

***Lipid metabolism affects the infrared spectrum of *E. coli****

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Fourier transform infrared spectroscopy has been used to investigate the effect of lipid metabolism on the infrared spectrum of cells. The spectrum of wild-type *E. coli* was compared to that of a mutant strain that was not able to synthesize the phospholipid phosphatidylethanolamine (PE). Differences between the two spectra were clearly observed indicating amongst others an effect on the lipid chain order. The differences were not restricted to the spectral regions of lipid absorption.