



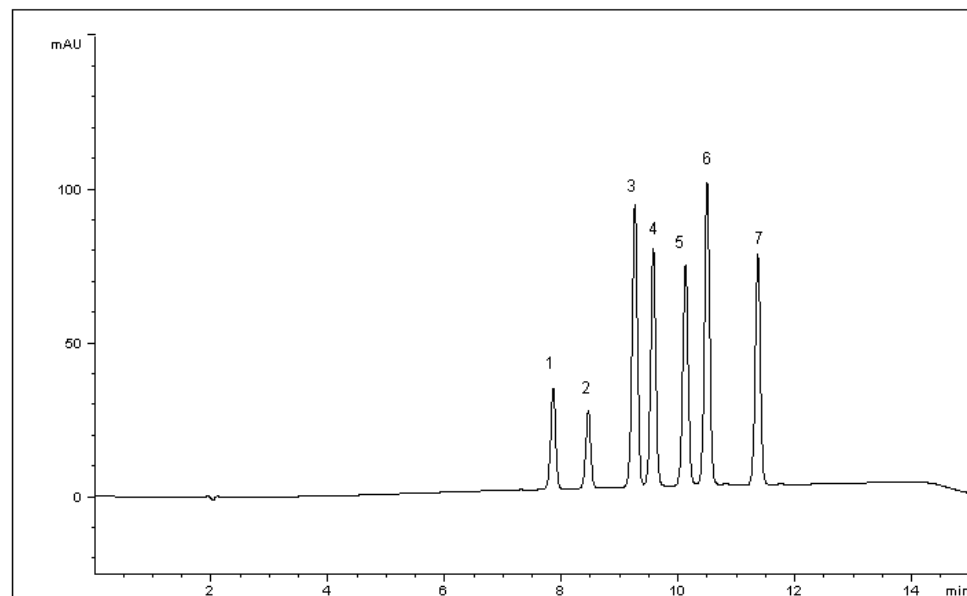
Seven Nitroaromatic and Nitroamine Explosives Analyzed with HPLC - AppNote

A Reproducible Method for Detection of a Nitroaromatics

Click [HERE](#) for Column Ordering Information.

The EPA Standard Test Method (8330B) for the analysis of Seven Nitroaromatic and Nitroamine Explosives in Soil by HPLC requires the use of two Reversed-Phase Columns, C18 and CN in series. These Explosive compounds are notorious for separation difficulty due to the similarities in structure.

This Method has been developed for all seven of the Nitroaromatic Explosives and is rapid, sensitive, and Reproducible .

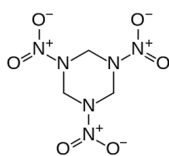


Peaks:

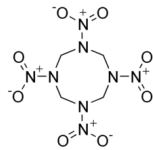
1. Hexahydro-1,3,5-trinitro-1,3,5-triazine (HTNT)
2. Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (OTNT)
3. m-Dinitrobenzene (DMB)
4. 2-Amino-4,6-dinitrotoluene (ADNT)
5. 1,3,5-Trinitrobenzene (TNB)

6. 2,4-Dinitrotoluene (DNT)

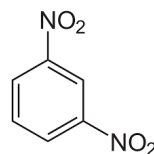
7. 2,4,6-Trinitrotoluene (TNT)



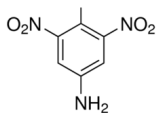
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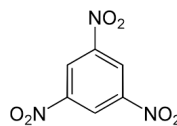
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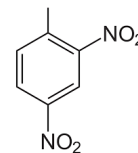
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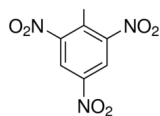
4



5



6



7

Method Conditions

Column: Cogent Phenyl Hydride™, 4μm, 100Å



Catalog No.: 69020-15P

Dimensions: 4.6mm x 150mm

Mobile Phase:

A: DI Water with 0.1% Formic Acid (v/v)

B: Acetonitrile with 0.1% Formic Acid (v/v)

Gradient:

Time (minutes)	%B
0	25
10	65
11	25
15	25

Injection vol.: 1 μ L

Flow rate: 1.0mL / minute

Detection: UV @ 254nm

Sample Preparation: EPA Method 8330 Explosives Mixture each analyte @ 100 ug/mL Standard Solution in Acetonitrile

%RSD: <0.2%



Notes: These solid compounds do not occur naturally in the environment. The commonly known compound, TNT, is an explosive used in military shells, bombs, and grenades, in industrial uses, and in underwater blasting. 2,4,6-Trinitrotoluene production in the United States occurs solely at military arsenals.

