

## Analysis of formaldehyde and a cetaldehyde in atmosphere

Formaldehyde and acetaldehyde in atmosphere was analyzed after solid phase extraction. Fig.1 shows the sampling system. Fig.2 shows the procedure of derivatization by using 2,4-DNPH S10 Cartridge (SUPELCO). Fig.3 shows the chromatogram of formaldehyde (7.35ppbV), acetaldehyde (3.70ppbV), acetone (41.7 ppbV) and 2-butanone in atmosphere collected by 2,4-DNPH S10 Cartridge (SUPELCO).

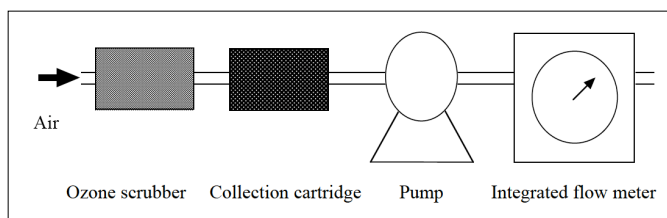


Fig.1 Overview of sample collection system

### Conditions:

Column : CrestPak C18S  
 Eluent : H<sub>2</sub>O/CH<sub>3</sub>CN (40/60)  
 Wavelength : 360nm  
 Flow rate : 1.0ml/min  
 Column temperature: 40 degree celsius  
 Sample : STD(0.5µg/ml each as carbonyl)  
 Ambient air  
 Injection volume : 20µL

Keywords: 1.2,4-DNPH derivatives of aldehydes and ketones, 2.ambient air, 3.OFD, 4.UV, 5.EPA TO-11

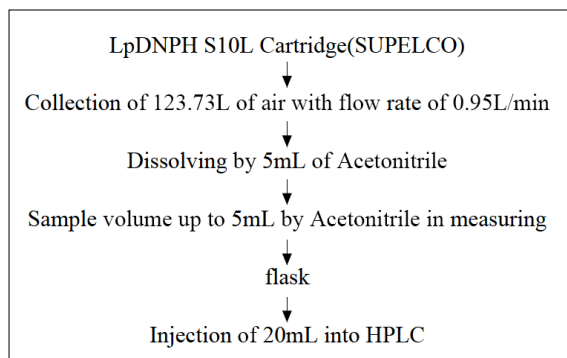


Fig.2 Procedure of collection and derivatization

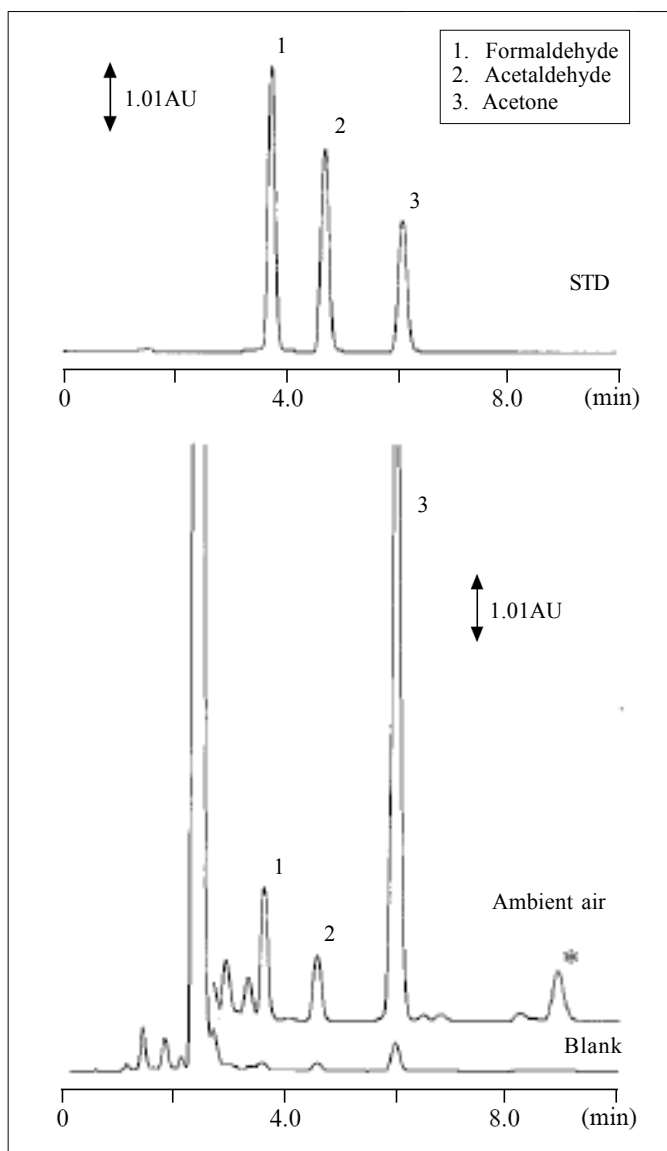


Fig.3 Chromatogram of STD sample and ambient air