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 the South-West Pacific from 2006 to 2008
Technical Details on Laboratory Measurements

National Institute of Water & Atmospheric Research Ltd. (NIWA)

1. Information on contributors
(1) Contributors: Gordon Brailsford
(2) Organization: National Institute of Water & Atmospheric Research Ltd., New Zealand

2. Information on instrument
(1) Analytical method: Gas Chromatography (FID)
(2) Manufacturer: Hewlett Packard
(3) Model: 5890 series II

3. Information on sampling
(1) Sampling volume: 5 ml
(2) Carrier gas: Instrument grade Nitrogen
(3) Flow rate: 40 ml/min
(4) Temperature of the oven: 100 C

4. Information on the main column
(1) Diameter: 1/8" O.D.
(2) Length: 6 feet
(3) Material: Stainless steel

Note: also a 1 foot pre-column of 5A molesieve 80/100 mesh

5. Information on column packings
(1) Trade name: Molecular Sieve 5A
(2) Mesh: 80/100

6. Information on standard gas
(1) Number of standard gases: 5
(2) Concentration of standard gases: 1373 - 1975 ppb CH4-in-air
(3) Scale: NOAA04 Scale

7. Other information (references, papers, literatures, etc.)
Lowe, D.C., W. Allan, M.R. Manning, A.M. Bromley, G.W. Brailsford, D.F. Ferretti, A. Gomez, R.K. Knobben, R.M. Martin, M. Zhu, R. Moss, K. Koshy, and M. Maarta, Shipboard determinations of the distribution of 13C in atmospheric methane in the Pacific, Journal of Geophysical Research, 104 (D21), 26,125-26,135, 1999.

Lowe, D.C., C.A.M. Brenninkmeijer, G.W. Brailsford, K.R. Lassey, A.J. Gomez, and E.G. Nisbet, Concentration and 13C records of atmospheric methane in New Zealand and Antarctica: Evidence for changes in methane sources, Journal of Geophysical Research, 99 (D8), 16,913-16,925, 1994.

Please note that these results are now on the NOAA04 scale not the previously used NIST scale.