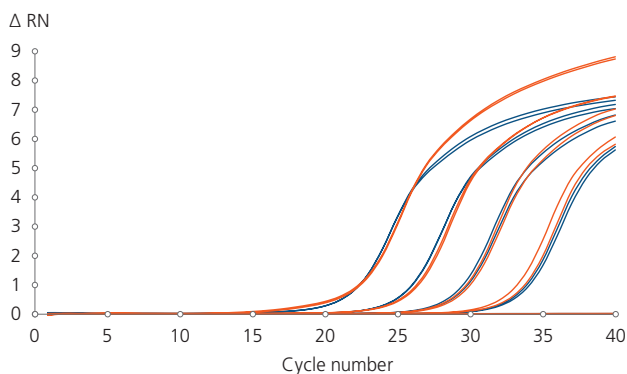
### Extracta Plus DNA Procedure



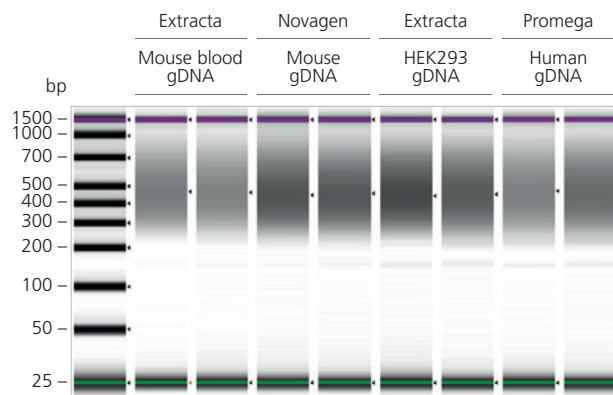
**Figure 1** Extracta Plus DNA procedure. This procedure can be completed in just 15 mins, following sample pre-treatment, resulting in ready-to-use DNA for sensitive downstream applications such as endpoint PCR, qPCR and NGS.

## High quality extracted DNA

Extracted DNA is free of inhibitors that may impact downstream applications such as PCR, qPCR and next generation sequencing.



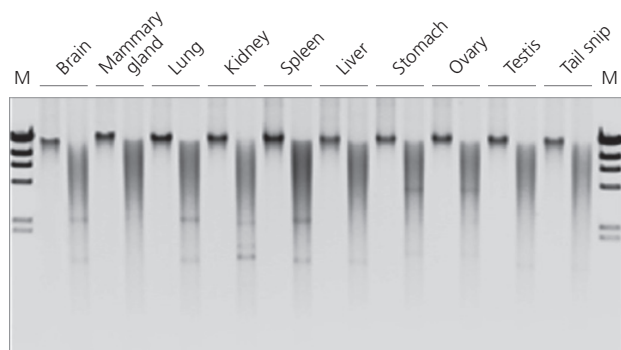
**Figure 2** Extracted gDNA suitable for qPCR. gDNA was extracted from HEK293 cells using the Extracta Plus DNA Kit (blue) and compared to commercially available high quality gDNA (orange). Serial dilutions from 30 ng – 30 pg were prepared and analyzed by qPCR using PerfeCta SYBR Green FastMix, Low ROX. Linear amplification of diluted samples demonstrates high quality DNA input. The lack of shift in Cq values indicates the absence in interfering inhibitors in the extracted samples.



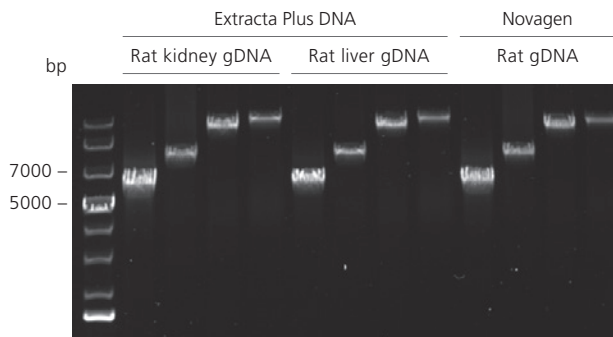
**Figure 3** Reproducible preparation of high quality NGS libraries. gDNA was extracted from mouse whole blood (100 µl) and HEK293 cells (1 x 10<sup>6</sup> cells) using the Extracta Plus DNA Kit. Illumina NGS libraries were prepared from 100 ng of extracted DNA and an equivalent quantity of commercially available high-quality DNA using the sparQ DNA Frag & Library Prep Kit. TapeStation electrophoresis analysis demonstrates a similar fragmentation pattern and yield for all samples, indicating suitability for NGS library preparation.

## Extraction of high molecular weight gDNA

Extracta Plus DNA allows high molecular weight gDNA extraction, enabling long range PCR and sequencing applications.



**Figure 4** Extracted gDNA of high molecular weight. The Extracta Plus DNA Kit was used to extract DNA from a variety of tissues: rat (brain and lung), pig (mammary gland), cow (kidney), mouse (liver, testis and tail snip) and guinea pig (stomach and ovary). Samples were digested with EcoRI and visualized by agarose gel electrophoresis. M: Marker, HindIII digest of lambda DNA.



**Figure 5** High molecular weight gDNA supports long range PCR. gDNA was extracted from rat kidney or liver samples and 6, 8, 12 or 20 kb targets were amplified using repliQa HiFi ToughMix. Analysis of PCR products by agarose gel electrophoresis demonstrated clean product for each target, comparable to that of commercially available high quality rat gDNA.

## ORDER INFO

### Product Name

Extracta Plus DNA - 10  
Extracta Plus DNA - 50

### Quantabio Catalog Number

95213-010  
95213-050

### Size

10 rxns  
50 rxns

Quantabio products are intended for molecular biology applications. The products are not intended for the diagnosis, prevention or treatment of a disease.  
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