

# Product Information

## DNA Gel Extraction Kit

**Catalog Numbers:** 31030-50 and 31030-250

### Kit Contents

Component	31030-50 (50 assays)	31030-250 (250 assays)
Binding Buffer	2 x 50 mL 99987-50mL	2 x 250 mL 99987-250mL
Wash Buffer Concentrate	2 x 10 mL 99988-10mL	2 x 55 mL 99988-55mL
Elution Buffer	1 x 15 mL 99989	2 x 15 mL 99989
Spin Columns and Collection Tubes	1 x 50 Spin Columns and Collection Tubes 99991-50	2 x 125 Spin Columns and Collection Tubes 99991-125

### Storage and Handling

Store kit at room temperature. Kit components are stable for one year from date of receipt when stored as recommended. The Binding Buffer contains the chaotropic salt guanidine thiocyanate, which is an irritant. Use gloves and other appropriate laboratory protection when using this kit. Mixing bleach with guanidine thiocyanate can produce hazardous byproducts. DO NOT mix waste from gel extraction kit with bleach.

### Product Description

Biotium's DNA Gel Extraction Kit is a silica-gel spin column based DNA extraction kit designed to purify 40 bp-40 kb DNA fragments from agarose gels in TAE or TBE buffer. Each column has a maximum binding capacity of 10 ug DNA. Biotium's DNA Gel Extraction Kit is compatible with the removal of GelRed™ and GelGreen™ Nucleic Acid Gel Stains, along with other commonly used nucleic acid gel stains. The purified DNA is compatible with common downstream applications such as transformation, sequencing, PCR, and restriction digests.

### Assay Protocol

#### Before starting

Before use, be sure to add 100% non-denatured ethanol to the Wash Buffer Concentrate. For 31030-50, add 40 mL ethanol to 10 mL Wash Buffer Concentrate. For 31030-250, add 220 mL ethanol to 55 mL Wash Buffer Concentrate.

Centrifugation steps should be carried out at 17,900 x g (approximately 10,000 rpm) in a conventional benchtop microcentrifuge.

- Excise the agarose gel slice containing the DNA fragment of interest using a clean sharp instrument, such as a scalpel. Weigh the gel slice, record the weight, and transfer the gel slice to a 1.7 mL microcentrifuge tube.
- Add 3 volumes of Binding Buffer to 1 volume of the gel slice (100 mg is equal to approximately 100 uL).
- Incubate the gel slice and Binding Buffer at 50°C for 10 minutes or until gel slice is completely dissolved. Occasional vortexing during this incubation will speed up the process.
- Check the color of the solution after the gel has completely dissolved. If it is yellow, the pH of the solution is ideal for DNA binding to the column. If, however, the solution is orange, red, or violet, simply add small amounts of 3 M sodium acetate pH 5.0 to the solution until the color returns to yellow.
- For more efficient recovery of fragments less than 500 bp or more than 4 kb, add 1 gel volume of isopropanol to the tube and mix.
- Pipette the sample into a provided column in its collection tube and centrifuge for 1 minute. If there is excess sample, simply process in several rounds, making sure to apply the additional sample to its corresponding column.
- Discard the flowthrough and return the column, now containing the bound DNA of interest, to its collection tube.
- Add 750 uL Wash Buffer (be sure that ethanol has been added) to the column and centrifuge for 1 minute.
- Discard the flowthrough and return the column to the collection tube. Centrifuge for another 1-5 minutes to remove residual ethanol from the column.
- Carefully remove column and place in a clean 1.5 mL microcentrifuge tube.
- Add 30-50 uL Elution Buffer to the center of the column. Incubate for 1 minute and then centrifuge for 1 minute to collect purified DNA.
- Store eluted DNA at -20°C.

### Related Products

Catalog number	Product
31021	1 kb DNA Ladder, 300 uL
31022	Ready-to-Use 1 kb DNA Ladder, 1.5 mL
31031	100 bp DNA Ladder, 300 uL
31032	Ready-to-Use 100 bp DNA Ladder, 1.5 mL
41001	GelRed™ Nucleic Acid Gel Stain, 3X in water
41002	GelRed™ Nucleic Acid Gel Stain, 10,000X in DMSO
41003	GelRed™ Nucleic Acid Gel Stain, 10,000X in water
41004	GelGreen™ Nucleic Acid Gel Stain, 10,000X in DMSO
41005	GelGreen™ Nucleic Acid Gel Stain, 10,000X in water
41006	TBE, 5X
31006	AccuBlue™ High Sensitivity dsDNA Quantitation Kit
31007	AccuBlue™ Broad Range dsDNA Quantitation Kit
31028	AccuClear™ Ultra High Sensitivity dsDNA Quantitation Kit
31000	EvaGreen® dye, 20X in water
31003	Fast EvaGreen® qPCR Master Mix (200 rxn)
31014	Fast Plus EvaGreen® qPCR Master Mix - Low Rox (200 rxn)
31015	Fast Plus EvaGreen® qPCR Master Mix - High Rox (200 rxn)
31020	Fast Plus EvaGreen® qPCR Master Mix (200 rxn)

Please visit our website at [www.biotium.com](http://www.biotium.com) for information on our life science research products, including environmentally friendly EvaGreen® qPCR master mixes, fluorescent CF™ dye antibody conjugates and reactive dyes, apoptosis reagents, fluorescent probes, and kits for cell biology research.

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