对比法测定 DNA 浓度

Plate assay for determination of DNA concentration

A fairly accurate, rapid assay of DNA concentration can be obtained by UV visualization of samples spotted onto ethidium bromide-containing agarose plates.

1) Prepare 0.8% (w/v) agarose/ethidium bromide plates by melting 0.8g agarose in 100ml 1 x TAE buffer (50 x TAE: 2M Tris-acetate, 50mM EDTA), allowing agarose to cool to approximately 50°C and adding 10ul of a 10mg/ml ethidium bromide stock solution (final concentration was 1ug/ml). Plates can be stored for up to 1 month at 4°C in the dark.

2) Prepare standard DNA solutions of known concentrations to cover the concentration range of 10ng/ul to 200ng/ul in distilled water or TE buffer.

3) Spot standards (1ul) carefully onto the surface of a plate in duplicate followed immediately afterwards by the DNA sample of unknown concentration (1ul).

4) Allow spots to absorb for 10 to 15 minutes.

5) Visualise DNA by illumination using a shortwave UV light box.

The concentration of DNA in the unknown sample can be approximated by comparison with the standards.