

**Part-Per-Trillion level determination of Alkylphenols,  
Chlorophenols and Bisphenol A using GC/MS-SIM  
in Tap Water**

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**Abstract** : A new technique is proposed for the determination of alkylphenols, chlorophenols and bisphenol A in tap water. The sample preparation consists of a solid phase extraction (SPE) of alkylphenols, chlorophenols and bisphenol A from a water sample with XAD-4 and subsequent conversion to isobutyloxycarbonyl (isoBOC) derivatives or *tert.*-butyldimethylsilyl (TBDMS) derivatives for sensitive analysis with the GC/MS-SIM mode.

The recoveries were 86.6~105.2 % (isoBOC derivatization) and 97.6~484.5 % (TBDMS derivatization), respectively.

The limit of quantitation of alkylphenols, chlorophenols and bisphenol A for SIM were 0.001~0.050  $\mu\text{g/l}$  (isoBOC derivatization) and 0.003~0.050  $\mu\text{g/l}$  (TBDMS derivatization). The SIM responses were linear with the correlation coefficient varying 0.9755~0.9981 (isoBOC derivatization), and 0.9908~0.9996 (TBDMS derivatization). The derivative methods and their application to tap water samples will be discussed.

**Key words** : solid phase extraction, isoBOC derivatization, TBDM derivatization

**발표유형** : 포스터