

**Electron paramagnetic resonance studies of gamma irradiated azithromycin**

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Gamma irradiated azithromycin – antibiotic important inter alia in dermatology was examined by the use of an X-band (9.3 GHz) electron paramagnetic resonance spectroscopy. The following doses of irradiation [kGy]: 5, 10, 15, 20, and 25, were used. EPR spectra with complex shape were recorded for all the irradiated samples. Continuous microwave saturation of EPR spectra indicates slow spin-lattice relaxation processes in irradiated azithromycin. The strongest paramagnetism characterizes azithromycin irradiated with a dose 25 kGy. Amplitudes of EPR lines of irradiated azithromycin decrease with increasing of storage time for all doses. The performed EPR studies point out that gamma irradiation should be rejected as sterilization method of azithromycin.