



PAN AFRICA
CHEMISTRY NETWORK



NMR Workshop - Hands-on Training July 20th – 24th 2026

Department of Chemistry, University of Nairobi, Faculty of Science and
Technology, Chiromo Campus, Nairobi, Kenya

Programme

Day 1: Monday, July 20th 2026

Venue: Department of Chemistry, Room 119

Time	Activity	Facilitator
08:30 – 09:00	Arrival & Registration of Participants	Erick Awas / Alice Ndekei

**Opening Ceremony
Join Meeting on Teams**

<https://teams.microsoft.com/meet/346209421912274?p=ZG0MsDkYpnhWI7u0MC>

Chair: Charles Mirikau

Time	Institution	Speaker
09:00 – 09:05	Kenya National NMR Centre (KNMRC)	Prof. John Onyari
09:05 – 09:10	PACN, Kenyan hub	Prof. Solomon Derese
09:10 – 09:20	Chairman, Department of Chemistry	Prof. David Kariuki
09:20 – 09:25	Dean, Faculty of Science and Technology	Prof. Francis Nyongesa
09:25 – 09:35	Royal Society of Chemistry	Dr. Andrew Shore
09:35 – 09:40	CEO, NRF Kenya	Prof. Andala Dickson
09:40 – 09:50	Vice Chancellor, University of Nairobi	Prof. Ayub Gitau or DVC RIE(TBC)
09:50 – 10:00	Introduction of delegates and resource persons	Charles Mirikau
10:00 – 10:10	Discussion on the program and expectation of the delegates	Prof. Abiy Yenesew
10:10 – 10:20	Vote of Thanks & Photo session	Charles Mirikau
10:20 - 10:50	Tea break	

Training Session 1		
Venue: Room 119, Department of Chemistry		
10:50 - 13:00	Introduction to NMR Spectroscopy	Mirikau
	Theory of NMR Spectroscopy	
13:00 - 14:00		Lunch (Chiromo Campus Club)
Training Session 2		
14:00 -15:00	Factors affecting Chemical Shifts in ^1H NMR Spectroscopy	Abiy/Solomon
15:00 - 16:00	Spin-Spin Splitting in ^1H NMR Spectroscopy	Abiy/Solomon
16:00 - 17:00	Simple ^1H NMR problem solving	Abiy/Solomon/Mwaniki
17:00 - 17:30	Open discussion and close for the day Tea/Coffee Break	Abiy/ Wanjohi

Homework I: Simple ^1H NMR problems

Day 2: Tuesday, July 21st 2026

Training Session 3		
Venue: Room 119, Department of Chemistry		
09:00 - 09:30	Discussion of previous problems	Abiy/Solomon/Mwaniki/Ndakala
09:30 - 10:30	^{13}C NMR Spectroscopy - Chemical Shifts, DEPT, APT	Abiy/Solomon/ Mwaniki
10:30 - 11:00	Tea/Coffee Break	
11:00 -1 3:00	Problem solving session on ^{13}C NMR spectroscopy	Abiy/Solomon/Mwaniki
13:00 - 14:00	Lunch	
Training Session 4		
14:00 – 15:30	NMR Laboratory (sample preparation, running and processing)	Ivan/Nicholas/Alice/Mirikau
15:30 - 17:00	Running 1D NMR and processing	Ivan/Nicholas/Alice/Mirikau
17:00 - 17:30	Open discussion and close for the day (Tea/Coffee Break)	Abiy/ Wanjohi

Homework II: Combined ^1H NMR and ^{13}C NMR problems

Day 3: Wednesday, July 22nd 2026

Training Session 5		
09:00 - 10:30	Introduction to 2D NMR Spectroscopy: H,H COSY, HSQC/HMQC, HMBC	Abiy/Solomon/Mwaniki/Ndakala
10:30 -11:00	Tea/Coffee Break	
11:00 -13:00	Special 1D NMR, NOEDIF, NOESY/ROESY	Abiy/Mwaniki/Solomon
13:00 - 14:00	Lunch	
Training Session 6		
14:00 - 15:30	Running and Processing of 2D NMR	Abiy/Ivan/Alice
15:30 - 17:00	Interpretation of Combined NMR Spectra	Abiy/Mwaniki/Solomon
17:00 – 17:30	Open Discussion and close for the day (Tea/Coffee Break)	Abiy/Wanjohi

Homework III: Combined Spectroscopy Problems

Day 4: Thursday, July 23rd 2026

Training Session 7		
09:00 - 10:30	Interpretation of Combined NMR Spectra (contd.)	Abiy/Mwaniki/Solomon
10:30-11:00	Tea/Coffee Break	
11:00-13:00	Running and Processing of 2D NMR	Abiy/Ivan/Alice
13:00 - 14:00	Lunch	
Training Session 8		
14:00 - 15:30	Determination of Relative Configuration and Position of Substituents using NMR based on Coupling Constants	Solomon/Ndakala
15:30 - 17:00	Determination of Relative Configuration and Position of Substituents using NMR based on Coupling Constants	Solomon/Ndakala
17:00 – 17:30	Open Discussion and close for the day (Tea/Coffee Break)	Abiy/Wanjohi

Day 5: Friday, 24th July 2026

Training Session 9		
Venue: Room 119, Department of Chemistry		
08:30 - 10:00	Application of NMR Spectroscopy in Inorganic Chemistry - Some Examples	Kariuki/Mirikau
10:00 - 10:30	Tea/Coffee Break	
10:30 - 12:00	NMR in Qualitative and Quantitative Analysis	Onyari
12:00 - 13:00	Closing Ceremony and Award of Certificates	Wanjohi/Onyari/Kariuki/Nyongesa
13:00 - 14:00	Lunch and Departure	