Interpretation of electrorotation of protoplasts. 1. Theoretical considerations.

Fuhr, G. R., Gimsa, J., Glaser, R., 1985. Studia biophysica 108:149–164.

Abstract: This paper contains the theoretical fundament of the rotation of protoplasts in high-frequency rotating electric fields (electrorotation). The protoplasts have to be calculated as three-shell spheres, considering their composition of vacuole, tonoplast, cell plasma, and plasmalemma. In contrast to the behaviour of single-shell bodies, the electrorotation spectrum indicates a rather complicated shape, depending on the dielectric properties of their compounds. This is demonstrated on theoretical rotation spectra which are calculated for typical parameters of protoplasts.

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