

Q1	The specification states the system "shall integrate microwave and ultrasound-assisted extraction technologies." In respect of the "or equivalent" provision, could you confirm whether both technologies must be combined within a single integrated unit, or whether an equivalent solution delivering both capabilities would be considered compliant?
A1	Both microwave-assisted and ultrasound-assisted extraction capabilities are required. The requirement is for a combined and coordinated system capable of applying microwave and ultrasound energy to the same extraction material, independently and/or in combination, without requiring manual transfer of the material between unrelated standalone instruments. The technologies may be provided within a single integrated unit or as an engineered, interconnected system, provided that the tenderer demonstrates that the proposed solution: • delivers both microwave- and ultrasound-assisted extraction within the same process vessel or closed process arrangement; • permits independent and combined control of both technologies; • provides coordinated process control, temperature monitoring, agitation and appropriate safety interlocks; • is supplied as a complete, compatible and operational system; and • meets all other minimum technical and performance requirements stated in the tender specification. Two separate, unrelated laboratory instruments requiring manual transfer of the sample between units would not be considered equivalent.

Q2	We would welcome confirmation of any specific installation, commissioning or training requirements at the site.
A2	The successful tenderer will be required to provide delivery, positioning, installation, commissioning and functional verification of the complete system at the designated TU Dublin site. The supplier shall: • install and configure the equipment and all included accessories; • identify and confirm all site and utility requirements in advance of delivery, including electrical supply, cooling, ventilation, vacuum, gas supply and any other required services; • carry out all operational and safety checks; • demonstrate the independent and combined operation of the microwave and ultrasound functions; • verify the operation of the control system, sensors, safety interlocks and data-recording functions; • provide operating, cleaning, maintenance and safety documentation; and • provide on-site/virtual training for nominated TU Dublin staff members.