

REPORT OF THE GC-MS WORKSHOP 23-27 Aug 2010, JKUAT, KENYA

The GC-MS Instrumentation workshop was facilitated by Dr. Mathias Schaffer, a Senior Scientist at the University of Cologne, Germany and Prof. Antony Gachanja, a Professor in analytical/environmental Chemistry at the Jomo Kenyatta University of Agriculture and Technology. It was attended by 16 participants drawn from 7 sub-Saharan African countries. Out of this group, 5 were sponsored by OPCW while the rest were sponsored by PACN:

1. Dr. Asekun Olayinka, University of Lagos, **NIGERIA – PACN**
2. Dr. Martin Onani, University of Western Cape, **SOUTH AFRICA - PACN**
3. Mr. Patrick Ssebugere, Makerere University, **UGANDA - PACN**
4. Ms. Regina Bwire, University of Dar es Salaam, **TANZANIA - PACN**
5. Ms. Faith Mabiki, Sokoine University of Agriculture, **TANZANIA - PACN**
6. Dr. Kituyi Lusweti, Moi University, **KENYA - PACN**
7. Dr. Danstone Baraza, Masinde Muliro University of Science & Technology, **KENYA - PACN**
8. Mr. Stanely Wambugu, University of Nairobi, **KENYA - PACN**
9. Mr. Jason Mzuga, Egerton University, **KENYA - PACN**
10. Ms. Eunice Nyawade, Jomo Kenyatta University of Agriculture & Technology, **KENYA - PACN**
11. Ms. Irene Orina, Jomo Kenyatta University of Agriculture & Technology, **KENYA - PACN**
12. Dr. Temilola Oluseyi, University of Lagos, **NIGERIA – OPCW**
13. Dr. Aly Savadogo, University of Ouagadougou, **BURKINA FASO - OPCW**
14. Dr. Gaymary Bakari, Sokoine University of Agriculture, **TANZANIA - OPCW**
15. Ms. Christine Nagawa, Makerere University, **UGANDA - OPCW**
16. Mr. Nathaniel Boadi, Kwame Nkuruma University of Science & Technology, **GHANA - OPCW**

The workshop covered: Introduction to GC and MS Instrumentation where participants learnt how to set up and tune the instrument, do basic maintenance including changing the columns, injector liner and source components e.g. filament. They also learnt how to inject and run samples on the machine. Spectral Interpretation was covered at great depth. One participant from Sokoine University of Agriculture, Tanzania was able to run her samples (which she had brought along) and interpret the spectra with the help of the facilitators. Sample pre-treatment using Solid Phase Extraction method and identification of unknowns in an analgesic drug sample were also done although more time was needed for this.

During an interactive session between the facilitators and the participants at the end of the workshop to discuss the way forward, the participants appreciated the theory on Mass Spectrometry and requested that the training should be extended to 2 weeks to allow more time for hands-on experience on the machine. They also appreciated the new collaboration created amongst them and encouraged networking among their universities. They also requested if similar training could be held in other areas of instrumentation such as NMR, etc.

The Vice Chancellor of the University; the Dean, Faculty of Science and the teaching fraternity of the Department of Chemistry also appreciated the opportunity accorded to them to host the international workshop. Their aim is to develop a laboratory which is recognized globally as a center of excellence where data produced from research work can be published in the international journals without question.

Professor Mary Ndung'u, the Dean, Faculty of Science noted that while the expectations of the participants had been met during the training, they need to make practical use of the skills they acquired since a number of them have a GC-MS equipment in their laboratories.

Professor Jacob Midiwo, the Executive Secretary of the Local Management Committee of PACN in his closing remarks at the end of the workshop thanked OPCW for their support. He reminded the participants that this kind of workshop was aimed at training Africans to help us solve our problems without relying on the West; and that this was an opportunity to combine our theory of GC-MS instrumentation and practical work so that we are able to propagate the technique to the others.