

DEVICE FOR COLLECTING BREATH CONDENSATE

Available for licensing or joint development for specific applications.

Exhaled breath may contain biomarkers that can be used in diagnostics or monitoring of disease, including infectious and chronic conditions. These biomarkers are typically molecular (either small molecules or larger biomolecules, such as peptides or proteins) or in a form of nano or micro particles (viruses, bacteria, microorganisms).

Accordingly, they are sufficiently small to be contained within the micro and nano droplets of moisture in the exhaled breath and thus can be collected for analysis in the form of liquid Exhaled Breath Condensate (EBC).

+ Special features of our design

The EBC collection device was designed to address specific concerns that are important for sampling EBC that may contain infectious agents/pathogens and for simplifying the use of the device.

Safety when collecting infectious EBC samples

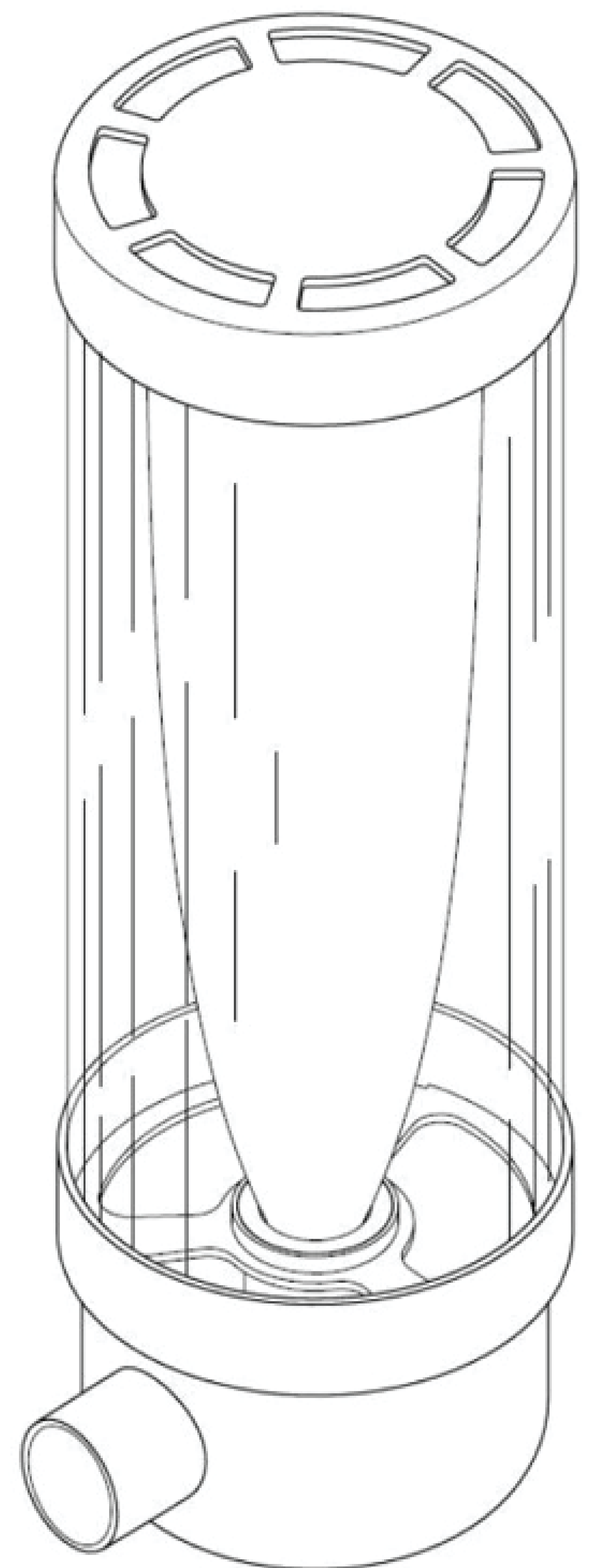
- The EBC is collected into a receptacle that is closed automatically when the device is disassembled, thereby **preventing the exposure** to the open (potentially infectious) liquid **during subsequent handling**;
- **A filter** can be used **to prevent releasing the droplets** into the surrounding environment during the collection of the EBC sample;
- The receptacle allows for easy transfer of the liquid EBC for analysis, e.g., using a pipette tip.

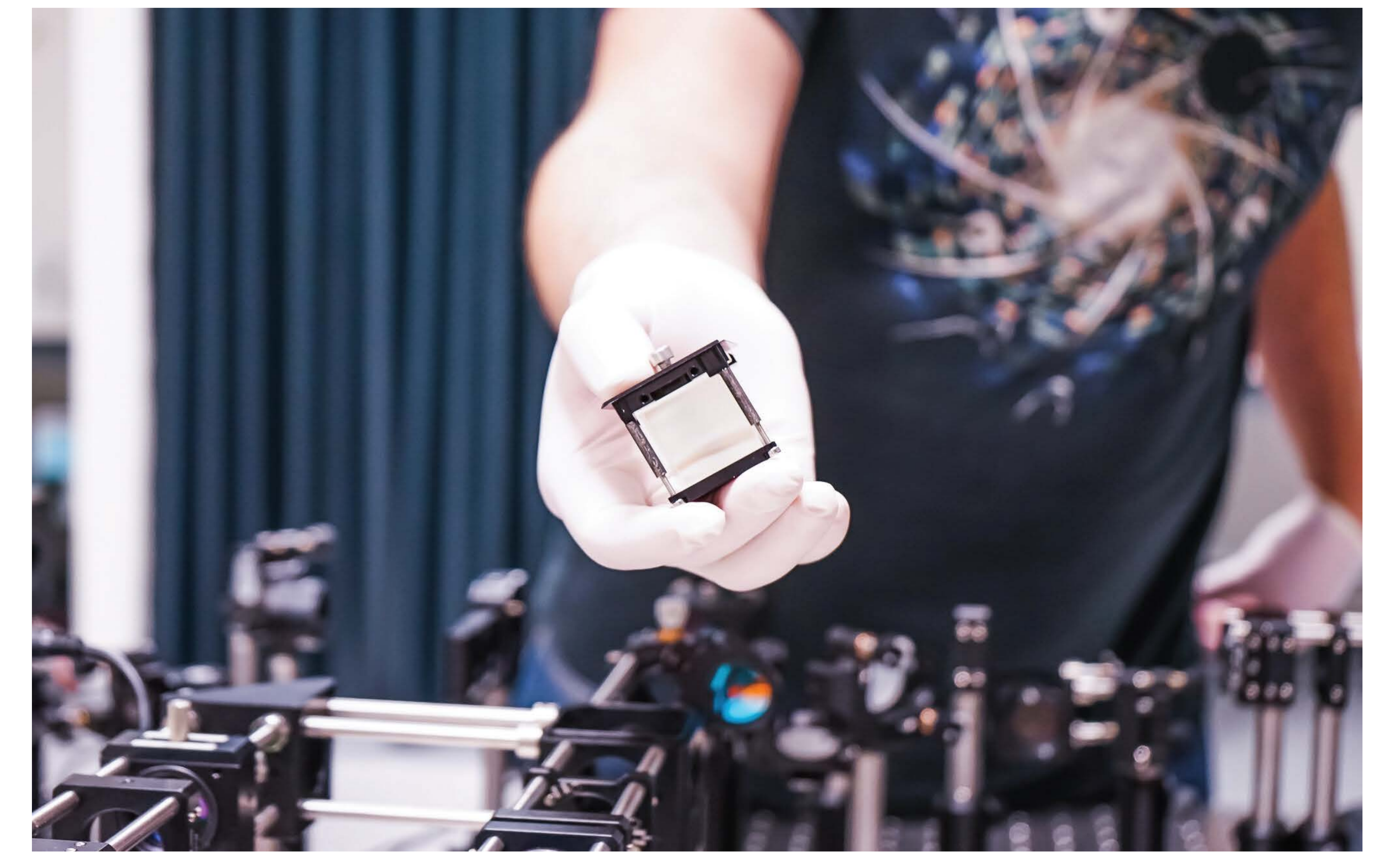
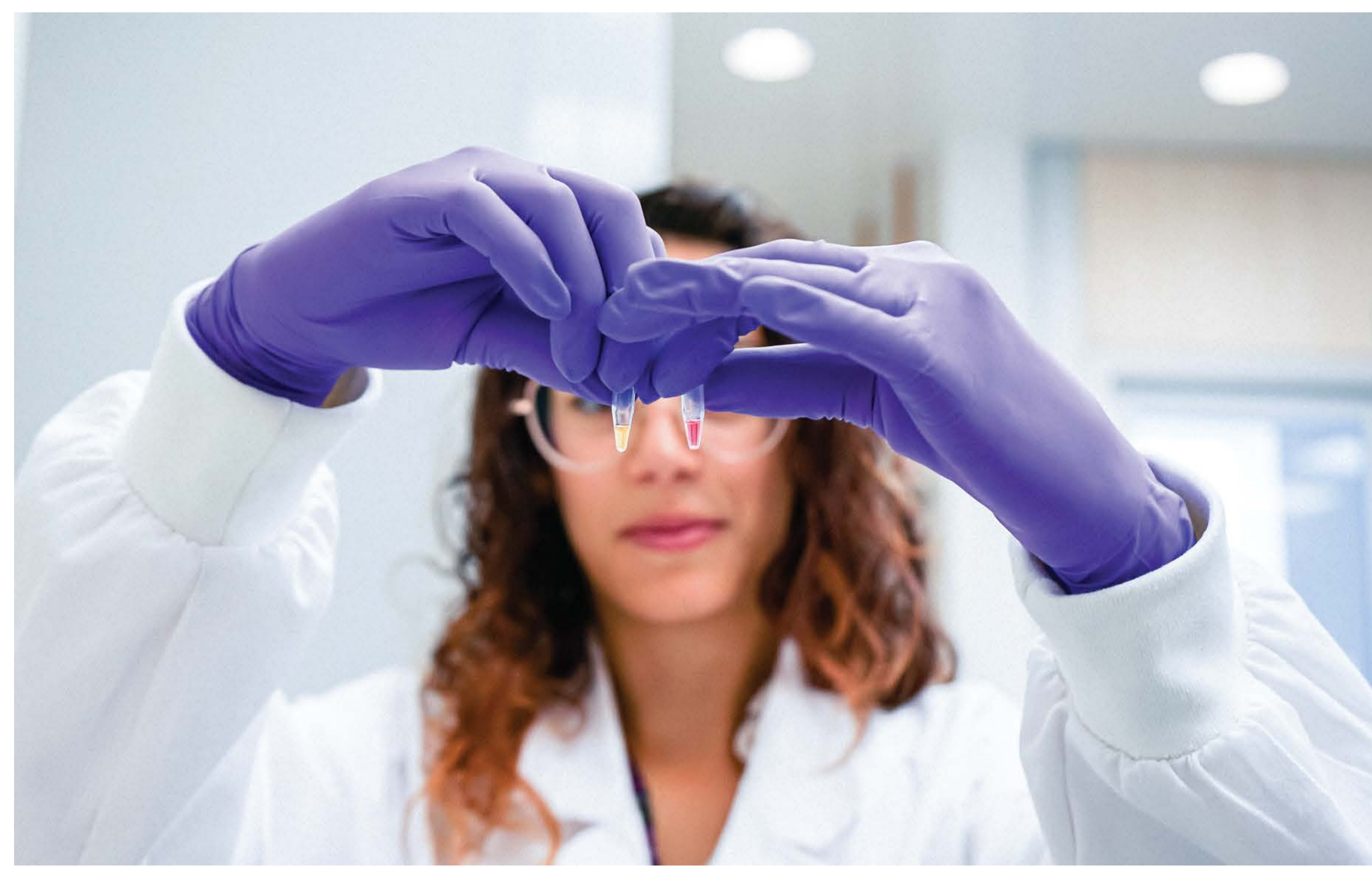
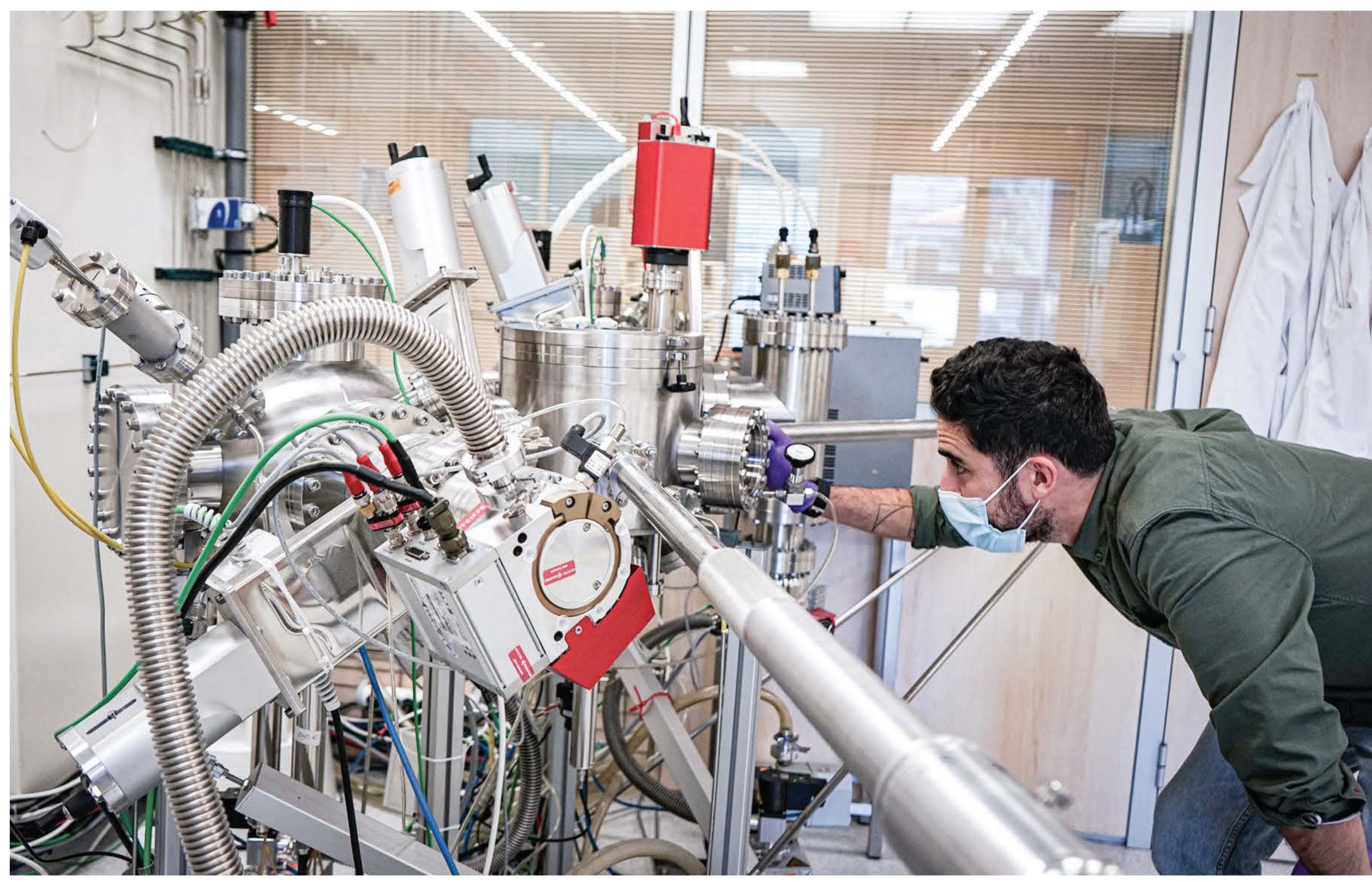
Simplified user experience

- The cooling element is contained within the device, **avoiding the exposure of the cold surface to the hands of the user**;
- The device can use **ice water as a cooling agent**, bypassing the need for more expensive freezer or dry ice cooling systems;
- The device can be **produced using high-volume manufacturing methods**; depending on the choice of the materials can be manufactured to be inexpensive and disposable or with major components that can be cleaned and reused.

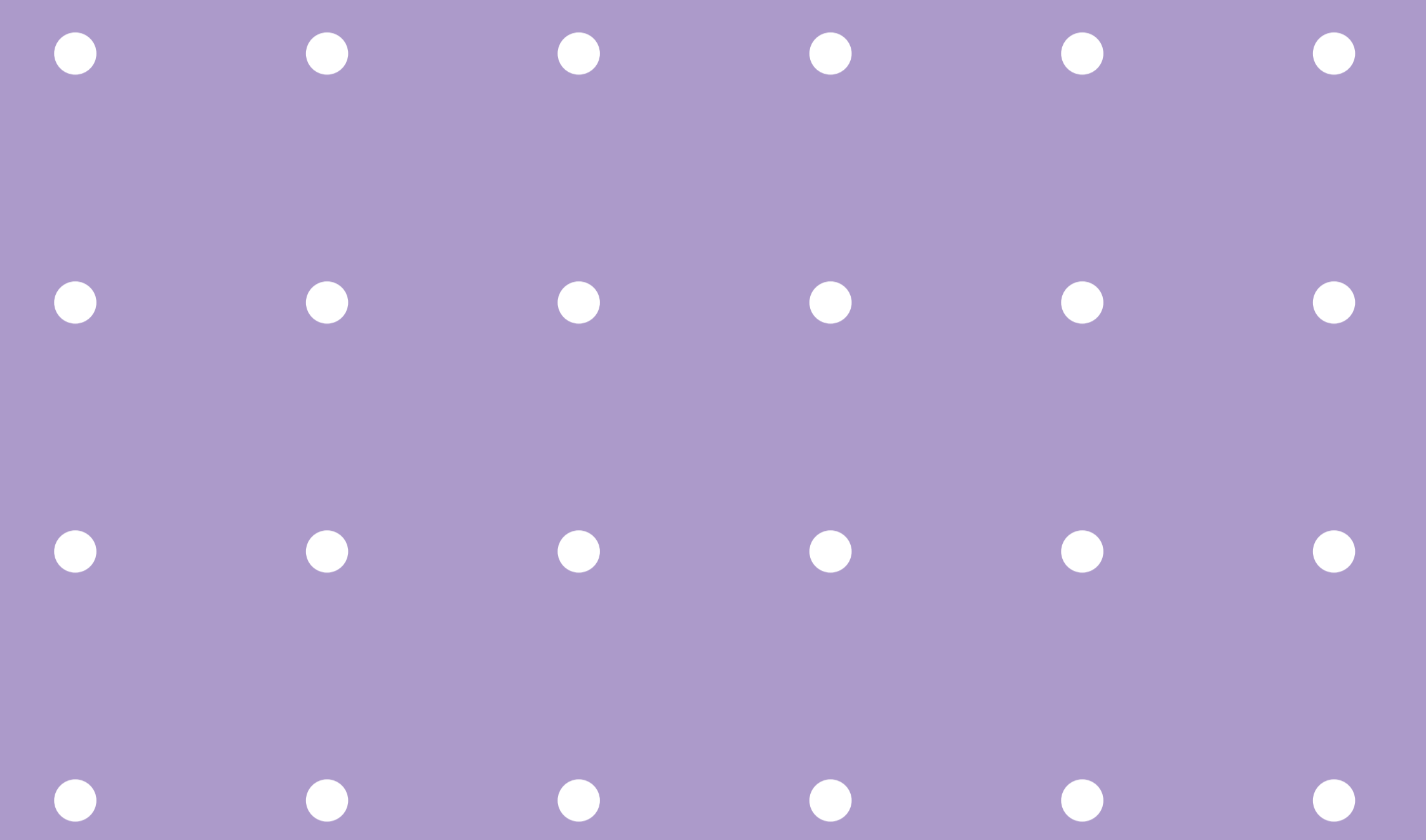
+ IP Protection

Registered Community Design (RCD) application number 008603880
EPO Patent Application EP21184406
PCT Patent Application PCT/EP2022/067989





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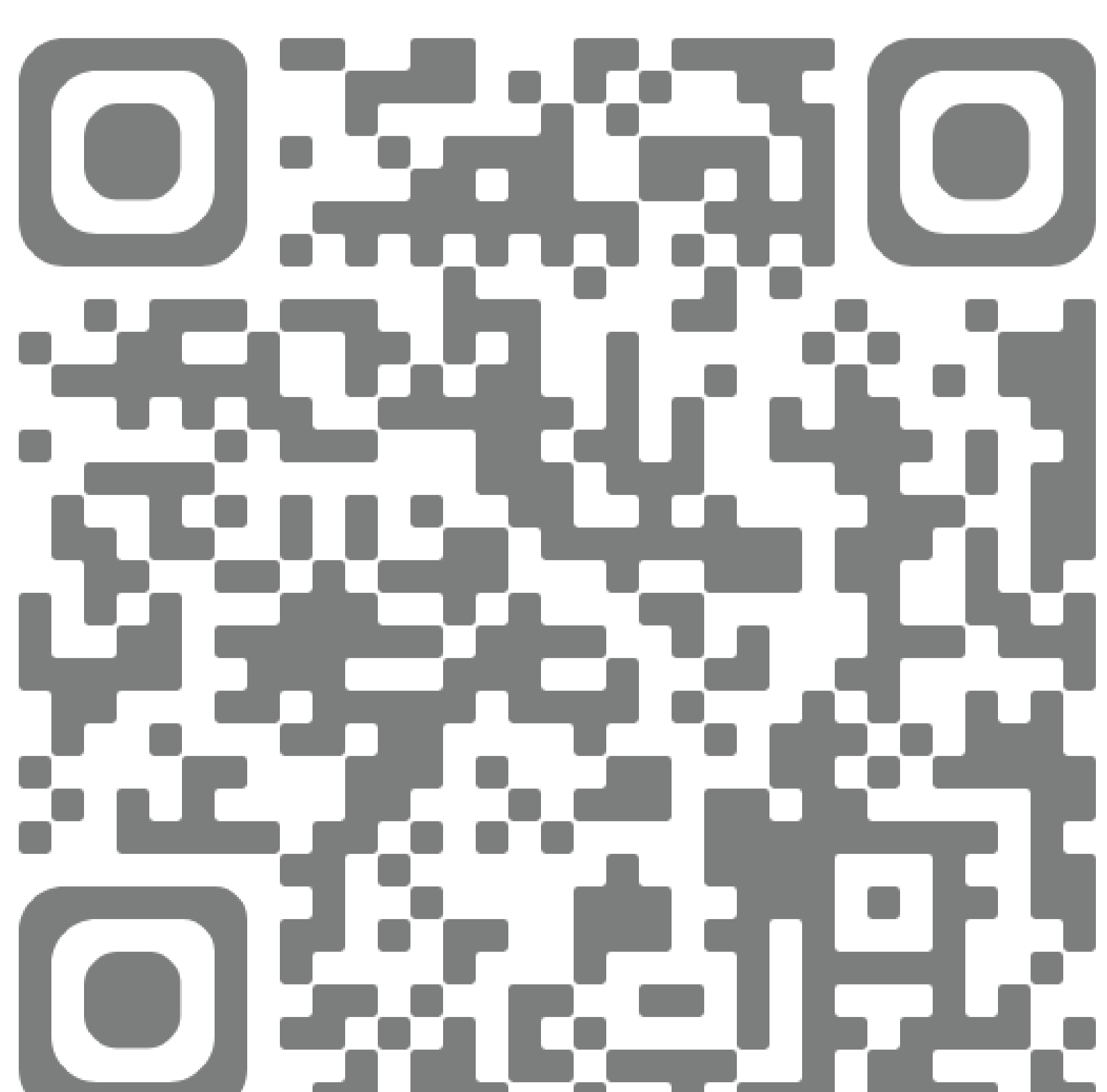
02 TECHNOLOGY

By nourishing on our multiple disciplines in house and with partners, we develop and deploy solutions to the market.

04 SOCIETY

INL is committed to disseminating to all audiences the nanotechnology concepts, and bring society closer to our scientific developments. Visit our website and explore our activities and events.

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