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Molecular Biotechnology Programme

Uppsala University School of Engineering

UPTEC X 07 003		Date of issue 2007-01
Author <p style="text-align: center;">Martin Holmgren</p>		
Title (English) <p style="text-align: center;">Biomolecular interaction studies of xanthurenic acid using capillary electrophoresis</p>		
Abstract <p>Xanthurenic acid, which is a metabolite product emanating from the degradation of tryptophan by the enzyme indoleamine-2,3 dioxygenase (IDO), is present in our body and can induce cell death and also denaturation of some proteins by binding to them. The primary goal of this project was to study the interaction between xanthurenic acid and insulin at physiologic pH. The affinity of xanthurenic acid to calcitonin and cyclodextrins was also determined. To study the mentioned associations, capillary electrophoresis was used where focus was on the partial filling technique. The xanthurenic acid and insulin interacted weakly whereas no interaction was detected between the acid and calcitonin. The affinity of xanthurenic acid to γ-cyclodextrin and 2-hydroxypropyl β-cyclodextrin was determined to 60 M^{-1} and 90 M^{-1}, respectively. Furthermore, it was shown that the 2-hydroxypropyl groups facilitated the binding of xanthurenic acid to 2-hydroxypropyl β-cyclodextrin.</p>		
Keywords Capillary electrophoresis, partial filling technique, association constants, xanthurenic acid, insulin, calcitonin, cyclodextrin		
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Project name	Sponsors	
Language <p style="text-align: center;">English</p>	Security	
ISSN 1401-2138	Classification	
Supplementary bibliographical information	Pages <p style="text-align: center;">28</p>	
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