

Radiation damage to DNA-protein complexes

During the working stay in CBM CNRS I learned different polyacrylamide gel electrophoresis techniques (PAGE), which I applied to the specific DNA-protein complex that I study at the moment. A SDS-PAGE technique was used to check the purity of the purchased estrogen receptor protein. The denaturing retardation polyacrylamide gel has been used to purify a 59 bp DNA oligomer. The conditions at which the complex between protein and DNA is formed have been searched and tested using native retardation polyacrylamide gels. Finally sequencing polyacrylamide gel electrophoresis has been used to determine a possible footprint of the protein on DNA oligomer strand breakage pattern.

The mentioned experiments have been performed using the biological material (DNA oligonucleotide, estradiol, estrogen receptor protein and other chemicals) purchased from the grant 33-04012 from the Ministry of Education, Youth and Sports CR, grant IAA1048103 and the research project K4055109 of the Academy of Sciences CR. The existing equipment, material and know-how of experimental techniques in host laboratory have been used.

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