

Preface

Determinations of levels of unsaponifiable matter in oils began in the late nineteenth century. They have been published in scientific journals throughout the twentieth century and are still published today.

The first book in which a large number of unsaponifiable matter contents were referenced was written by Paul-Henri Mensier and published in 1957. Entitled *Dictionnaire des Huiles Vegetales (Dictionary of Vegetable Oils)*, it mentioned about 520 unsaponifiable matter contents of oilseeds species. No other document has so far reached this number.

In 1996, under the authority of Alain Karleskind, the *Oil and Fats Manual* quotes 29 unsaponifiable matter contents and features 27 tables containing the contents of unsaponifiable fractions in the most exploited seed oils. It was first published in French (*Manuel des Corps Gras*) in 1992.

The *Nouveau Dictionnaire des Huiles Vegetales (New Dictionary of Vegetable Oils)* was published in 1995. Its author, Eugene Ucciani, cites 203 unsaponifiable matter contents of the oils determined during works on fatty acids from vegetable oils. However, the chemical families constituting the unsaponifiables are not mentioned.

The contribution of a new book devoted to unsaponifiable matter content is based on the following arguments:

- Almost half of the 686 references on the subject contained therein have been published since 1994.
- This collection presents the contents of the chemical families found in the unsaponifiable matter (sterols, 4-methylsterols, triterpene alcohols, tocopherols, tocotrienols, carotenoids, fatty alcohols, hydrocarbons etc.) of each published work.
- Neither P-H. Mensier, A. Karleskind nor E. Ucciani reported in their works the methods used for each determination of unsaponifiable matter content mentioned and/or the chemical families that compose them. In this area, a result reported without specifying the method used remains incomplete.

- Several families of constituents of unsaponifiable matter (tocopherols and tocotrienols, sterols, carotenoids, hydrocarbons etc.) are still the subject of much research and have many applications (areas of health, food technology, cosmetics).

I must add that I am not an engineer or researcher specializing in oleochemicals. However, close collaboration initiated in 2000 with Expanscience Laboratories (France) allowed me to conduct extensive bibliographic searches on some oilseed species and examine their particular unsaponifiable matters. In addition to these surveys, some personal unpublished works on the subject are mentioned.

I end this introduction by thanking Agnes Bergers and Claudie Gestin (ITERG, Industrial Technical Centre on Fats, Pessac, France) who allowed me access to journals of this institute, and Xavier Pagès (ITERG) for three unpublished results.

I also thank Anthony Piccirilli, (Valagro Renewable Carbon Poitou-Charentes, Poitiers, France) who has verified that the book does not contain serious flaws, and the R & D Lipochemistry Department of Expanscience Laboratories (Epernon, France) that authorized me to disclose the results of joint works.

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<http://www.springer.com/978-3-642-35709-1>

Unsaponifiable Matter in Plant Seed Oils

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2013, X, 366 p., Hardcover

ISBN: 978-3-642-35709-1