

[Available Issues](#) | [Japanese](#)>> [Publisher Site](#)Author: [ADVANCED](#) | Volume Page
Keyword: [TOP](#) > [Available Issues](#) > [Table of Contents](#) > [Abstract](#)

ONLINE ISSN : 1348-2246

PRINT ISSN : 0910-6340

Analytical Sciences

Vol. 26 (2010) , No. 3 p.337

[\[PDF \(782K\)\]](#) [\[References\]](#)**High Frequency Spectroscopic Study of the Bound State of Water in PEG–H₂O System during Heating from Frozen State**[Takaya TAKEI^{1\)}](#) and [Yoshinori SUGITANI^{1\)}](#)*1) Department of Chemistry, Faculty of Science, Kanagawa University*

(Received November 9, 2009)

(Accepted January 30, 2010)

The bound state of water in PEG (polyethylene glycol)–H₂O systems was studied by using HFS and DSC methods. Samples with the mixing ratios EO:H₂O = 1:1 (a) and 1:10 (b), where EO indicates the ethylene oxide units in PEG chain, were heated from frozen state to melt state. Sample (a) gave an HFS peak corresponding to the weakly bound water, while sample (b) gave the peaks of both the bound and free water. DSC measurements gave quite similar patterns to those of HFS measurements, but with additional peaks corresponding to cold crystallization. The difference between the two measurements was reasonably interpreted by considering the origin of the cold crystallization.

[\[PDF \(782K\)\]](#) [\[References\]](#)Download Meta of Article [\[Help\]](#)[RIS](#)[BibTeX](#)

To cite this article:

Takaya TAKEI and Yoshinori SUGITANI, *Anal. Sci.*, Vol. 26, p.337, (2010) .



[Japan Science and Technology Information Aggregator, Electronic](#)

