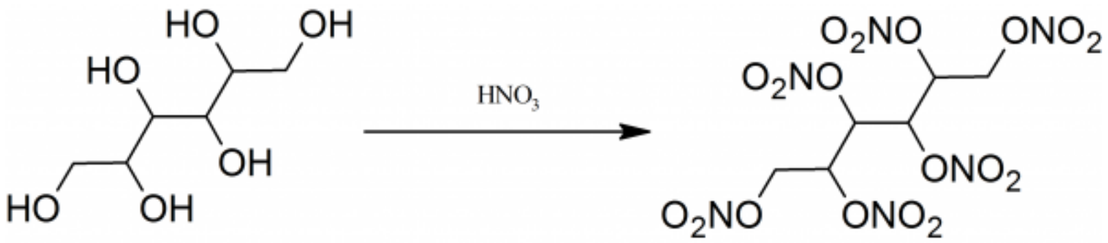
Preparation of mannitol hexanitrate



100 g of finely powdered mannitol is gradually treated, with stirring, with 500 g of nitric acid (d=1.5). When all has dissolved, the solution is cooled to o and 1000 g of concentrated sulfuric acid are added. After standing for an hour the separated crystals of mannitol hexanitrate are filtered off, and washed, first with cold water, then with warm sodium carbonate solution. They are finally recrystallized from alcohol. According to other synthetic procedure, 100 g of powdered mannitol is rubbed with just sufficient nitric acid (d=1.5) completely to dissolve it. The solution is then treated alternately with 450 g nitric and 1500 g sulfuric acids have been added. A hard mass of crystals is obtained. They are filtered off, washed with cold water, partially dried and crystallised from alcohol. The nitric-sulfuric acid mixture affords, when diluted with ice, a further quantity of mannitol hexanitrate. Mannitol hexanitrate crystallizes in colorless silky needles. It is almost insoluble in water, is fairly soluble in alcohol, and readily soluble in ether.

Organic medical chemicals, by M. Barrowliff, 228, 1921