

2024 BIPM qNMR Summer School: Information & Syllabus

The BIPM invites applications for participation in a qNMR Summer School to be held at the BIPM Headquarters in June 2024. Twelve places are available for scientists at NMIs/DIs that already have practical skills in NMR and wish to enhance their skills in the use of qNMR for the pure organic material value assignment.

Location and Dates:

The Summer School will be held on-site at the BIPM Headquarters in Sèvres, France. It is scheduled from Monday June 24th to Friday June 28th 2024 inclusive.

Course lecturers:

The course will be delivered by senior scientific staff from the BIPM Headquarters and from NMIs:

Steven Westwood (BIPM)	Taichi Yamazaki (AIST/NMIJ, Japan)
Gustavo Martos (BIPM)	Leandro Santos (INTI, Argentina)
Klas Meyer (BAM, Germany)	Wei Zhang (NIM, China)

Facilities:

Summer School participants will use the BIPM Chemistry Department facilities including a JEOL-ECS 400 for qNMR measurements, and the course will be a mixture of interactive lectures and practical work.

Costs and sponsorship:

There is no charge for participation in the School, but participants are responsible for their individual costs for travel and accommodation during the School. Lunches will be provided by the BIPM and two summer school dinners sponsored by JEOL (Europe) and FUJIFILM-Wako.

Applications:

Requests to register for the School should be submitted using the [online application form](#) (click for link)

Further information on terms for participation is provided in the application form. The deadline for applications is **15 December 2023**.

Timetable & Syllabus

Monday	9h00 - 10h00	Opening Session	
24 th June	10h30 - 17h00	• qNMR Data Processing – basics	Practical
		• qNMR sample preparation – theory and practice	Practical
Tuesday	9h00 - 12h30	<ul style="list-style-type: none"> • Traceability of measurements • Reference Materials for qNMR • Key parameters for ¹H qNMR • Spectrometer optimization • Data Processing – case studies 	Practical Practical
25 th June	12h30 - 13h00	qNMR instruments and methods (JEOL)	
	14h00 - 17h30	<ul style="list-style-type: none"> • Quality procedures for qNMR • qNMR experiment optimization 	
	18h00 - 22h00	Dinner sponsored by JEOL	
Wednesday	9h00 - 10h30	<ul style="list-style-type: none"> • Good practice for FID processing • Integration and impurity treatment 	
26 th June	11h00 - 12h30	<ul style="list-style-type: none"> • Orthogonal techniques • Use of benchtop qNMR 	
	12h30 - 13h00	qNMR Reference Materials (Fujifilm-Wako)	
	14h00 - 17h00	Data Processing - participant data	Practical
	17h00 - 17h30	Key parameters for ¹⁹ F/ ³¹ P qNMR	Practical
Thursday	9h00 - 10h30	<ul style="list-style-type: none"> • qNMR troubleshooting • MU of qNMR – models & case studies 	
27 th June	11h00 - 13h00	MU of participant ¹ H qNMR results	Practical
	14h00 - 15h30	<ul style="list-style-type: none"> • qNMR of peptides • ¹⁹F & ³¹P qNMR 	
	16h00 - 17h30	Data processing - ¹⁹ F & ³¹ P qNMR data	Practical
	18h00 - 22h00	Dinner sponsored by FUJILFIM-Wako	
Friday	9h00 - 10h30	Applications of 2D NMR in qNMR	
28 th June	11h00 - 12h30	Case studies of 2D NMR	Practical
	12h30 - 13h00	Closing session	