

The HUNK's published articles and background references on chemical denaturation and protein stability

Published Articles

Denatured State Aggregation Parameters Derived from Concentration Dependence of Protein Stability

Arne Schön, Benjamin R. Clarkson, Rogelio Siles, Patrick Ross, Richard K. Brown, Ernesto Freire

Analytical Biochemistry, Vol. 488, Pages 45-50, 2015

Isothermal Chemical Denaturation to Determine Binding Affinity of Small Molecules to G-protein Coupled Receptors

Patrick Ross, Wilhelm Weihofen, Fai Siu, Amy Xie, Hetal Katakia, S. Kirk Wright, Ian Hunt, Richard K. Brown, Ernesto Freire

Analytical Biochemistry, Vol. 473, Pages 41-45, 2015

Stability of Biologics at High Concentrations

Ernesto Freire, Richard Brown and Arne Schön

Drug Discovery and Development, January 10, 2014

Optimizing Biologics Stability Testing: Novel Instrument Automates Critical Procedure Using Chemical Denaturation

Richard Brown, Ernesto Freire, Burleigh Hutchins

Genetic Engineering & Biotechnology News, Vol. 33, No. 16, September 15, 2013

Chemical Denaturation as a Tool in the Formulation Optimization of Biologics

Ernesto Freire, Arne Schön, Burleigh M. Hutchins, Richard K. Brown

Drug Discovery Today, Vol. 18, Pages 1007-1013, 2013

Ligand Binding Analysis and Screening by Chemical Denaturation Shift

Arne Schön, Richard K. Brown, Burleigh M. Hutchins and Ernesto Freire

Analytical Biochemistry, Vol. 443, Issue 1, Pages 52–57, December 1, 2013

Background References on Chemical Denaturation and Protein Stability

Fifty Years of Solvent Denaturation

John A. Schellman

Biophysical Chemistry, Vol. 96, Pages 91–101, 2002

Determination and Analysis of Urea and Guanidine Hydrochloride Denaturation Curves

C.N. Pace

Methods Enzymol, Vol. 131, Pages 266-280, 1986

Linear Extrapolation Method of Analyzing Solvent Denaturation Curves

C. Nick Pace, Kevin L. Shaw

PROTEINS: Structure, Function, and Genetics, Suppl 4:1–7, 2000

Denaturation of Proteins by Urea and Guanidine Hydrochloride

C. Nick Pace, Gerald R. Grimsley, J. Martin Scholtz

Protein Folding Handbook. Part I. Edited by J. Buchner and T. Kiefhaber

Copyright 2005 WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim

ISBN: 3-527-30784-2

Urea Denaturation of Barnase: pH Dependence and Characterization of the Unfolded State

C.N Pace, et al.

Biochemistry, Vol. 31, Pages 2728-2734, 1992

Staphylococcal Nuclease: A Showcase of m Value Effects

David Shortle

Advances in Protein Chemistry, Vol. 46, 1995

Measuring the Conformational Stability of a Protein

C.N. Pace, B.A. Shirely, J.A. Thomson

Protein Science, Vol. 4, Pages 2138-2148, 1995

Denaturant m Values and Heat Capacity Changes: Relation to Changes in Accessible Surface Areas of Protein Folding

Jeffrey K. Myers, C. Nick Pace, J. Martin Scholtz

Relationships Between the Temperature Dependence of Solvent Denaturation and the Denaturant Dependence of Protein Stability Curves

Mark E. Zweifel, Doug Barrick

Biophysical Chemistry, Vol. 101 –102, Pages 221–237, 2002

Cold Denaturation of Monoclonal Antibodies

Kristi L. Lazar, Thomas W. Patapoff, Vikas K. Sharma
mAbs Vol 2. Issue 1, Pages 42-52; January/February 2010

Urea and Guanidine Hydrochloride Denaturation of Ribonuclease, Lysozyme, Alpha-chymotrypsin, and Beta-lactoglobulin

R.F. Greene, Jr., C.N. Pace
J. Biol. Chem., Vol. 249, Pages 5388-5393, 1974

Unfolding Free Energy Changes Determined by the Linear Extrapolation Method**1. Unfolding of Phenylmethanesulfonyl α -chymotrypsin Using Different Denaturants**

M.M. Santoro, D.W. Bolen
Biochemistry, Vol. 27, Pages 8063-8068, 1988

Unfolding Free Energy Changes Determined by the Linear Extrapolation Method**2. Incorporation of ΔG_{N-U} values in a Thermodynamic Cycle**

D.W. Bolen, M.M. Santoro
Biochemistry, Vol. 27, Pages 8069-8074, 1988

Denaturant m Values and Heat Capacity Changes: Relation to Changes in Accessible Surface area of Protein Unfolding

J.K Myers, et al.
Prot. Science, Vol. 4, Pages 2138-2148, 1995

The Thermodynamic Linkage Between Protein Structure, Stability and Function

E. Freire
In Methods in Molecular Biology, Murphy, K.P., ed., Vol. 168, Pages 37-68, 2001