



一、中文計畫名稱：

石化工業區周界空氣中甲基丙酮、甲基丁基酮、甲基異丁酮、丙酮、丁酮、甲基丙烯酸甲酯、乙酸乙酯、乙醯乙酸甲酯、丙烯酸甲酯、正丁酸甲酯、戊基乙酸甲酯、甲醇、乙醇、乙二醇、丙三醇、異丙醇及丁醇等十七項揮發性有機物調查之研究

二、英文計畫名稱：

Investigation of the existing levels of methyl acetone, methyl butyl ketone, methyl isobutyl ketone, acetone, methyl ethyl ketone (2-butanone), methyl methacrylate (MMA), ethyl acetate, methyl acetoacetate, methyl acrylate, methyl butyrate, methyl amyl acetate, methanol, ethanol, ethylene glycol, glycerin, isopropyl alcohol and n-butyl alcohol in the proximity of three major petrochemical industrial parks

三、計畫編號：EPA-92-1601-0204

四、執行單位：工業技術研究院環境與安全衛生技術發展中心

五、計畫主持人（包括共同主持人）：蕭祥憲，張寶額，張瑞琪，

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十三、中文摘要關鍵詞：石化工業區，目標化合物，周界空氣

十四、英文摘要關鍵詞：

petrochemical industrial parks, target compounds, ambient air

十五、中文摘要

本計畫主要是提供石化工業區周界空氣中甲基丙酮、甲基丁基酮、甲基異丁酮、丙酮、丁酮、甲基丙烯酸甲酯、乙酸乙酯、乙醯乙酸甲酯、丙烯酸甲酯、正丁酸甲酯、戊基乙酸甲酯、甲醇、乙醇、乙二醇、丙三醇、異丙醇及丁醇等十七項極性揮發性有機物之調查，以提供空保處有機溶劑管制濃度之重要參考。執行之初先以研究建立上述十七項污染物之檢測技術，包括方法之品保規範，包括準確性、偵測極限、精密度及重覆性等之評估。蒐集極性揮發性有機污染物之國內外相關檢測技術報告及管制標準，並提供國內相關業別污染源資料。採樣及檢測之石化工業區周界空氣樣品數，應達三十件以上，樣品來源至少應包含三個石化工業區，以達到樣品多樣性之要求（每件檢測項目包含十七項揮發性有機物），並提供符合環檢所檢測標準方法格式之草案，及將十七項污染物之檢測技術轉移環檢所。

十六、英文摘要：

The major objective of this study is to evaluate two different sampling techniques used for collecting atmospheric samples of 17 target organic compounds. These target organic compounds include methyl acetone, methyl butyl ketone, methyl isobutyl ketone, acetone, methyl ethyl ketone (2-butanone), methyl methacrylate (MMA), ethyl acetate, methyl acetoacetate, methyl acrylate, methyl butyrate, methyl amyl acetate, methanol, ethanol, ethylene glycol, glycerin, isopropyl alcohol and n-butyl alcohol. Two types of commonly used sampling media, SUMMA canister and sorbent trap have been tested for their collection efficiencies. The test will include sample recovery, medium breakthrough (sorbent trap), method detection limit, analytical precision, and accuracy. The samples will be analyzed by gas chromatography/mass spectrometry (GC/MSD).

Furthermore, this study has investigated the existing levels of these 17 target organics in the proximity of four major petrochemical industrial parks. Thirty atmospheric samples have been collected from these four industrial parks. The results will be used as a reference for government to establish regulatory emission limits for these 17 target organics.

關閉視窗