Comparison of Signal-to-Noise, Blank Determination, and Linear Regression Methods for the Estimation of Detection and Quantification Limits for Volatile Organic Compounds by Gas Chromatography

Publons ID	4140058
Wos ID	WOS:000273591600027
Doi	
Title	Comparison of Signal-to-Noise, Blank Determination, and Linear Regression Methods for the Estimation of Detection and Quantification Limits for Volatile Organic Compounds by Gas Chromatography
First Author	
Last Author	
Authors	Sanagi, MM; Ling, SL; Nasir, Z; Hermawan, D; Ibrahim, WAW; Abu Naim, A;
Publish Date	NOV-DEC 2009
Journal Name	JOURNAL OF AOAC INTERNATIONAL
Citation	96
Abstract	LOD and LOQ are two important performance characteristics in method validation. This work compares three methods based on the International Conference on Harmonization and EURACHEM guidelines, namely, signal-to-noise, blank determination, and linear regression, to estimate the LOD and LOQ for volatile organic compounds (VOCs) by experimental methodology using GC. Five VOCs, toluene, ethylbenzene, isopropyl benzene, n-propylbenzene, and styrene, were chosen for the experimental study. The results indicated that the estimated LODs and LOQs were not equivalent and could vary by a factor of 5 to 6 for the different methods. It is, therefore, essential to have a clearly described procedure for estimating the LOD and LOQ during method validation to allow interlaboratory comparisons.
Publish Type	Journal
Publish Year	2009
Page Begin	1833
Page End	1838
Issn	1060-3271
Eissn	1944-7922
Url	https://www.webofscience.com/wos/woscc/full-record/WOS:000273591600027
Author	DADAN HERMAWAN