

# ABOUT ESfEQA



ESfEQA is a German company based in Heidelberg and accredited according to DIN EN ISO/IEC 17043:2010 by the German Accreditation Body DAkkS. ESfEQA offers more than 90 External Quality Assessment programs in Biochemistry, Hematology, Immunology, Microbiology, Molecular Diagnostics and Educational Programs.

Please visit our website for more information.

Ask your local distributor or ESfEQA how to get enrolled in the ESfEQA External Quality Assessment Schemes.

## DENGUE NS1 ANTIGEN

EXTERNAL QUALITY ASSESSMENT /  
PROFICIENCY TESTING PROGRAM

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## EXTERNAL QUALITY ASSESSMENT PROGRAM

### Dengue NS1 Antigen (DENVAG)

Analytical Parameter:  
*Dengue Virus NS1 antigen*

Analytical Methods:  
*Immunchromatography assays (Lateral Flow Rapid tests)*  
*ELISA*

### Biological Background

Dengue viruses (DENV) belong to the flavivirus family and cause the most rapidly spreading vector-transmitted viral infection in humans with approximately 400 million cases and 22 000 deaths worldwide each year. The vectors of these viruses are mosquitos of the genus *Aedes*, namely *A. aegypti* (yellow fever mosquito), and *A. albopictus* (Asian tiger mosquito), and humans in particular are the reservoir hosts for DENV.

DENV is found mainly in Latin America, Central Africa, India and Southeast Asia. The virus is also regularly introduced into Europe: while it was long considered a disease of travelers returning home, local infections with DENV (but also with West Nile virus and Chikungunya virus, among others) have been reported repeatedly in recent years.

Therefore, rapid and reliable diagnostics for the detection of acute dengue virus infections are becoming increasingly important.

In this context, the detection of the highly specific dengue virus NS1 antigen in serum/plasma/whole blood samples of infected individuals from the onset of clinical symptoms in both primary and secondary infections is of particular importance offering a reliable alternative to other direct pathogen detection methods such as RT-PCR. Since the virus and NS1 antigen are only detectable up to day 10 after the onset of the disease, serological antibody detection is an important tool in dengue virus diagnostics, too.

Thus, in addition to its existing EQA/Proficiency Testing program for detection of antibodies to DENV, WNV, ZIKV, and CHIKV, ESfEQA has launched a new EQA/Proficiency Testing program for testing of Dengue NS1 antigen in human specimens to support medical laboratories and point-of-care testing sites to assess the quality of their Dengue NS1 antigen testing for reliable test results.

### Schedule & Samples

The Dengue NS1 Antigen program (ordering code: DENVAG) consists of 2 surveys per year, one in the 2nd quarter, and one in the 4th quarter. For each survey, 2 liquid or lyophilized samples of either serum or plasma or simulated samples consisting of an aqueous protein matrix are provided. Dengue virus NS1 antigen positive samples contain recombinant Dengue NS1 protein.

This program is synchronized with other ESfEQA programs allowing consolidated shipments of survey samples, either directly from ESfEQA or via the local ESfEQA distributor.

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### ESfEQA Reports & Certificates

Reports with detailed statistical information are provided as PDF-files to each participant via the TEQA web application. This includes the assessment of the laboratory performance in comparison to the target values and to the results of participants that have used the same, but also other analytical devices. Moreover, the reports contain specific comments on the evaluation and conclusions for a better understanding of the survey results.

Reports and Certificates are made available within 3 weeks after the closing date for result submission.



### Benefits of ESfEQA DENVAG EQA

- Stable control material with storage temperature at 2-8 °C
- Increase your confidence and the confidence of customers and patients in your diagnostic results
- Benefit from peer group comparison and comparison with other diagnostic equipment
- Supports the laboratory staff and management in their efforts for continuous quality improvement
- Customer-oriented service by local ESfEQA distributor and second-level support by ESfEQA, Heidelberg/Germany