Agarose Gel Extraction Kit
Spin-column based DNA cleanup from agarose gels

**Description:**
Agarose Gel Extraction Kit is designed for high-yield recovery of DNA from agarose gel with simultaneous removal of primer-dimers, primers, nucleotides, proteins, salt, agarose, ethidium bromide, and other impurities. The preparation is based on a silica-membrane technology for binding DNA in high-salt and elution in low-salt buffer. The kit provides a simple and efficient way to purify DNA in a size range between 100 bp and 10 kb. It requires no organic extractions or precipitation and guarantees high and stable recovery rates.

**Content:**
- Extraction Buffer
- Activation Buffer
- Washing Buffer (before use, add 96-99 % Ethanol as indicated on the bottle)
- Elution Buffer
- Spin Columns
- 2 ml Collection Tubes

**To be provided by you:**
- 96-99 % Ethanol
- Isopropanol
- 1.5 ml microtubes

**Preparation procedure:**
The agarose gel is dissolved in the chaotropic Extraction Buffer followed by a simple binding, washing, and eluting procedure. Before start, add 96-99 % Ethanol to the Washing Buffer as indicated on the bottle.

The additional use of Isopropanol enhances yield and is recommended for fragments smaller than 200 bp or larger than 5 kbp. The optional secondary washing step minimizes the salt content of the purification product but may significantly reduce the yield of DNA fragments <200 bp.

<table>
<thead>
<tr>
<th>Buffer</th>
<th>PP-202XS 10 preps</th>
<th>PP-202S 50 preps</th>
<th>PP-202L 250 preps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraction Buffer</td>
<td>15 ml</td>
<td>75 ml</td>
<td>2x 185 ml</td>
</tr>
<tr>
<td>Activation Buffer</td>
<td>1.2 ml</td>
<td>6 ml</td>
<td>30 ml</td>
</tr>
<tr>
<td>Washing Buffer</td>
<td>add 12 ml Ethanol (final volume 15 ml)</td>
<td>add 64 ml Ethanol (final volume 80 ml)</td>
<td>add 160 ml Ethanol to each bottle (final volume 200 ml each)</td>
</tr>
<tr>
<td>Elution Buffer</td>
<td>1 ml</td>
<td>5 ml</td>
<td>25 ml</td>
</tr>
</tbody>
</table>

For *in vitro* use only!

**Shipping:** shipped at ambient temperature

**Storage Conditions:** store at ambient temperature

**Shelf Life:** 12 months
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1 Excision of the Gel:
• Cut the area of gel containing the DNA fragment.
• Transfer the excised gel to a clean 1.5 ml microtube.

2 Sample Preparation:
• Add 3 volumes of Extraction Buffer to 1 volume of the sliced gel. For example, add 300 µl Extraction Buffer to each 100 mg (approx. 100 µl) gel. For gels containing >2.5 % agarose, add 6 volumes of Extraction Buffer per gel volume.
• Incubate at 60 °C for 10 min with occasional mixing to ensure gel dissolution.
• Add 1 volume Isopropanol per gel volume to the dissolved gel and mix well.
• For purification of DNA fragment sizes smaller than 200 bp or larger than 5 kbp increase the amount of Isopropanol to 2 volumes.

3 Column Activation:
• Place a Spin Column into a 2 ml collection tube.
• Add 100 µl of Activation Buffer into the Spin Column.
• Centrifuge at 10,000 g for 30 sec in a micro-centrifuge.

4 Column Loading:
• Apply the sample mixture from step 2 into the activated Spin Column.
• Centrifuge at 10,000 g for 30 sec in a micro-centrifuge.
• Discard the flow-through.

5 Column Washing:
• Place the DNA loaded Spin Colum into the used 2 ml tube.
• Apply 700 µl of Washing Buffer to the Spin Column.
• Centrifuge at 10,000 g for 30 sec and discard the flow-through.

Optional Secondary Washing: Recommended only for DNA >200 bp and if highly purified DNA for DNA sequencing, transfection etc. is required.
• Add 700 µl of Washing Buffer to the Spin Column.
• Centrifuge at 10,000 g for 30 sec and discard the flow-through.
• Centrifuge again for 2 min to remove residual Washing Buffer.

6 Elution:
• Place the Spin Column into a clean 1.5 ml microtube (not provided in the kit).
• Add 30-50 µl Elution Buffer or dd-water to the center of the column membrane.
• Incubate for 1 min at room temperature.
• Centrifuge at 10,000 g for 1 min to elute DNA.