

Method for determining hyaluronic acid (HA) electromorphs by gel electrophoresis with subsequent visualization includes preparing an HA solution, performing gel electrophoresis, visualizing the HA solution, and determining HA electromorphs. Electrophoretic distribution of the HA solution is performed in a 10% polyacrylamide gel (PAAG) in 1×TBE buffer consisting of 89 mM Tris-HCl, pH 8.2, 89 mM boric acid, and 2 mM Na₃EDTA, at a constant voltage of 500 V and a temperature of 60 °C for 2-4 hours in a vertical gel electrophoresis apparatus; wherein 5 µl of HA solutions and HA-containing preparations, a molecular weight marker, mixed with 2 µl of loading buffer, and an aqueous solution of an electrophoretically neutral dye are loaded into the gel; visualization of the HA solution separated in the PAAG is carried out by AgNO₃ staining after treating the PAAG with 10% ethanol, 1% nitric acid, and 0.012 M AgNO₃, followed by developing in 0.28 M Na₂CO₃ with 0.019% formalin and fixing in 10% acetic acid; and determination of HA electromorphs is performed by comparison with the molecular weight marker using software.