

Accepted Manuscript

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Authors: Karlijn Bezemer, Rikus Woortmeijer, Mattijs Koeberg, Peter Schoenmakers, Arian van Asten



PII: S0379-0738(18)30331-1
DOI: <https://doi.org/10.1016/j.forsciint.2018.06.011>
Reference: FSI 9358

To appear in: *FSI*

Received date: 9-1-2018
Revised date: 29-5-2018
Accepted date: 6-6-2018

Please cite this article as: Karlijn Bezemer, Rikus Woortmeijer, Mattijs Koeberg, Peter Schoenmakers, Arian van Asten, Multicomponent characterization and differentiation of flash bangers – Part I: Sample collection and visual examination, Forensic Science International <https://doi.org/10.1016/j.forsciint.2018.06.011>

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Multicomponent characterization and differentiation of flash bangers - Part I: Sample collection and visual examination

Karlijn Bezemer^{1,2}, Rikus Woortmeijer², Mattijs Koeberg², Peter Schoenmakers¹,
Arian van Asten^{1,2,3}

¹van 't Hoff Institute for Molecular Sciences, Faculty of Science, University of Amsterdam, PO Box 94157, 1090 GD Amsterdam, The Netherlands

² Netherlands Forensic Institute, P.O. Box 24044, 2490 AA The Hague, The Netherlands

³CLHC, Amsterdam Center for Forensic Science and Medicine, University of Amsterdam, P.O. Box 94157, 1090 GD Amsterdam, The Netherlands

Correspondence and requests should be addressed to: Karlijn Bezemer (k.bezemer@nfi.minvenj.nl)

Highlights

- Introduction of a novel multicomponent analysis strategy for flash bangers.
- A unique and forensically relevant sample set of flash bangers has been collected.
- Visual examination already results in a high degree of differentiation.

Abstract

To continue to assist law enforcement agencies in counteracting the illegal use of fireworks new forensic methods have to be developed. In the Netherlands, many incidents involve powerful flash bangers mainly due to irresponsible behavior and misuse for criminal activities. Obtaining tactical information for differentiation of these flash bangers is of high priority in forensic casework. A representative sample set of a certain type of flash bangers, confiscated by the Dutch police, has been collected in a time period of one year and initial characterization has been performed based on visual examination. The individual components of the flash bangers already allow for a high degree of differentiation. Ultimately, combining all visual characteristics of pyrotechnic charges, labels, fuses and caps resulted in the classification into 24 groups out of 30 seized sets of flash bangers. In addition to visual examination, this unique sample set offers a wide variety of research opportunities that could be further explored and that might prove essential in case scenarios where visual characteristics are more difficult to assess or are completely absent.

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