Figure (3.39): IR-Spectra for para-Benzoquinone (6x10 $^{-5}$ M) at 25C $^{\circ}$. using CH₂Cl₂ as a solvent.

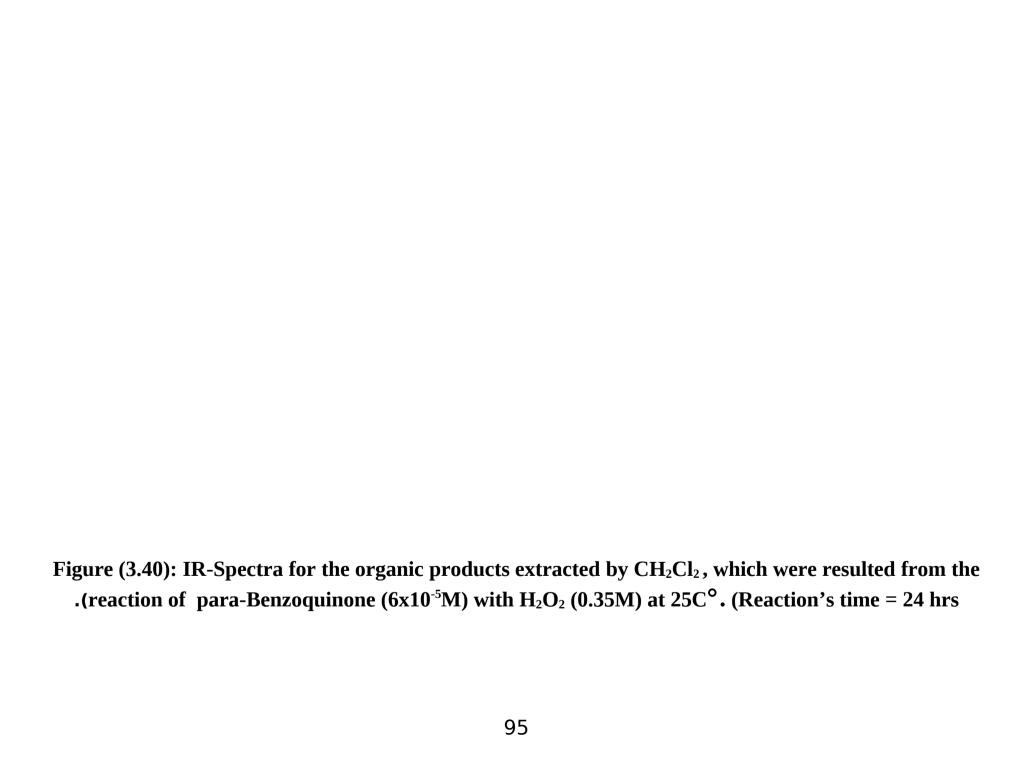


Figure (3.41): IR-Spectra for the organic products extracted by CH_2CL_2 which were resulted from the reaction of para-Benzoquinone (6x10⁻⁵M) with HWPA(1.25X10⁻³M) to activate $H_2O_2(0.35M)$ at $25C^{\circ}$. (Reaction's time = 24 hrs).

Figure (3.42): IR-Spectra for the organic products extracted by CH_2Cl_2 , which were resulted from the reaction of phenol (6x10⁻³M) with HWPA(1.25X10⁻³M) to activate $H_2O_2(0.35M)$ at 25C°. (Reaction's time =7 days).

Figure (3.43): (a) GC-Mass, spectra for phenol (6x10⁻³M). using CH₂CL₂ as a solvent.

(b) GC-Mass spectra for para-Benzoquinone(6x10⁻⁵M). Using CH₂Cl₂ as a solvent.

(c) GC-Mass spectra for the organic products extracted by CH_2Cl_2 , which were resulted from the reaction of HWPA (1.25x10⁻³M) with phenol (6x10⁻³M) to activate H_2O_2 (0.35M).

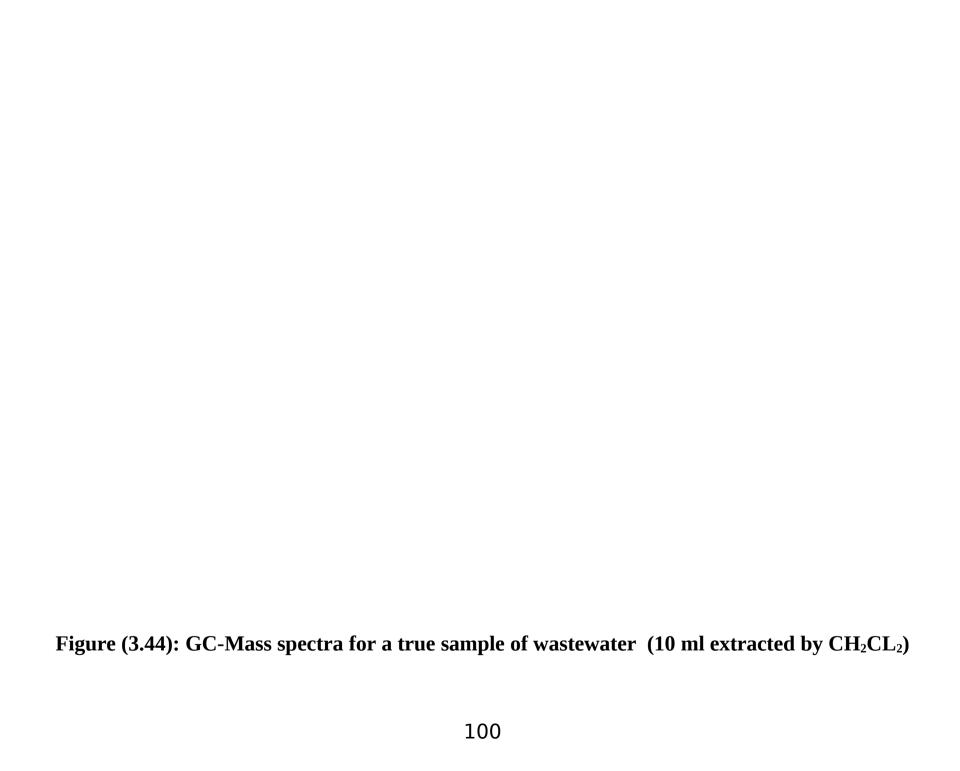


Figure (3.45): GC-Mass spectra for the organic products extracted by CH_2Cl_2 , which were resulted the reaction of HWPA (1.25x10⁻³M) with true sample of wastewater (6ml) to activate H_2O_2 (0.5M) (Reaction's time = 7 days).

Figure (3.46): GC-Mass spectra for the organic products extracted by CH_2Cl_2 , which were esulted from the reaction of HWPA (1.25x10⁻³M) with true sample of wastewater (6ml) to activate H_2O_2 (0.5M) (Reaction's time = 14 days).