

Forensic\_SEM@yahoogroups.com

Vojin Mastruko

**Subject:** Re: [Forensic\_SEM] S&B NONTOX ammo

**Sent:** Thursday, December 03, 2009 1:57 AM

Thank you for the info about US patent 6,964,287 relating to S&B primer mix. From the patent is clear that S&B proposed a lot of NONTOX primer mixtures that can contain B, Fe, Zn, Bi, Mn, Sn, V, Mo, Ca, K and Cu. It seems that S&B NONTOX primers and similar primers free from heavy metals will produce trouble to GSR analysts because of need to change searching scheme, make new environmental studies, etc.

Bryan Burnett

**Subject:** RE: [Forensic\_SEM] S&B NONTOX ammo & other Pb-free ammunitions

**Sent:** Thursday, December 03, 2009 8:10 AM

There has been much discussion over the last ten years as to the implications of a shooting case where Pb-free ammunition was used. I have yet to see a case where lead-free ammunition was used. Has anyone?

My understanding is that a firearm which fires Pb-free ammunition will still have PbSbBa-bearing particles because of previous use of standard (PbSbBa)-primered ammunition (Jozef Lebedzik, 2001, International Association for MicroAnalysis 2(2):4-8).

Jozef Lebedzik

**Subject:** Re: [Forensic\_SEM] S&B NONTOX ammo & other Pb-free ammunitions

**Sent:** Thursday, December 03, 2009 10:25 AM

It has been a long time since the "green" ammunition first appeared on the market. However, there is more and more and easy to get the nasty "green" stuff. S&B advertised it a number of years ago, but just recently I was able to get some. When ever the temperature here in Colorado climbs up from subzero values, I will test fire those suckers. I will post the results soon.

-----Original Message-----

Vojin Mastruko

**Subject:** [Forensic\_SEM] Zero GSR particles after massive shooting

**Sent:** Sunday, December 06, 2009 6:26 AM

S&B NONTOX ammunition in different calibers is not only Pb-free ammunition. It is Pb-Ba-Sb free! It does not produce Pb-Ba-Sb rounded particles normally found on shooters hands/clothes. This ammo is GSR free! I think this is a serious situation because GSR analysts must find a way how to deal with this "nasty green suckers". I am working on a robbery case where a felon killed a cop. The killed cop and two other police officers fired totally 13 S&B NONTOX 9x19 mm rounds. Classic GSR analysis for stubs used to tape police officers' hands didn't find a single GSR particle. SEM/EDX and GSR analyst were not to blame for possible malfunction or mistake because they passed last ENFSI GSR Proficiency test. The result of "Zero GSR particles after massive shooting" must be related to different type of primer, NONTOX primer that contains zero of specific elements like Pb, Ba and Sb. Depending on a case this new situation could be beneficial because this could lead to differentiation of source of GSR particles but generally this could be a big problem to GSR analysis and I am asking this group to concentrate on this problem in order to find an answer how to solve this problem.

Jozef Lebiedzik

**Subject:** Re: [Forensic\_SEM] Zero GSR particles after massive shooting

**Sent:** Sunday, December 06, 2009 7:20 PM

I did test fire the S&B NONTOX primer only and it looks like "Winchester Clean" primer. Mostly potassium. Such an ammo when fired, surprisingly doesn't produce potassium particles, just a few of them. The K reacts with other elements, so the detection is not simple. However, when you fire the primer only, it's mostly K alone. I will look a bit further in to the problem and see what can be done here.