

PC 3 - Validation of Simple Liquid Phase ¹H NMR Method for the Determination of Degree of Deacetylation of Chitosans

A. Serreqi, M. Lavertu, A. Rodrigues, M. Berrada, D. Wang, *A. Chenite*

Bio Syntech Canada Inc. 475 Armand-Frappier Blvd. Montreal QC, H7V 4B3 CANADA

A simple, rapid, precise and robust liquid phase ¹H NMR method was developed and validated to determine the degree of deacetylation (DDA) of chitosans. The method is applicable to a wide range of deacetylation and can tolerate significant variability in the sample preparation. The method was tested with chitosans from 48.0 to 99.8 % DDA. Also it was tested with chitosan samples with concentrations from 2.50 to 15.00 mg/mL. Chitosan samples with up to 40 % water content were tested as well. These variables had no significant impact on the % DDA determination of the samples. The precision, ruggedness, specificity, stability, robustness and accuracy of the method will be discussed.