The chemical composition of the essential oils isolated from *Rosa canina* flowers at three development stages (small bud with completely fused sepals, half open flower and full bloom) was investigated by GC-FID and GC-MS. The essential oil obtained from small bud by solid-liquid extraction using hexane as organic solvent was characterised by the dominance of phenylethyl alcohol (39.34%), eugenol (5.44%) and nonadecane (5.34%). In contrast, those obtained from the half open flowers was dominated by alkanes with the nonadecane (10.54%), eicosane (6.62%) and heneicosane (6.42%) as the main constituents. At full blooming, the aromatic profile was prevailed by nonadecane (23.28%), eicosane (18.95%) and hexadecane (7.17%).

Additionally, using pentane as organic solvent during the extraction process has led to a marked improvement of the essential oil quality. Hence, enhancement of the content of the oxygenated components mainly eugenol and ethylphenyl alcohol was observed in all analysed oils.

*Figure 1*: GC-MS chromatogram of the essential oil obtained by solid-liquid extraction using pentane as organic solvent.