Library Preparation

1. DNA Fragmentation

Break DNA into smaller fragments (200-600 bp)

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2. End Repair

Create blunt ends on DNA fragments

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3. Adapter Ligation

Attach sequencing adapters to both ends

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4. Size Selection

Select fragments of desired length

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5. PCR Amplification

Amplify library for sequencing

Quality Control

Check library size distribution and concentration using Bioanalyzer or TapeStation

Critical Factors

Input DNA quality, fragmentation method, and adapter ligation efficiency