



**GAW World Calibration Centre (WCC) for Methane  
and  
Quality Assurance/Science Activity Centre (QA/SAC)  
in Asia and the South-West Pacific**



**Methane Reference Gas Intercomparison for Japan from 2009 to 2010  
Technical Details on Laboratory Measurements**

**National Institute for Environmental Studies (NIES)**

*1. Information on contributors*

- (1) Contributors: Dr. Toshinobu MACHIDA
- (2) Organization: National Institute for Environmental Studies, Japan

*2. Information on instrument*

- (1) Analytical method: Gas Chromatography (FID)
- (2) Manufacturer: Agilent Technologies
- (3) Model: HP5890

*3. Information on sampling*

- (1) Sampling volume: 10 ml
- (2) Carrier gas: Nitrogen
- (3) Flow rate: 40 ml/min
- (4) Temperature of the oven: 80 °C

*4. Information on the main column*

- (1) Diameter: 1/8 inch
- (2) Length: 2 m
- (3) Material: Stainless steel

*5. Information on column packings*

- (1) Trade name: Molecular Sieve 5A
- (2) Mesh: 60/80

*6. Information on standard gas*

- (1) Number of standard gases: 7
- (2) Concentration of standard gases: 512, 1261, 1512, 1762, 2014, 2512 and 3012ppb
- (3) Scale: NIES94 Scale

*7. Other information (references, papers, literatures, etc.)*