

Contents

NMR in foods: the industrial perspective <i>J.P.M. van Duynhoven, A. Haiduc, F. van Dorsten and E. van Velzen</i>	1
----------------------------------------------------------------------------------------------------------------------	---

Food in the Human Body

Functional MRI of food in the gastrointestinal tract <i>E. Cox, C.L. Hoad, L. Marciani, R.C. Spiller and P.A. Gowland</i>	15
Nutrimetabonomics: metabonomics in food science <i>H. Tang and Y. Wang</i>	26
Metabolomics in food science: evaluating the impact of functional foods on the consumer <i>C.A. Daykin, F. Wülfer and J.P.M. van Duynhoven</i>	36

Food Quality

¹ H NMR-based metabonomics applied in the elucidation of biochemical effects of consumption of whole grain cereals <i>H.C. Bertram, K.E. Bach Knudsen, A. Malmendal, N.C. Nielsen, X. Fretté and H.J. Andersen</i>	47
Low molecular weight metabolites in white muscle from cod (<i>gadus morhua</i>) and haddock (<i>melanogrammus aeglefinus</i>) analyzed by high resolution ¹ H NMR spectroscopy <i>I.B. Standal, I.S. Gribbestad, T.F. Bathen, M. Aursand and I. Martinez</i>	55
NMR of cell walls: a multi-scale approach <i>C. Rondeau-Mouro, H. Bizot and M. Lahaye</i>	63
MRI of a meat-related food system <i>J.P. Renou, J.M. Bonny, L. Foucat and A. Traoré</i>	72
Use of MRI to probe the water proton mobility in soy and wheat breads <i>A. Lodi and Y. Vodovotz</i>	83
Probing water migration and mobility during the ageing of bread <i>N.M. Sereno, S.E. Hill, J.R. Mitchell, U. Scharf and I.A. Farhat</i>	89
High resolution NMR tools for the analysis of beer and wine <i>A.M. Gil and J. Rodrigues</i>	96

Adulteration study in Brazilian honey by SNIF and ^1H NMR <i>E.F. Boffo, L.A. Tavares, A.G. Ferreira, M.M.C. Ferreira and A.C.T. Tobias</i>	105
---------------------------------------------------------------------------------------------------------------------------------------------------------	-----

The practical aspects of the quantitative analysis of solid-liquid systems using TD-NMR with low-field instruments <i>L. Andrade, W. MacNaughtan and I.A. Farhat</i>	114
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----

Food Processing

Influence of grain structural components on the drying of wheat: a magnetic resonance imaging study <i>P.K. Ghosh, D.S. Jayas, M.L.H. Gruwel and N.D.G. White</i>	125
----------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----

Dynamic visualisation of structural changes in cereal materials under high-moisture conditions using 3D MRI and XRT <i>W.P. Weglarz, G.J.W. Goudappel, G. van Dalen, H. Blonk and J.P.M. van Duynhoven</i>	134
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----

MRI study of polenta gelatinization during cooking <i>I. Serša, A. Sepe and U. Mikac</i>	141
---------------------------------------------------------------------------------------------	-----

The melting behaviour of lard in “Danish style” liver pâté as measured by DSC and TD-NMR <i>G. Svenstrup, E. Micklander, J. Risbo and I.A. Farhat</i>	148
----------------------------------------------------------------------------------------------------------------------------------------------------------	-----

New Techniques and Novel Data Analysis and Exploitation

Motional relativity and novel NMR sensors <i>B. Hills, K. Wright, N. Marigheto and D. Hibberd</i>	157
------------------------------------------------------------------------------------------------------	-----

Molecular dynamics in sugar classes as revealed by recent dynamic solid-state NMR methods <i>D. Reichert, O. Pascui, M. Kovermann, N.E. Hunter and P.S. Belton</i>	167
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----

How much information is there in an NMR measurement? <i>P.S. Belton</i>	177
----------------------------------------------------------------------------	-----

Advances in the magnetic resonance imaging of extracellular matrix of meat <i>J.M. Bonny, L. Foucat, M. Mouaddab, L. Sifre-Maunier, A. Listrat and J.P. Renou</i>	184
----------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----

Separation of two dimensional diffusion and relaxation time distributions from oil/fat and moisture in food <i>G.H. Sørland, F. Lundby and Å. Ukkelberg</i>	189
----------------------------------------------------------------------------------------------------------------------------------------------------------------	-----

Dairy product authentication by ^1H NMR spectroscopy in combination with different chemometric tools <i>M. Cuny, E. Vigneau, M. Lees and D.N. Rutledge</i>	197
------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----

<i>Contents</i>	ix
A ternary full-rank experimental design as viewed by chemometrics and NMR spectroscopy <i>H. Winning and S.B. Engelsen</i>	205
Phytic acid degradation by phytase as viewed by ^{31}P NMR and multivariate curve resolution <i>M.M. Nielsen, N. Viereck and S.B. Engelsen</i>	214
Subject Index	223

