Explosives Analysis Procedures

Prepared By: S/A John W. Bendure
Trace Evidence Section, N.C.S.B.I.
Revised in March 2001

EXPLOSIVES

Explosives evidence examined in the Trace Evidence Section is usually in one of two forms, preblast or postblast. Preblast analysis involves the identification of an unexploded material that could range from anything such as gunpowder(a common propellant) to C4(a white plastic high explosive). Analysis of these materials can be done in bulk form which tends to make the examination easier. In most cases, the analysis usually deals with the examination of postblast materials or debris which requires the examination to be done on trace quantities of explosive and/or residual byproducts. This type of analysis employs the use of various techniques and instrumentation such as spot tests, thin layer chromatography, infrared spectroscopy, polarizing light microscopy, scanning electron microscopy/x-ray analysis, GC/MS, and x-ray diffraction.