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 2013 to 2014
Technical Details on Laboratory Measurements

National Oceanic and Atmospheric Administration/Earth System Research Laboratory (NOAA/ESRL)

1. Information on contributors
(1) Contributors: Andrew Crotwell, Patricia Lang and Edward J. Dlugokencky
(2) Organization: NOAA/ESRL Global Monitoring Division, U.S.A.

2. Information on instrument
(1) Analytical method: Gas Chromatography (FID)
(2) Manufacturer: Hewlett-Packard (currently, Agilent)
(3) Model: 6890

3. Information on sampling
(1) Sampling volume: 5 ml
(2) Carrier gas: N_2 (99.9995%) with further purification by heated catalyst followed by molecular sieve traps
(3) Flow rate: 40 ml/min
(4) Temperature of the oven: 40 ^{o}C

4. Information on the main column
(1) Diameter: 3.2 mm (outside)
(2) Length: 3 m
(3) Material: Stainless steel

5. Information on column packings
(1) Trade name: HayeSep Q
(2) Mesh: 80/100

6. Information on standard gas
(1) Number of standard gases: 1
(2) Mole fraction of standard gases: 1854.13 ppb
(3) Scale: NOAA04 (CH_4 in natural air)

7. Other information (references, papers, literatures, etc.)
Dlugokencky, E. J., R. C. Myers, P. M. Lang, K. A. Masarie, A. M. Crotwell, K. W. Thoning, B. D. Hall, J. W. Elkins, and L. P. Steele (2005), Conversion of NOAA atmospheric dry air

CH_4 mole fractions to a gravimetrically prepared standard scale, J. Geophys. Res., 110, D18306, doi:10.1029/2005JD006035.