



**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 2004 to 2005  
Technical Details on Laboratory Measurements**

**Tohoku University (TU)**

*1. Instrument*

- (1) Analytical method: Gas Chromatography (FID)
- (2) Manufacturer: HP
- (3) Model: 6890NF

*2. Sampling*

- (1) Sampling volume: 10 ml
- (2) Carrier gas: Nitrogen
- (3) Flow rate: 60 ml/min
- (4) Temperature of the oven: 80°C

*3. Main column*

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

*4. Column packings*

- (1) Trade name: Molecular Sieve 13X
- (2) Mesh: 45/69

*5. Standard gas*

- (1) Number of standard gases: 4
- (2) Concentration of standard gases: 938.9, 1330.2, 1724.5 and 2132.1ppb
- (3) Scale: Tohoku University Gravimetric Scale

*6. References*

- Aoki, S., T. Nakazawa, S. Murayama and S. Kawaguchi, Measurements of atmospheric methane at the Japanese Antarctic, Syowa, Teiius, Ser. B, 44, 273-281, 1992