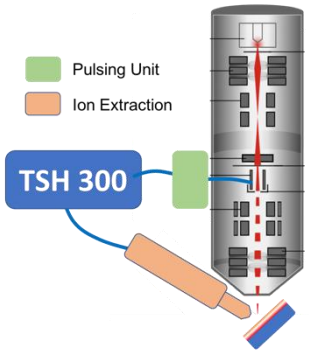
TSH 300

An Easy-to-Integrate Time of Flight Secondary Ion Mass Spectrometer for Helium / Neon Ion Microscopes

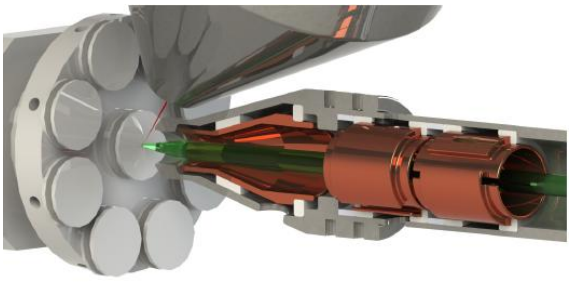
Elemental Analysis on the nm Scale

The **TSH 300** is a Secondary Ion Mass Spectrometer designed for dedicated use in Helium/Neon Ion Microscopes (HIM). It combines the outstanding imaging capabilities of a HIM with the ability to determine elemental compositions on the nm scale. It measures mass spectra in a specified location with nm precision or acquires elemental maps with variable field of view.

Implementation of SIMS is based on pulsing the primary ion beam and thus ensures minimum sample damage during measurement.



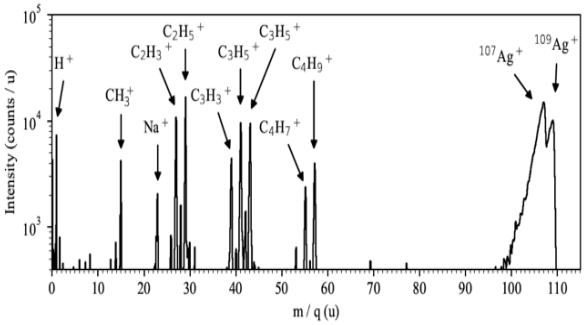
The **TSH 300** is easy to integrate into the HIM by just occupying one single free port of the chamber. No modifications of the HIMs ion column necessary leaving the imaging capabilities of the device untouched. Switching between standard secondary electron imaging and SIMS takes just a few seconds.



The **TSH 300** is shipped with a dedicate PC for data acquisition and analysis including a powerful software for fitting of SIMS spectra, extraction of elemental maps and for easy export of the results. All electronics are mounted in a single 19 inch standard NIM cabinet.

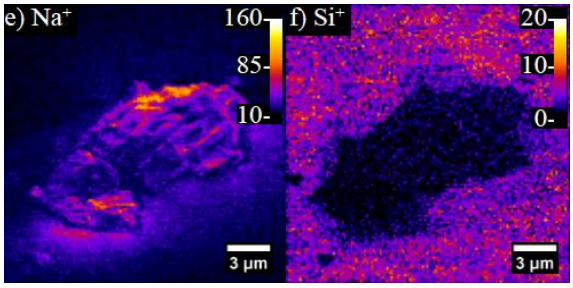
Key-Features

Mass range	1 … 300 u
Mass resolution	> 50:1
Lateral resolution	< 50 nm
Field of view	up to 100 µm
Mapping resolution	512 x 512
Acquisition times	01 … 10 min. (spectra)
	10 … 30 min. (maps)



Mapping and Imaging

Data acquisition in list mode and easy-to-use software allow to choose particular ion mass(es) for mapping either during or after the measurement since all masses are measured simultaneously.
All data is stored in human readable format for easy post processing with any software.



Contact

TSH 300 was developed at the Helmholtz-Zentrum Dresden-Rossendorf (HZDR) and is distributed by the HZDR Innovation GmbH. For further information, pricing and quotation contact:

tsh@hzdri.de

Tel.: +49 351 260 3617