

Call for participation

ENFSI Proficiency Test on Identification of GSR by SEM/EDS – GSR2020 –

Dear GSR expert,

On behalf of the ENFSI Expert Working Group “Firearms/GSR” we would like to invite you to participate in the proficiency test on the Identification of gunshot residue (GSR) particles by means of Scanning Electron Microscopy coupled with Energy Dispersive X-ray Spectroscopy (SEM/EDS). As part of the GSR Quality Scheme [1], the GSR proficiency test is organized, conducted and evaluated by QuoData GmbH.

Since receiving ASCLD-LAB approval in 2006, the program has enjoyed worldwide success. ISO 17043 accreditation is in preparation and scheduled for 2020. The GSR Quality Scheme is conducted annually and we invite you and your laboratory to participate in the 2020 round. State-registered Forensic Science Laboratories and all members of the European Network of Forensic Science Institutes (ENFSI) are welcome to participate.

Each participant will receive a specially prepared sample for the detection and identification of typical GSR particles (containing lead, barium and antimony) using their own laboratory-specific procedure for the automated detection of GSR particles via SEM/EDS.

The primary purpose of this proficiency testing program is to help laboratories improve and maintain their level of performance and correct any inaccuracies in their reported findings. The scheme also enables laboratories to demonstrate the quality of their measurements to accreditation bodies and other relevant authorities.



Background information

The scheme has existed since 2001. Preparations for the 2020 round are currently in progress and the samples are expected to be ready for dispatch in July 2020. The organization and statistical evaluation of the GSR2020 round will be conducted by QuoData GmbH (based in Dresden, Germany) on behalf of the ENFSI Expert Working Group “Firearms/GSR” [4], as has been the case since 2010. QuoData GmbH is specialized in providing services in the area of external quality assurance and proficiency testing; more generally, QuoData GmbH develops statistical tools for quality assurance. In connection with the GSR PT scheme, QuoData provides a dedicated website where supplementary information regarding the current round is available [5].

Results of previous GSR proficiency tests have been published in the Journal of Forensic Sciences ([6], [7] and [8]).

The findings compiled from the GSR2020 proficiency test will be published in a final report which will be submitted to all participants. In addition, each participant will receive a certificate of participation.

Test sample description

It has been shown that the use of a synthetic sample set is necessary in order to guarantee identical test samples. Therefore, GSR2020 will be performed again with synthetic samples ([5], [6] and [7]).

Test sample preparation has been subcontracted to Plano GmbH (Germany) [2] and will soon be completed. Sample characteristics were chosen as in former GSR PT rounds, though the number of particles, their diameter and their location will be different.

Homogeneity and stability testing of test samples has been subcontracted to the German Bundeskriminalamt (BKA) [3].

Time table of GSR2020

Date	Action	Responsibility
31 March 2020	Deadline for registration	Laboratories register with QuoData GmbH
14 April 2020	Deadline for payment	QuoData GmbH sends invoices and checks incoming payments
31 July 2020	Sample dispatch	QuoData GmbH sends the samples to the participants
28 August 2020	Deadline for uploading test results	Participants upload test results
4 September 2020	Activation of the GSR QC analysis tool	QuoData GmbH sends login data and activates the GSR QC analysis tool
18 September 2020	Cross checking submitted data	Using the GSR QC analysis tool, participants check submitted data
November 2020	Dispatch of final report and certificates	QuoData GmbH sends final reports and certificates

The deadline for registration is **31 March 2020**.

The deadline for payment of the participation fee is **14 April 2020**.

Sample dispatch is currently scheduled for **31 July 2020**. Each laboratory will receive one test sample along with instructions. Test results are uploaded and an online questionnaire regarding instrumental and procedural conditions is filled out on a dedicated website provided by QuoData GmbH.

The deadline for uploading the test data and the questionnaire is four weeks after sample dispatch on **28 August 2020**.

Five working days after the deadline for uploading test results, on **4 September 2020**, the participating laboratories will receive an email with the login data for the GSR QC analysis tool. Once they login, participants will be able to access their own test results as well as additional information, including the exact number of GSR particles, their sizes and exact positions. This will give the laboratories the opportunity to cross-check previously submitted data. It also allows the samples to be subsequently used in the laboratory as a standard for validation purposes in a GSR analysis. Laboratories have ten working days until **18 September 2020** to cross-check their data.

Participating laboratories will receive the final report and their certificate of participation by email in **November 2020**.

Participation fee

A participation fee will be charged to the laboratories covering the costs arising from the production of suitable sample material, the statistical evaluation, and the preparation of the final report and certificates. The fee is **905 €** per participant (plus 19 % VAT for German participants) plus shipping and packing (30 €).

In order to ensure comparability and independence of all laboratory test results, only one set of results per laboratory will be taken into account in the evaluation of the proficiency test. The fee covers the evaluation of one set of results corresponding to one test sample. It is however possible to order more than one PT test sample. The price for any additional test sample is 905 € plus shipping and packing (30 €). For each test sample one set of results will be evaluated and an individual report will be provided.

GSR QC analysis tool

For the evaluation of additional sets of results, please refer to the web-based *GSR QC Analysis Tool* which can be used for the purpose of quality assurance: <https://gsr-ie.quodata.de>.

The GSR QC analysis tool will be available free of charge for one year after completion of GSR2020, as an additional service offered to the participants. This will make it possible to subsequently use PT test samples for other purposes (e.g. as a validation standard for the SEM/EDS system or for quality assurance studies).

Payment and shipping

For participants from EU-countries other than Germany, the declaration of a VAT registration number is necessary; otherwise they will be charged German VAT.

Payment and sample shipping will proceed as follows:

1. The laboratory accepts the conditions for participation, either by filling in the application form on the website or by sending back a signed application form to QuoData. In so doing, the laboratory specifies whether payment will be carried out by bank transfer or by credit card (MasterCard, Visa or JCB). Please note that we have to charge a 3 % fee for payment by credit card
2. Additionally a flat rate of 30 € per test will be charged for shipping and packaging. Sample shipping will be carried out by a global courier delivery service.

Any additional costs, e.g. due to customs duties, are covered by the participating laboratory.

Binding application for participation

The statement of participation is binding and cannot be cancelled once QuoData GmbH has received the application. If a purchase order was submitted together with your statement for participation, an invoice for the participation fee and shipping costs will be mailed to the address indicated on the purchase order.

The amount indicated on the invoice must be credited to the account specified in the invoice no later than the deadline for payment on **14 April 2020**. No sample will be shipped until the fee has been received.

Statement for subscription and conditions for participation

If you participated in the 2019 GSR PT round, you can login and enroll here:

<https://gsr.quodata.de/pt-participant/enrollment>

If you have forgotten your password, you can request a new password to be sent to your registered email address at any time.

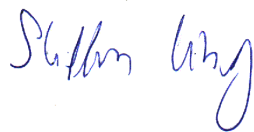
Otherwise, please fill in the online application form provided here:

https://gsr.quodata.de/pt-participant/lab_applicant/add.

You will get an email with your login data and the link for enrollment.

Enrollment is possible until **31 March 2020**.

On behalf of the ENFSI Expert Working Group "Firearms/GSR"



Dr. Steffen Uhlig, QuoData GmbH

References

- [1] https://quodata.de/fileadmin/forensik_2016_public/GSR-PT-scheme-description.pdf
- [2] <https://www.plano-em.de>
- [3] <https://www.bka.de>
- [4] <http://www.enfsi.eu/about-enfsi/structure/working-groups/firearms-and-gsr>
- [5] <https://quodata.de/gsr-quality-scheme.php>
- [6] Niewoehner L., Wenz W., Andrasko J., Beijer R., Gunaratnam L.; "ENFSI Proficiency Test Program on Identification of GSR by SEM/EDX"; Journal of Forensic Sciences; vol. 48(4); (2003); pp. 786-792.
- [7] Niewoehner L., Andrasko J., Biegstraaten J., Gunaratnam L., Steffen S., Uhlig S.; "Maintenance of the ENFSI Proficiency Test Program on Identification of GSR by SEM/EDX (GSR2003)"; Journal of Forensic Sciences; vol. 50(4); (2005).
- [8] Niewoehner L., Andrasko J., Biegstraaten J., Gunaratnam L., Steffen S., Uhlig S., Antoni, S.; "GSR2005-Continuity of the ENFSI Proficiency Test on Identification of GSR by SEM/EDX"; Journal of Forensic Sciences; vol. 53(1); (2008).