

TLC of Explosives from Various Groups

	<u>Separated Compounds</u>	<u>Absorbent Material</u>	<u>Developing Solvent</u>	<u>Visualization of R_f values</u>	
1	PETN, DINA, RDX, HMX, tetryl, TNB, TNT, dipicrylamine, ammonium nitrate	Silica gel G	a. Benzene b. Chloroform c. Pet Ether (30-50°C) - Acetone (5:3)	5% DPA in ethanol followed by UV	
2	o- and m-DNB, 1-chloro-2,4-DNB, TNB, 2,4-DNT, TNT, tetryl, EGDN, NG, PETN, RDX	Silica gel G	Benzene-Pet Ether-Methanol (8:6:1 or 4:5:1)	Nitroaromatics: (1) 5% DPA in Me-OH (2) NaOH in Me-OH/Acetone (1:1) RDX & Nitrates: UV followed by 5% DPA in MEOH acidified by H ₂ SO ₄ to strengthen color	
3	Nitrobenzene, o-, m-DNB, o-, m-, p-MNT, 2,4-, 2,6-, 3,4-DNT, 2,4,6-, 2,3,4-, 2,4,5-, 3,4,5-TNT, TNB, EGDN, NG, PETN	Silica gel G	a. Pet Ether-Ethyl Acetate (3:2) b. TNT & Nitrate Esters 2 dimensional: 1. Benzene-Pet Ether-MeOH (4:5:1) 2. Pet Ether-Ethyl Acetate (3:2) c. Some TNT & DNT isomers, TNB & m-DNB-2 dimensional: 1. Pet Ether-Ethyl Acetate (3:2) 2. 1,2-Dichloroethane-Pet Ether (1:2)	5% Alkaline Solution of DPA in Acetone /Methanol (1:1) followed (only the Nitrate Esters) by UV **NOTE** Nitrobenzene & the MNT isomers were not separated	

