The electron paramagnetic resonance spectra of 3β-doxyl-5α-cholestane dissolved in five liquid crystals have been recorded as a function of temperature in the isotropic and mesogenic phases. From these spectra the order parameter \( \langle P^2 \rangle \) has been determined. The results have been compared with the data obtained from the optical birefringence measurements and from the polarized absorption spectra of the dichroic dye dissolved in liquid crystal host.

Key words: Liquid Crystal; EPR; Order Parameter.