

This work deals with the determination of ethanol in petrol using contactless impedance detector. Planar and tubular detection cells of various geometric parameters are tested. The cells are connected as a frequency determining capacitor in an integrated multivibrator circuit. Analyzed gasoline, whose dielectric constant depends on the ethanol content, forms the dielectric of the capacity cells. Therefore, for various contents of ethanol, the capacity of the detection cells varies and the multivibrator generates different frequency. Based on the calibration, the content of ethanol can be determined from the frequency measured. The results obtained are compared with those obtained by gas chromatography with mass spectrometric detection.