



More efficient propellant analysis contributes to sustainability

Improved chemical analysis methods in the S+T laboratory responsible for propellant analysis are helping to sustainably conserve resources without adversely affecting the quality of the results. Among other things, ten times less solvent is needed to obtain identical results.

During 2017, a number of improvements were made to the analysis of propellant in our laboratory as part of our ammunition monitoring tasks. One major success was our optimisation of the chemical analysis process which allows us to determine the stabiliser content in the propellants. Thanks to this new method, not only is it possible to determine the stabiliser content with the same precision and accuracy than before, but it is also six times quicker and uses ten times less chemical solvent. This method, which was validated as part of a bachelor's degree dissertation at the Fribourg School of Engineering and Architecture, contributes to the progress made by armasuisse S+T in terms of sustainability: it saves resources over the long term without diminishing the quality of the measurements or impairing ammunition safety.



Ultra-high performance liquid chromatography (UHPLC) for analysing propellant powder at armasuisse S+T

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