

## New integrated sample management software at PSI HOTLAB

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The department Hotlab (AHL) of Paul Scherrer Institute (PSI) accounts, according to internal as well as external regulations, nuclear materials and moderators. The capacity of the Hotlab is limited by various dispositions by the Swiss regulator ENSI (Eidgenössisches Nuklearsicherheitsinspektorat) and the Swiss Federal Office of Energy (SFOE).

For the detection and control of nuclear fuel samples and monitoring with respect to criticality safety, AHL used since 1998 KBuch.

In autumn 2011, a logic error was detected in the software during a routine booking with extraordinary nuclear fuel. This bug was reported to the national regulator ENSI (2012) and appropriate administrative measures have been taken to prevent the recurrence of the logic error.

ENSI additional requirement: “Given the fact that the logic fault is inherent and can’t be resolved in the short term, effective measures to prevent future accounting errors must be taken to medium term. The software should be developed to state of the art as soon as possible”.

Subsequently, a project (Streit et al., 2014) was launched to update the used software as required. The project was set up to integrate the new sample and order management (IPV) software (Figure 1) into the Quality Management Software IQSoft used at PSI Hotlab (Zubler et al., 2014).

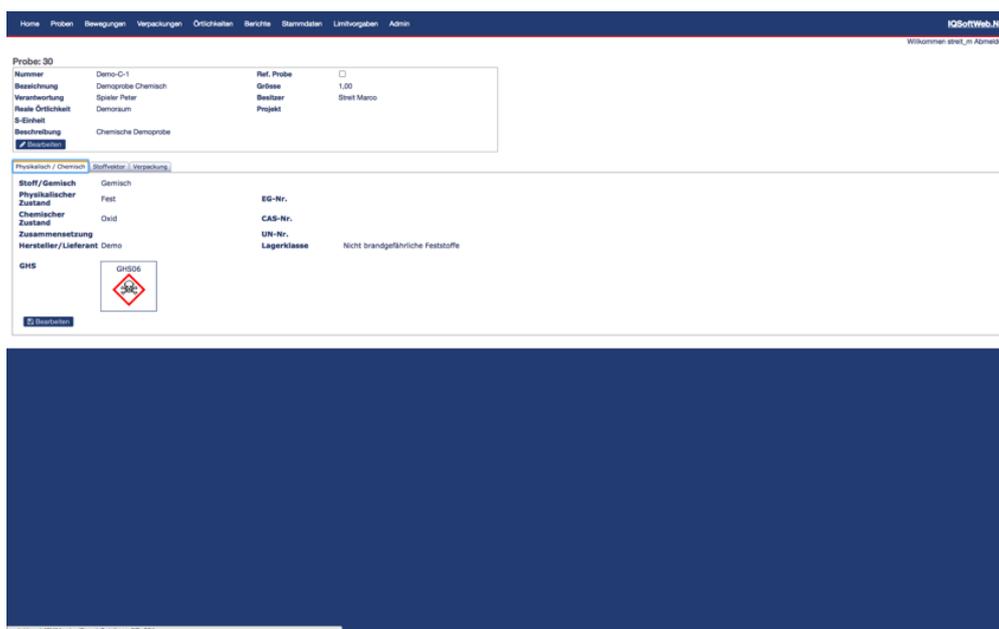


Figure 59: Print screen of the Integrated Sample and Order Management Software

A strong interaction with IQS Ltd. was created to ensure information exchange at the right time, during development as well as the extensive testing phase (Jany, 2015; Streit et al., 2015) of the new software up to today where the software is in use and further user-friendliness is under development.

In Spring 2017 the software was approved by the Swiss regulator (ENSI, 2018) and with the 1<sup>st</sup> of September 2017 the old KBuch was shut down and IPV was taken over its functionality.

AHL and IQS Ltd are further developing the functionality of the Software together. Due to the possibilities of the Database setup special reports can be generated by AHL itself.

The actual presentation is a follow up of the presentations given in 2014/2015 and will shortly summarize the concept, the testing phase and lessons learned during this period. The today's status after approval of the regulator and the further planned development are presented.

## References

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