



orano

Laboratory and Glovebox Capability

Experience and expertise across the lifecycle

Orano operates nuclear laboratories across its sites in France, and is familiar with the challenge of maintaining equipment, developing and integrating new technologies, and extending the life of equipment with obsolescence issues.

In the UK, our design organisation collaborates with our operational facilities to support modifications, upgrades and in-life servicing.

We therefore have extensive operational experience of glovebox facilities, and can offer everything from laboratory design including layout, through-put and demand profile assessments, to services surrounding the integration and supply of laboratory equipment, such as equipment identification, and its design and integration into gloveboxes, fume cupboards and shielded cells. In the UK, our teams deliver multi-million-pound contracts on key civil nuclear and defence programmes, where glovebox and laboratory facilities underpin some of the UK's most important nuclear analysis activities.

Orano channels the value of its owner: operator experience into large-scale nuclear research and analytical programmes in the UK civil nuclear and defence sectors. It combines the global expertise of the group with decades of UK experience, and locally recruited teams.

Relevant and local UK capability

Orano's facilities in France, particularly at La Hague and Melox, have large-scale laboratory and glovebox facilities, working on various stages of used fuel recycling. Dealing with a range of special nuclear materials, these sites have direct parallels with UK programmes, where Orano has delivered between 10 and 20 different types of laboratory equipment to clients, integrating them into gloveboxes, fume cupboards and shielded cells.

What do we offer?

Tried-and-tested Lessons Learned from Experience (LFE) from our own facilities

Owning and operating our own laboratory and glovebox facilities in France gives us a unique understanding of the challenges that may be faced in designing, commissioning, operating and decommissioning gloveboxes in a range of specialised environments. For UK clients, we combine this international experience and LFE with the expertise of our UK-based teams to provide bespoke, fit-for-purpose solutions, enabling innovations that are tailored to specific site and client requirements.

Access to state-of-the-art testing facilities

Our reach-back to France also gives us access to Orano's specialised and established testing facilities. The first of these is the HRB (Hall de-Recherche de-Beaumont, or Beaumont Research Facility): a major test facility constructed to support the active commissioning of two new reprocessing lines at La Hague, where it is possible to prototype and test equipment in full-scale hot cell mock-ups prior to deployment. Our second facility, the ADC (Applied Development Centre), was developed as a testing facility for new equipment and services to support Melox.

Use of Virtual Reality for design development and training

We use the latest technology to ensure our designs are robust and developed with humans in mind. Through a Virtual Reality Platform, we can test how items move or are moved within gloveboxes, and immediately identify design errors in prototyping and design development. A first-person perspective display means the situation is viewed as if by an operator, and creates a test environment where the glovebox is fitted with real gloves.

Provision of specialised equipment, working with the supply chain

Collaborating with the supply chain, Orano provides specialist equipment for use in laboratory and glovebox facilities. For two major UK programmes, Orano has integrated the following instrumentation into gloveboxes: TICTOC - Total inorganic carbon and total organic carbon analyser, CFU - Combined furnace unit, LIBS - Laser induced breakdown spectroscopy, IC - Ion Chromatography, TGAMS - Thermo Gravimetric Analysis coupled with Mass Spectrometry, SSA - Specific surface analyser, Halide Furnace, CIC - combustion ion chromatography.



Orano Limited acts as the UK gateway to the global expertise of the Orano group, working with the UK's major nuclear clients on some of the sector's highest profile challenges. With expertise across the fuel cycle, Orano is a world leader in nuclear, with 17,000 employees across the world.

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Why choose Orano Limited?

Orano Limited acts as a gateway to the full range of Orano's international experience, while ensuring our services are tailored to the UK context. Our glovebox expertise allows us to propose a unique offer to clients seeking to design, commission or decommission laboratory and glovebox for the analysis of radioactive materials. With offices based across the UK, we are within the reach of the majority of the UK's nuclear clients and offer locally-based, UK teams who work closely with colleagues in France.



orano
Giving nuclear energy its full value

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