The presentation shows that new modifications of bleaching earths play an important role for good bleaching in refining edible fats and oils. The availability of newly modified clays is of high interest for efficiency and economic viability in the refining process as well as reducing environmental pollution. At first the central role of bleaching is described and subsequently different methods are explained to get an overview about the complexity of bleaching edible fats and oils. In the main part an overview is given about different activation methods, e. g. activation with acids or bases and especially the development of new modifications to form modern products for good bleaching. This includes both the application of new activation materials like citric acid and new activation techniques. The latter opens the door for a new and innovative technology in activation, so called „dry activation“. In this way the combination of new bleaching earths with highly efficient procedures is presented. At last some futural aspects in developing new materials for bleaching are shown.