

환경 및 산업보건			번호: J - C - 4		
제 목	국문	간접흡연의 생물학적 지표로서 소변 내 cotinine과 1-hydroxypyrene-glucuronide의 분석			
	영문	Urinary cotinine and 1-hydroxypyrene-glucuronide as biomarkers of environmental tobacco smoke			
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<p>1. 연구 목적 This study was conducted to compare two biomarkers of environmental tobacco smoke (ETS); urinary cotinine and 1-hydroxypyrene-glucuronide (1-OHPG).</p> <p>2. 연구 방법 Urine samples were collected from 102 junior high school students. Urinary cotinine was determined by GC and urinary 1-OHPG was assayed by synchronous fluorescence spectroscopy (SFS) after immuno-affinity purification using monoclonal antibody 8E11. Information on ETS was collected by self-administered questionnaire. Pearson's correlation coefficient was used to evaluate the association between urinary cotinine and 1-OHPG levels.</p> <p>3. 연구 결과 Log transformed urinary cotinine levels were significantly correlated with the amounts of ETS assessed by the questionnaire. (Pearson's correlation coefficient, $r=0.36$, $p<0.01$). Urinary 1-OHPG levels were also significantly correlated with amounts of ETS (Pearson's correlation coefficient, $r=0.25$, $p=0.01$). Moreover, a significant positive correlation was observed between urinary 1-OHPG and urinary cotinine levels in children with ETS exposure (Pearson's correlation coefficient, $r=0.19$, $p=0.05$).</p> <p>4. 고찰 This study suggested that urinary 1-OHPG can be potentially useful biomarkers of environmental tobacco smoke. (Supported by Ministry of Environment)</p>					