Abstract:
The “brittle leaf disease” or “BLD”, that appeared some years ago in north Africa, is one of the most destructive diseases of date palm (*Phoenix dactylifera* L.). In the present work we screened, for the first time, by gas chromatography-mass spectrometry (GC/MS), for changes in the volatile compounds profiles from healthy and BLD-affected date palm leaves. Chromatographic analysis showed that lipids and hydrocarbons composition of leaves change significantly. Indeed, a total of 43 volatile compounds including: fatty acids, hydrocarbons (aliphatic and aromatic), phenols and ketones, were identified in BLD-affected leaves, versus only 26 in healthy ones. Our results also revealed that n-Hexadecanoic acid, 9,12-octadecadienoic acid, 9,12,15-octadecatrien-1-ol, and octadecanoic acid, increase significantly in BLD-affected leaves; however, we registered a decrease in 1-hexadecene, 9-octadecyne and tocopherol contents. These results suggest implication of lipids (fatty acids in particular) in the plant defence reaction. So, further investigations must be carried out in the aim to check this assumption and to acquire better understanding concerning the date palm response to BLD.