

# Extraction of bacterial chromosomal dna

[Science](#), [Biology](#)



Nucleic acids have a peak of absorbance at 260 nm and this is used to estimate their concentration. Why is the OD280 useful as a measure of contamination and what type of contamination is it measuring?

OD260/OD280 ratio is used as an estimate of DNA purity with a ratio between 1.7 and 2.0 accepted at high purity. Aromatic amino acids present in proteins absorb at 280 nm which is present in the DNA sample will contribute to the total absorbance.

In order to extract DNA from human cells modifications are needed at the cell breakage stage as human cells have no cell wall as opposed to bacterial cells. Hence the cell can be lysed simply by treating it with a detergent instead of using lysozyme.

5). When a linear DNA molecule was cut with EcoRI, the following sized fragments were produced, 160 bp, 1500 bp, 2700 bp, 5600 bp. What was the total size of the original DNA and how many restriction sites were present for EcoRI?

6). A circular DNA plasmid was cut with HindIII, the following sized fragments were produced, 250bp, 600 bp, 5200 bp, 6000 bp. What was the total size of the original plasmid and how many restriction sites were present for HindIII?

Copy and Paste the following DNA sequence into the program and cut it with the following enzymes - attach the restriction map of the DNA - for each enzyme say how many sites there are, the position of the sites, and the sizes of the fragments after cutting.

Restriction fragment length polymorphism or RFLP refers to a difference in homologous DNA sequences that can be identified by the presence of fragments of different lengths after digestion of the concerned DNA samples

with specific restrictions endonucleases.

RFLP is an important tool in diagnosing genetic diseases by localizing genes for genetic disorders. An RFLP probe is a labeled DNA sequence that hybridizes with one or more fragments of the digested DNA sample.