

Contents

<i>List of Contributors</i>	vii
<i>Acknowledgements</i>	ix
<i>Preface</i>	xi
PART I INTRODUCTION	1
1 Organic Materials in Art and Archaeology	3
<i>Maria Perla Colombini and Francesca Modugno</i>	
2 Overview of Mass Spectrometric Based Techniques Applied in the Cultural Heritage Field	37
<i>Gianluca Giorgi</i>	
PART II DIRECT MASS SPECTROMETRIC ANALYSIS	75
3 Direct Mass Spectrometric Techniques: Versatile Tools to Characterise Resinous Materials	77
<i>Erika Ribechini</i>	
4 Direct Mass Spectrometry to Characterise Wax and Lipid Materials	97
<i>Martine Regert</i>	
5 GALDI-MS Applied to Characterise Natural Varnishes and Binders	131
<i>Patrick Dietemann and Christoph Herm</i>	
6 MALDI-MS Applied to the Analysis of Protein Paint Binders	165
<i>Stepanka Kuckova, Radovan Hynek and Milan Kodicek</i>	

PART III GAS CHROMATOGRAPHY/MASS SPECTROMETRY	189
7 GC/MS in the Characterization of Lipids	191
<i>Maria Perla Colombini, Francesca Modugno and Erika Ribechini</i>	
8 GC/MS in the Characterisation of Resinous Materials	215
<i>Francesca Modugno and Erika Ribechini</i>	
9 GC/MS in the Characterisation of Protein Paint Binders	237
<i>Maria Perla Colombini and Gwénaëlle Gautier</i>	
10 SPME/GC-MS in the Characterisation of Terpenic Resins	261
<i>Jean Bleton and Alain Tchaplà</i>	
11 Py-GC/MS of Organic Paint Binders	303
<i>Ilaria Bonaduce and Alessia Andreotti</i>	
12 Py-GC/MS of Natural and Synthetic Resins	327
<i>Dominique Scalarone and Oscar Chiantore</i>	
PART IV LIQUID CHROMATOGRAPHY/MASS SPECTROMETRY	363
13 Characterization of Organic Natural Dyes by Electrospray Mass Spectrometry Coupled with HPLC and/or Capillary Electrophoresis	365
<i>Katarzyna Lech, Katarzyna Połec-Pawlak and Maciej Jarosz</i>	
PART V OTHER MS-BASED TECHNIQUES	389
14 Compound-specific Stable Isotopes in Organic Residue Analysis in Archaeology	391
<i>Richard P. Evershed</i>	
15 ToF-SIMS Study of Organic Materials in Cultural Heritage: Identification and Chemical Imaging	433
<i>Vincent Mazel and Pascale Richardin</i>	
16 Accelerator Mass Spectrometry for ¹⁴C Dating	459
<i>Mariaelena Fedi</i>	
Index	483