

Preface

This is the fourth edition on mass spectra and retention times of common components in plant essential oils. It differs from the previous edition in that an additional 600 compounds have been added and the source of the sample has been added, along with a few sources in nature for most of the compounds. All of the compounds have been analyzed on an HP5970 MSD mass spectrometer using HP Chemstation software. I hope it will be useful as a tool for the identification of compounds in this format. In addition, the library (including retention times) is available for the most common mass spectrometer/ computer systems.

Changes in technology allow us to make this available now. For instance, when I began research on essential oils in 1966, a major portion of my thesis work involved the identification of components in *Juniperus* by IR spectra. Of course that involved cold trapping compounds as they eluted from the TC detector on GC. With current mass spectrometers, we can now accomplish in a couple of hours the analysis that took months or years.

This book is an outgrowth of the previous books (Identification of Essential Oils by Ion Trap Mass Spectroscopy, Academic Press, 1989; Identification of Essential Oil Components by Gas Chromatography/Mass Spectroscopy, Allured Publishing, 1995), but its roots reach back to 1976 when I took a sabbatical study with Ernst von Rudloff and Lawrence Hogge at the National Research Council of Canada. Our collaborative efforts yielded numerous mass spectra on their quadrupole mass spectrometer. Later, as I visited with colleagues in chemical ecology, I began to appreciate the library that I had assembled. So this book is an outgrowth of many collaborations, starting with Ernst von Rudloff and now reaching around the world.

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