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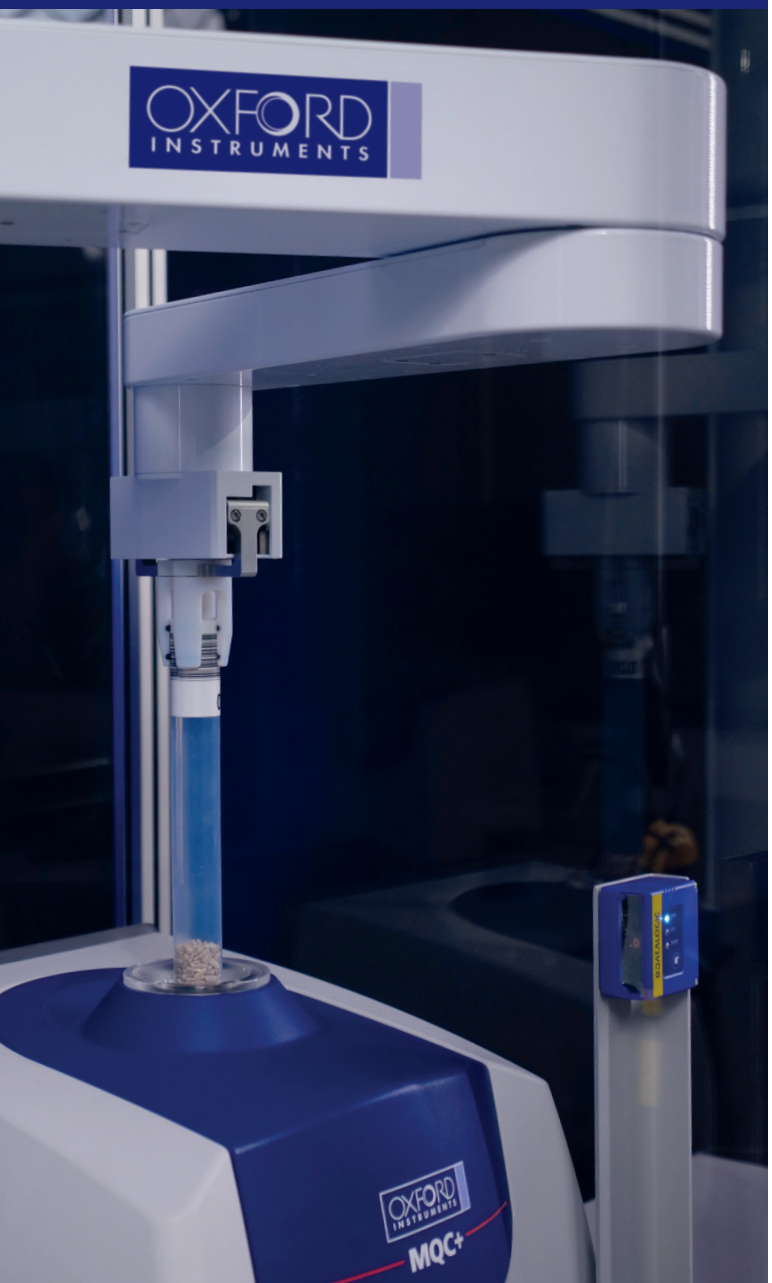
MQ-Auto

Sample automation for the **MQC+** range of benchtop NMR analysers

Sample automation for the MQC+ range of benchtop NMR analysers

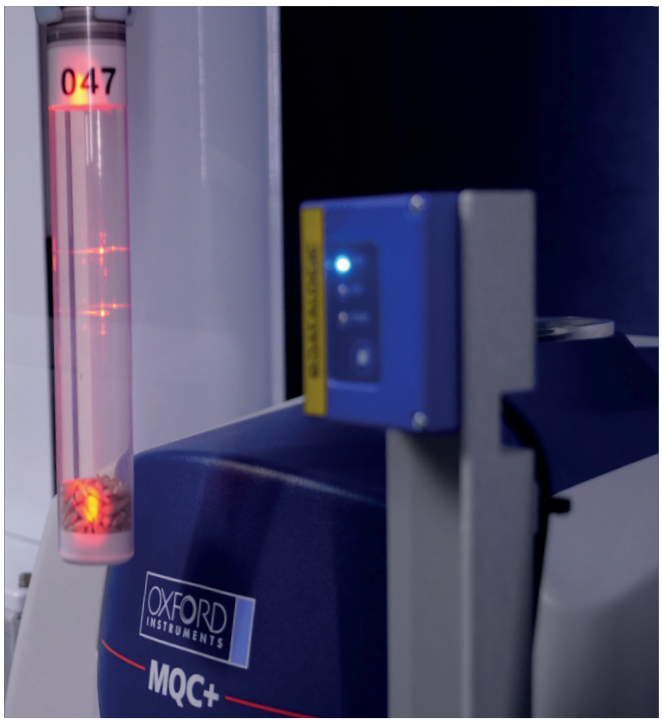
Thousands of users worldwide enjoy the fast and accurate measurements made possible by the Oxford Instruments **MQC** and **MQC+** range of Nuclear Magnetic Resonance (NMR) analysers. Laboratory productivity and efficiency are given an extra boost with the **MQ-Auto**, a robotic system that extends the working time of the **MQC+** and frees laboratory staff for more intensive tasks.



MQ-Auto

The **MQ-Auto** system is based around a high-performance robot arm and a range of sample racks and conditioning stations. An optional balance can be incorporated for applications that require samples to be weighed, and a barcode reader is also available for sample identification.

The optional balance automatically records gross weight of sample plus tube.



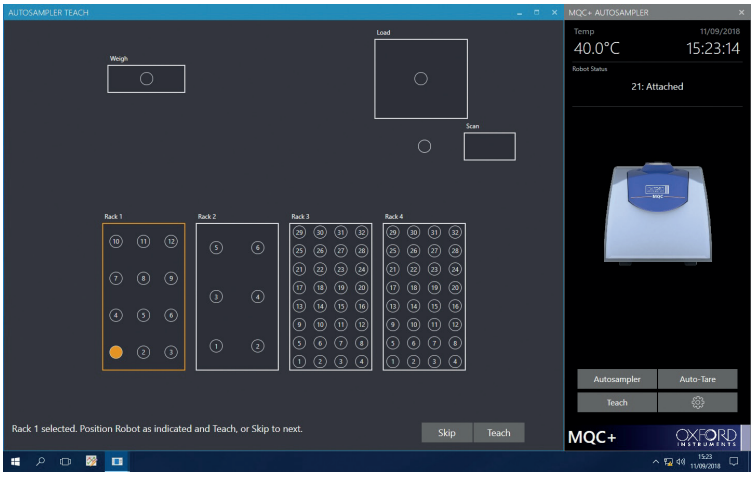
The optional barcode reader records sample ID and recalls previously stored tare weight of the tube.

Safety

Operator safety is of course paramount with any electrical or mechanical installation, so comprehensive safety features have been built into the **MQ-Auto**. The robot arm itself is a so-called "collaborative robot", designed to stop automatically if any obstruction (such as a human limb) is encountered in its path. In addition to this, the entire autosampler installation is housed in a transparent enclosure interlocked to shut down the robot arm if the door is opened. This two-level security protection ensures that the system can be operated safely with confidence.

Operation

The **MQ-Auto** is controlled by software running on either the Windows-10 internal computer of the **MQC+** instrument, or on an external PC. The software allows samples to be run against different calibrations, and also allows operation to be paused mid-run for additional samples to be added. Optional barcodes can be attached to sample tubes to identify the sample and to store the tare weight of the tube for measurements that require weighing.



Sample racks	18 mm (8 ml) sample tubes	26 mm (14 ml) sample tubes
Room temperature racks (maximum 4)	Maximum 32 per rack[2]	Maximum 32 per rack[2]
Heated blocks (maximum 4)	Maximum 24 per block[2]	Maximum 18 per block[2]

Available racks and conditioning stations are shown in the table. A total of four racks and blocks may be used, in any combination[1].

[1] Sample tubes must all be the same size

[2] Three positions must be reserved for a tuning sample and initialisation routines

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