

Session I : Water Structure - *Chair : M. Mathlouthi*

**Cluster composition of liquid water derived from laser-raman spectra
and molecular simulation data**

M. Starzak

School of Chemical Engineering, University of Natal, Durban 4041, South Africa

The behaviour of water as a protein solvent near the glass transition temperature

L. Kroon , M. Weik and S. van Thillo

Structural Chemistry, Bijvoet center, Utrecht University, N.L.

Quantum and Molecular Mechanical Studies of Water and Carbohydrates

D. French

Southern Regional Research Center, U. S. Department of Agriculture, New Orleans

Session I : Water Structure - *Chair : H. Bizot*

Free and/or bound water by dielectric measurements

M. Henry a), M. Gaudillat b), L. Cadillon Costa c) , F. Lakkis a) ;

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b) Recherche et Développement, Société CLAUSE, Bretigny sur Orge ;

c) Physics Department, University of Aveiro, 3810-193 Aveiro, Portugal

Clathrate water molecules : Experiments and theoretical evidences

M. Dauchez, W Peticolas, AJP Alix (*Université de Reims Champagne-Ardenne*)

Magnetic Resonance Imaging, studies of water interactions in meat

J.P. Renou, L. Foucat, J.M. Bonny *STIM, INRA, Theix, F- 63122*

Session II : Water Activity - Chair : S. Guilbert

Water Activity: Thermodynamic and Kinetic Consequences on State changes in foods

T.P. Labuza (*University of Minnesota, Minneapolis, USA*)

Estimation of water equilibrium properties in food processing

C.G. Dussap, J.B. Gros

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The energy of interaction between water and surfaces of biological Reference Materials

S. Rückold ¹, K.H. Grobecker ², H.-D. Isengard ¹

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² IRMM, Geel, Belgium

Session II : Water Activity - Chair : D-N. Rutledge

Water vapor sorption isotherms and the caking of food powders

M. Mathlouthi, B. Rogé

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Dielectric method for the determination of aw

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Water activity and the preservation of plant foods

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Water activity and dielectric properties of gels in frequency range 200 MHz to 6 GHz

S. Clerjon, J-D Daudin et J-L Damez

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Session III : Water Determination - *Chair : H-D Isengard*

Karl Fischer titration – an old idea developed to a modern analytical procedure

Schoeffski Katrin

Riedel-de-Haën, Hannover, Germany

Influence of conductivity on Karl Fischer titration results

S. Gruenke

Merck laboratory reagents, Darmstadt, Germany

Karl Fischer titration of food: towards complete automation

Cosimo A. De Caro, Albert Aichert, Craig Gordon

Mettler-Toledo GmbH, Analytical Sonnenbergstrasse 74 CH-8603 , Schwerzenbach, Switzerland

Analysis of water in food by NIRS

H. Büning-Pfaue

Institute of food Science & Food chemistry, Bonn, Germany

Session III : Water Determination - *Chair : K-H. Grobecker*

Proposal of a new reference method for determining the water content of butter oil

H.D. Isengard , Heike Kerwin

University of Hohenheim, Institute of food technology, D- 70593 Stuttgart

Control of the water content of dairy products – definition of limits, consideration of process variation, official use of autocontrol data

H. Glaeser (*European Commission, Directorate General for Agriculture, B – 1049 Brussels*)

Total Solids Determination in Dairy Products by Microwave Oven Technique

C.T. Reh (*Nestlé Research Center, Quality and Safety, Vers-chez-les-Blanc, CH-1000 Lausanne, Switzerland*)

Measuring water content in raisins

N.A. Chaniotakis, M. Fouskaki (*Laboratory of Analytical Chemistry University of Crete - Iraklion Crete, GRECE*)