



TopSpec - 829157

WP6 - Modification of the Orbitrap mass spectrometer

Deliverable: D6.1 - Installation of Q Exactive instrument for Omnitrap development

Task: Installation of a loaned Q Exactive instrument to Fasmatech to support Omnitrap development. A Q Exactive HF instrument will be configured to be interfaced to Omnitrap by removing the charge detector on the back of the HCD cell and adding functionality of ion transfer to and from the Omnitrap. Once the instrument is shipped and installed at Fasmatech, dedicated trigger signals will be provided to initiate the operational sequence of the Omnitrap and software training and support provided to Fasmatech and Spectroswiss in order to fulfil corresponding tasks of the project. This instrument will be focused on optimizing Omnitrap functionalities.

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1. Description of action

A Q Exactive instrument was delivered to Fasmatech (**Figure 1**) and then in the summer of 2019 Omnitrap was added to it as the next step towards further deliverables of the project (**Figure 2**)

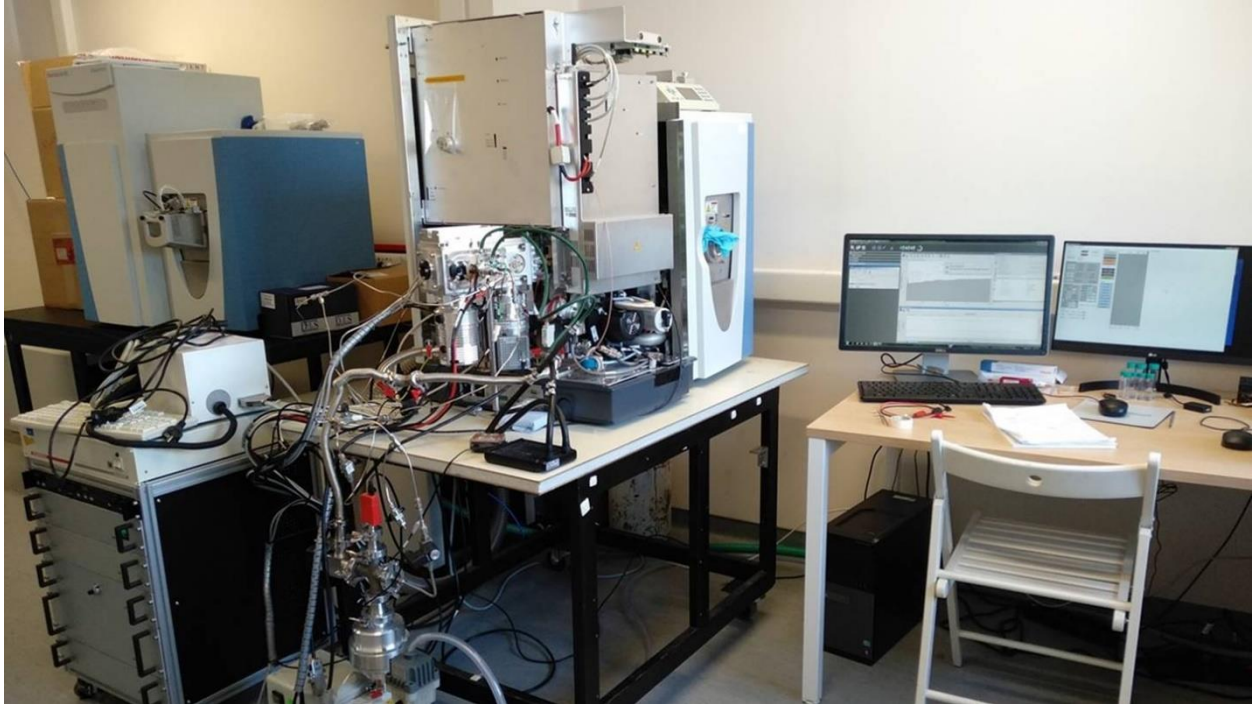


Figure 1. Q Exactive HF (instrument to the left) following delivery to Fasmatech.



Figure 2. Q Exactive HF interfaced with the Omnitrap.

2. Performance

Initial difficulties with Source turbopump were overcome by improved ventilation of the instrument and instrument passed standard acceptance specifications, making it available for Omnitrap installation.

Further modifications towards project needs include extension of the mass range of Orbitrap detection towards $m/z > 10,000$ to cover intact native proteins.