



BfR-Symposium Wild – prepared?

14.–15. March 2024, Berlin

BfR-Symposium

Wild – prepared?

The German Federal Institute for Risk Assessment (BfR) has conducted scientific research on the broad topic of game meat food safety for 12 years.

The aim is to minimise metallic fragments in game meat from food-supplying game species obtained by hunting, which can pose health risks, especially for hunters and their families who are frequent consumers. Proof of minimising the introduction of metallic fragments from leaded and lead-free rifle bullets can only be provided through knowledge and standardised procedures.

The BfR raised the question of whether lead particles in game meat can increase the lead content of food after cooking at the "Wild – Well shot?" conference. The results of the investigation, which used pigs as a model animal in a feeding trial, will be presented. What is the impact of hygiene measures on game meat after shooting? This question was also investigated in a BfR dissertation, and the results are reported here.

How can metallic fragments be detected by weight, size and distribution in game meat (roe deer)? How are they distributed and how can they be detected? The detection of fragments also includes the question of how the various hunting bullets behave when fired. When using leaded or so-called lead-free bullets, various metals are used as bullet materials to convert the kinetic energy of the bullet into killing work. To ensure equal conditions for bullet testing and evaluation, a standardised firing procedure is necessary. Developing a standardised test and evaluation procedure for hunting rifle bullets required breaking new ground. To ensure objectivity, the test procedure should clearly describe the individual work steps, test criteria, and environmental conditions. These requirements indicate that additional investigations have to be conducted to compare two commonly used gelatin block sizes when firing different high-energy hunting bullets. The results showed that only the large block size is suitable as a test simulant for high-energy bullets. Further results indicate that additional investigations into the use of large gelatin blocks are necessary. It was also important to clarify the effects of different mold materials, the duration of the cooling phase, and the influence of different storage periods before firing on the test results. The results obtained from these investigations now allow the use of the internationally recognised test simulants such as gelatin and ballistic soap. Standardised test procedures and standardised evaluation procedures now enable reproducible results.

The BfR, together with an international panel of scientific experts, has summarised the results of the scientific investigations in a product profile for testing hunting bullets for food-supplying game species. This contains terms to be used in the test with information on the bullet, a physical fact sheet and a chemical fact sheet on the test procedure. The panel also adopted definitions and terminology to ensure uniform understanding.

To make the standardised test and evaluation procedure for proof tests of hunting bullets internationally usable, the BfR plans to conduct a round robin test with international participation in 2024.

In addition to scientific research, international exchange with experts is an important aspect. With the approval of the COST Action "Safety in the Game Meat Chain" (CA22166; duration 2023-2027), the BfR and the participating project partners are contributing to the establishment of a Europe-wide network of experts. The focus is on exchanging knowledge on health risks to consumers from game meat obtained from hunting along the entire product chain.

Two informative days await you at the German Federal Institute for Risk Assessment!

Programme

Thursday, 14. March 2024

11:00–11:10	Welcome Prof. Dr Dr Dr h.c. Andreas Hensel, President of the German Federal Institute for Risk Assessment (BfR), Berlin
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11:10–11:20 Uhr	Welcome Dr Eckhard Heuer, Federal Ministry of Food and Agriculture (BMEL), Berlin
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Research mandate and networking

Moderation: Dr Monika Lahrssen-Wiederholt, BMEL

11:20–11:40	Food safety of game meat obtained from hunting PD Dr Robert Pieper, BfR, Berlin
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11:40–12:00	Health risks of lead, copper, zinc in game meat Dr Ulrike Pabel, BfR, Berlin
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12:00–12:20	The SafeGameMeat network (COST Action 22166) Dr Anneluise Mader, BfR, Berlin
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12:20–13:20	Lunch break (own costs)
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Safety of game meat

Moderation: Dr Anneluise Mader, BfR

13:20–13:50 **Rotaviruses and hepatitis E viruses in wild boar and wild ruminants in Brandenburg, 2019-2022**
Dr Eva Trojnar, BfR, Berlin

13:50–14:10 **Studies on rinsing hunted roe deer and factors influencing microbiological contamination**
PD Dr Felix Reich, BfR, Berlin

14:10–14:30 **Analysis of bullet fragments in roe deer carcasses**
Annina Haase, BfR, Berlin

14:30–14:50 **Bioavailability of lead – influence of culinary preparation**
Dr Kirsten Schulz, BfR, Berlin

14:50–15:20 **Coffee break**

Special aspects of bombardment studies

Moderation: Ingo Rottenberger, BfR

15:20–15:50 **Hunting rifle ammunition – a technical, sociological view on benefits, performance, availability and monitoring the success**
Dr Niels Kanstrup, Aarhus University, Denmark

15:50–16:20 **On the energy balance of deformation bullets during deformation in the target**
Prof. Johann Höcherl, University of the Bundeswehr Munich

16:20–16:40 **Review of the gelatin specifications of the manufacturer Gelita**
Finn Schrader, University Göttingen

16:40–16:50 **Closing remarks 1st day**
Dr. Monika Lahrssen-Wiederholt, BMEL

Friday, 15. March 2024

09:00–09:15 **Opening day 2**
Dr Monika Lahrssen-Wiederholt, BMEL, Berlin

Development of methods for testing the behaviour of hunting rifle bullets

Moderation: Dr Niels Bandick, BfR

09:15–09:45 **Suitability test of gelatin as a test simulant in two block sizes when fired with a very high-energy hunting bullet > 5000 J and test of a modified crack length measurement method**
Dr Ellen Ulbig, Annett Martin, Ingo Rottenberger, BfR, Berlin

09:45–10:15 **Suitability of two gelatin block sizes as ballistic simulants for hunting rifle bullets with 2900 J**
Annett Martin, Dr Ellen Ulbig, Ingo Rottenberger, BfR, Berlin

10:15–10:45 **Investigation of the influence of moulding materials, cooling phase and storage time on large gelatin blocks as a test simulant for hunting bullets**
Ingo Rottenberger, Annett Martin, Dr Ellen Ulbig, BfR, Berlin

10:45–11:15 **Coffee break**

11:15–11:35 **Standard operating procedure soap**
Ingo Rottenberger, BfR, Berlin

11:35–11:55 **Results of the expert discussion “Methods of recording bullet fragments and measurement procedures for describing a reliable killing effect in simulants”**
Dr Monika Lahrssen-Wiederholt, BMEL, Berlin

11:55–12:15 **Concept of the round robin test**
Ingo Rottenberger, BfR, Berlin

12:15–12:45 **Panel discussion – What needs to be done?**
Moderation: PD Dr Helmut Schafft, BfR, Berlin

12:45–13:00 **Closing remarks**
Dr Monika Lahrssen-Wiederholt, BMEL, Berlin

Organisational information

Venue

German Federal Institute for Risk Assessment (BfR)
lecture theater
Diedersdorfer Weg 1
12277 Berlin

Directions

Destination stop (www.bahn.de, www.bvg.de):
"Nahmitzer Damm/Marienfelder Allee (Berlin)"

Registration

Standard rate: 120.00 €
Students: 40.00 €
employee of an institution within the BMEL's portfolio
(incl. BfR): 0.00 €
Please register online by 14.03.2024 on
<https://www.bfr-akademie.de/english/wild2024.html>

General contact

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Further notes

The event will be held in German. Simultaneous translation into English will be provided.



Organiser

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About the BfR

The German Federal Institute for Risk Assessment (BfR) is a scientifically independent institution within the portfolio of the German Federal Ministry of Food and Agriculture (BMEL). It advises the Federal Government and the federal states ("Laender") on questions of food, chemicals and product safety. The BfR conducts its own research on topics that are closely linked to its assessment tasks.

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