

International Proficiency Test for the Detection and Classification of Gunshot Residues by SEM/EDS

GSR2026 – Call for participation

Status from February 9, 2026

Dear GSR expert,

On behalf of the ENFSI Expert Working Group Firearms/GSR we would like to invite you to this year's PT round on the detection and classification of gunshot residue (GSR) particles by means of Scanning Electron Microscopy coupled with Energy Dispersive X-ray Spectroscopy (SEM/EDS). State-registered Forensic Science Laboratories and all members of the European Network of Forensic Science Institutes (ENFSI) are welcome to participate in the PT round GSR2026.

As part of the annually conducted GSR Proficiency Testing (PT) Scheme [1], the GSR2026 PT round is managed by QD Labs LP (hereafter referred to as QD Labs), seamlessly continuing the PT scheme started by quo data Gesellschaft für Qualitätsmanagement und Statistik mbH (hereafter referred to as QuoData GmbH). QD Labs is a provider of proficiency tests accredited according to ISO/IEC 17043:2023 [2] by ANAB. Hence, we fulfil the requirements by ASTM E3255-21 [3] Standard Practice.

Since receiving ASCLD/LAB approval in 2006, the scheme has already enjoyed worldwide success.

Each participant will receive a specially prepared sample for the detection and classification of typical GSR particles (containing lead, barium and antimony) using their own laboratory-specific procedure for the *automated* detection of synthetic GSR particles via SEM/EDS (Scanning Electron Microscopy coupled with Energy Dispersive X-ray Spectroscopy) according to ASTM E1588-20 [4] / ASTM E1588-25 [5].

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

Details on the organization

With regard to GSR2025 and previous PT rounds, the organizational structure of the GSR PT scheme has changed. While the coordination is now managed by QD Labs, QuoData GmbH remains actively involved in supporting the process: As an external service provider, QuoData GmbH is still responsible for the procurement, assessment, and storage of sample material, logistics, statistical analysis, report generation, as well as the operation of the PT portal for online data entry.

Background information

In 2001, the first round of the GSR PT was conducted, and since 2010 the GSR PT scheme has taken place annually, organized by QuoData GmbH and since the GSR2022 PT round accredited by DAkkS according to DIN EN ISO/IEC 17043:2010 [6]. Effective January 1, 2026, the GSR PT scheme is managed and coordinated by the PT provider QD Labs and accredited by ANAB in accordance with ISO/IEC 17043:2023 [2], thereby continuing to fulfil the requirements of ASTM E3255-21 [2] Standard Practice.

Currently, preparations for the GSR2026 PT round are in progress and the samples are expected to be ready for dispatch on June 10, 2026. The organization and statistical evaluation of the GSR2026 PT round will be conducted by QuoData GmbH on behalf of the QD Labs and the ENFSI Expert Working Group Firearms/GSR [7]. QuoData GmbH has performed the statistical evaluation since 2010 and 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 GmbH provides a dedicated website where supplementary information on the current PT round is available [8].

Results of previous GSR PT rounds have been published in the Journal of Forensic Sciences ([9], [10] and [11]).

The findings compiled from the GSR2026 PT round will be published in a final report of results which will be submitted to all participants. In addition, each participant will receive an individual certificate of participation.

Test sample description

To guarantee the most equal conditions possible for all participants regarding the test samples, the use of synthetic sample sets is essential. Therefore, the GSR2026 PT round will be performed again with synthetic samples ([9], [10] and [11]).

The test material is designed according to the requirements of the Advisory Board and QD Labs, and is produced by the company PLANO GmbH in Wetzlar [12], Germany. Quality control is

performed on behalf of the ENFSI Expert Working Group Firearms/GSR by a DIN EN ISO/IEC 17025:2018 [13] accredited laboratory. The test items for the GSR2026 PT round will consist of specially prepared, virtually identical samples in accordance with ISO/IEC 17043:2023 [6].

Homogeneity and stability testing of test samples is conducted in a DIN EN ISO/IEC 17025:2018 [13] accredited ENFSI laboratory.

Time table of the GSR2026 PT round

Date	Action	Responsibility
April 30, 2026	Deadline for enrollment	Laboratories register for participation in the GSR2026 PT round through the PT portal https://pt.qd-labs.com Direct link to the product page: https://pt.qd-labs.com/en/product/1156
June 10, 2026	Sample dispatch	QuoData GmbH sends the samples to the participants
July 8, 2026	Deadline for uploading test results	Participants submit test results on the PT portal https://pt.qd-labs.com
July 29, 2026	Activation of the GSR QC Analysis Tool for cross checking submitted data	QuoData GmbH sends login data and activates the GSR QC Analysis Tool (https://gsr-ie.quodata.de)
August 12, 2026	Deadline for cross checking submitted data	Using the GSR QC Analysis Tool, participants check their submitted data
September 30, 2026	Publication of the final report of results and providing the individual certificates	QD Labs publishes the final report of results and the individual certificates, which are made available in the PT portal https://pt.qd-labs.com

The deadline for enrollment is April 30, 2026.

Following the organizational restructuring, QuoData GmbH will continue to provide a PT portal which is available at a new address:

<https://pt.qd-labs.com>

The enrollment for a GSR PT round is managed through the shop section of this new PT portal. Follow this link to go directly to the product page:

<https://pt.qd-labs.com/en/product/1156>

Here, you also have the option to request a quote before placing an order.

User accounts previously registered at <https://forensics-pt.quodata.de> have been migrated to the new PT portal. For security reasons, participants are required to set the password upon their first login (please use the “Reset your password” option; the same password as used previously may be chosen).

If you have not yet participated in a previous GSR PT round since 2019, please fill in the online application form, provided here:

https://pt.qd-labs.com/en/pt-participant/lab_applicant/add

Sample dispatch is scheduled for June 10, 2026. Each laboratory will receive one test sample along with instructions. Test results will need to be uploaded and an online questionnaire on instrumental and procedural conditions will need to be filled out in the PT portal, which is available at

<https://pt.qd-labs.com>

The deadline for uploading test results along with the online questionnaire is four weeks after sample dispatch on July 8, 2026.

On July 29, 2026, the participating laboratories will receive an email with the login data for the GSR QC Analysis Tool (<https://gsr-ie.quodata.de>). Once they login, the 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 their 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 August 12, 2026 to cross-check their submitted data.

The final report of results and the individual certificate of participation will be made available for the participating laboratories in the PT portal (<https://pt.qd-labs.com>) on September 30, 2026.

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 of results and the individual certificates. The fee is 1315 € per participant (tax obligation is subject to recipient of goods and services) plus 45 € for shipping and packing.

It is possible to order more than one PT test sample. The price for any additional test sample is 1315 €, along with 45 € extra shipping costs per additional package. Since two test samples can be sent per package, extra shipping costs will be invoiced as follows:

- No extra shipping and packing costs for 1 additional test sample
- An extra 45 € shipping and packing costs for 2 or 3 additional samples
- An extra 90 € shipping and packing costs for 4 or 5 additional samples, etc.

However, to ensure the comparability and independence of all laboratory test results, only one set of results per laboratory can be submitted for taking into account in the PT evaluation across laboratories and to receive an individual certificate of participation. 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>.

GSR QC Analysis Tool

The GSR QC Analysis Tool (<https://gsr-ie.quodata.de>) will be available for a maximum of 100 evaluations free of charge. It is an additional service offered to the participants and a benefit in the context of quality assurance within laboratories. This opportunity 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

Payment and sample shipping will proceed as follows:

1. The laboratory accepts the conditions for participation by placing an order in the shop section of the PT portal (<https://pt.qd-labs.com>; direct link to the product page: <https://pt.qd-labs.com/en/product/1156>). In doing so, 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, 45 € per package (with up to two test samples) will be charged for shipping and packaging.
3. After successful payment, sample shipping will be carried out by FedEx Corporation.

Any additional costs, e.g. due to customs duties, are covered by the participating laboratory. Tax obligation is subject to the recipient of goods and services.

Binding enrollment for participation

The statement of participation by placing an order is binding and cannot be cancelled once QD Labs has received this. If a purchase order was submitted together with your order, 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 within four weeks as specified in the invoice. No sample will be shipped until the fee has been received.

On behalf of the ENFSI Expert Working Group Firearms/GSR



Steffen Uhlig, PhD

Frankford DE / USA, February 9, 2026

Head of the proficiency test
QD Labs LP

References

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- [6] DIN EN ISO/IEC 17043:2010; Conformity assessment - General requirements for proficiency testing.
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- [9] 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.
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