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DETERMINATION OF TETRAHYDROTHIOPHENE IN AMBIENT AIR BY GAS CHROMATOGRAPHY WITH A PFPD DETECTOR COUPLED TO A PRE-CONCENTRATION TECHNOLOGY

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Tetrahydrothiophene (THT) is an odor additive used widely in the world. This paper introduced a new pre-concentration techniques coupled with a PFPD detector to analyze THT in ambient air samples. The positive results have been obtained in both standard and actual sample analysis. The results indicate that using Summa canisters or Tedlar bags to take the samples and followed by pre concentration techniques with a GC/PFPD detector, the lowest detection limits for THT can be as low as 2.0μg/m3. The relative standard deviations (n=6) of replicate sample precision are generally lower than 5.0%. Satisfactory results were obtained in the determination of THT in actual ambient air samples as well.