

Contents

Contents	7
Preface	9
Abstract	10
Deutschsprachige Zusammenfassung	11
Figure index	12
Table index	14
Abbreviations	15
1 Introduction	19
1.1 Fungi and mycotoxins	19
1.2 Mycotoxicoeses	20
1.3 Food mycotoxin risk assessment and regulation	22
1.4 Mycotoxin monitoring in the EU and Germany	23
1.5 The importance of food mycotoxin analysis	24
1.6 The importance of food mycotoxin chemistry	25
1.7 Important analytical concepts and techniques	26
1.8 Introduction to the relevant analytes	28
2 Objectives and solution approaches	34
2.1 Superior objectives	34
2.2 Quantification of TA 5 in cereals and beer	34
2.3 Quantification of ZON 10 in edible oils	37
2.4 Degradation of <i>Alternaria</i> mycotoxins upon food processing.....	39
3 Results and discussion	41
3.1 Quantification of TA 5 in cereals and beer	41
3.2 Quantification of ZON 10 in edible oils	53
3.3 Kinetic study on the degradation of TA 5 in aq. solution	66
3.4 Degradation of AOH 7, AME 8 and ALT 9 upon bread baking	74
4 Conclusion and outlook	84
5 Materials and methods	86
5.1 Materials and instruments	86
5.2 Software	90
5.3 Chemical nomenclature	90
5.4 Analytical terminology.....	90
5.5 General procedures	92
5.6 Methods	93
Literature	112
Annex	125
Acknowledgements	126