



**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 Asia from 2005 to 2006
Technical Details on Laboratory Measurements**

Japan Meteorological Agency (JMA)

1. Instrument

- (1) Analytical method: Gas Chromatography (FID)
- (2) Manufacturer: SHIMADZU
- (3) Model: Series GC-14BPF

2. Sampling

- (1) Sampling volume: 10 ml
- (2) Carrier gas: Nitrogen (ultra high purity)
- (3) Flow rate: 50 ml/min
- (4) Temperature of the oven: 70°C

3. Main column

- (1) Diameter: 3 mm
- (2) Length: 4 m
- (3) Material: stainless steel

4. Column packings

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

5. Standard gas

- (1) Number of standard gases: 5
- (2) Concentration of standard gases: 1600-2100 ppb
- (3) Scale: JMA CH₄ Scale

6. References

- Aoki, S., T. Nakazawa, S. Murayama and S. Kawaguchi, Measurements of atmospheric methane at the Japanese Antarctic station, Syowa, *Tellus, Ser. B*, 44, 273-281, 1992
- Matsueda, H., Y. Sawa, A. Wada, H.Y. Inoue, K. Suda, Y. Hirano, K. Tsuboi and S. Nishioka, Methane standard gases for atmospheric measurements at the MRI and JMA and intercomparison experiments, *Papers in Meteorology and Geophysics*, 54, 91-109, 2004.