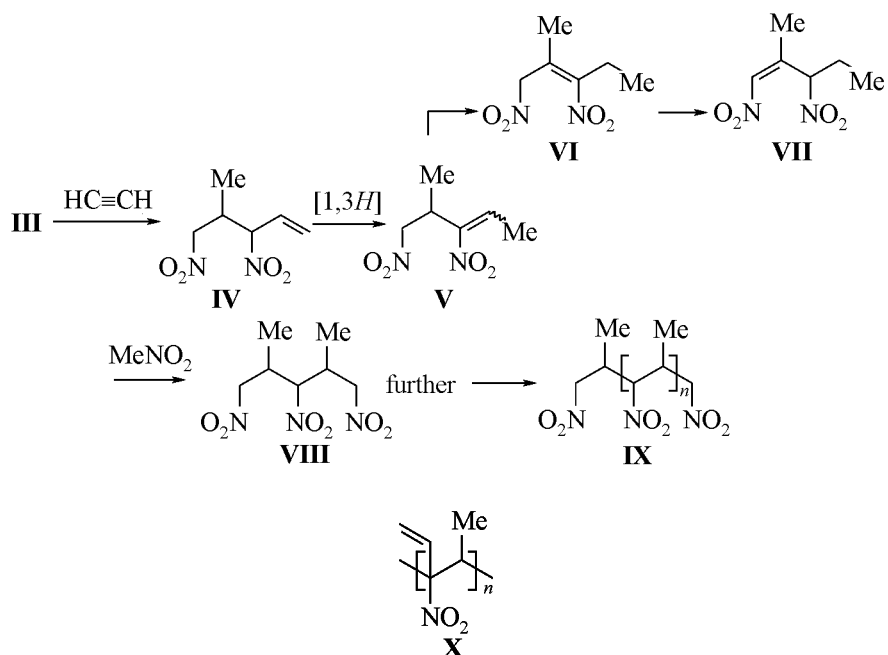


Scheme.



1,3-Dinitro-2-methylpropane (**III**), A mixture of 6.1 g (100 mmol) of nitromethane, 1 g (15 mmol) of KOH (containing ~15% of water), and 50 ml of DMSO was charged into a rotating pressure reactor of 0.5 l capacity. Acetylene was charged into the reactor to a pressure of 14 at, and within 30 min the reactor was heated to 80°C. On reaching this temperature the heating was stopped at once (the reaction mixture remained at 80°C for ~5–6 min). On cooling to the room temperature (the residual pressure was ~9 at) the reaction mixture was discharged, diluted by 2 volumes of water, the reaction products were extracted into ethyl ether (20 ml × 4), the combined ether solution was washed with water (10 ml × 4), and dried with calcined K₂CO₃. On removing ether we obtained 0.27 g (1.8 mmol, yield 1.8%) of compound **III** (purity by GLC data 95%). ¹H NMR spectrum (400.13 MHz, CDCl₃), δ, ppm: 4.60–4.40 m [4H, 2CH₂, ³J(CH₂, CH) 6.3 Hz], 3.10 m (1H, CH), 1.18 d [3H, Me, J(Me, CH) 7.0 Hz]. ¹³C NMR spectrum (100.61 MHz, CDCl₃), δ, ppm: 14.76 (Me), 31.09 (CH), 62.50 (CH₂). IR spectrum (thin film), ν, cm⁻¹: 2978–2929 m (CH, CH₂, Me), 1557 v.s (ν_{as} NO₂), 1431 s (CH₂), 1402 s (CH₂), 1378 v.s (ν_s NO₂). Mass spectrum, m/z (I_{rel}, %): 116 [M - 2O] (5), 85 [M + H - 4O] (3), 69 (C₄H₅O, 89), 57 (C₄H₉, 13), 55 (C₄H₇, 45), 46 (NO₂, 100).

REFERENCES

1. Trofimov, B.A., *Geteroatomnye proizvodnye atsetilena: novye polifunktsional'nye monomery, reagenty i poluprodukty* (Heteroatomic Derivatives of Acetylene, New Polyfunctional Monomers, Reagents and Intermediates), Moscow: Nauka, 1981.
2. Trofimov, B.A. and Mikhaleva, A.I., *N-Vinilpirroly*, Novosibirsk: Nauka, 1984; Trofimov, B.A., *N-Vinylpyrroles. The Chemistry of Heterocyclic Compounds*, part 2, vol. 48; *Pyrroles*, Jones, R.A., Ed., New York: Wiley, 1992, p. 131.
3. Trofimov, B.A. and Amosova, S.V., *Divinilsulfid* (Divinyl Sulfide), Novosibirsk: Nauka, 1983.
4. Mikhaleva, A.I. and Gusarova, N.K., *Atsetilen: reaktsii i proizvodnye. Bibliografiya nauchnykh trudov B.A. Trofimova* (Acetylene: Reaction and Derivatives. List of Scientific Publications of B.A. Trofimov), Novosibirsk: Izd SO Rus. Akad. Nauk, 1999.
5. Kukharev, B.F., Stankevich, V.K., and Klimenko, G.R., *Mendeleev Commun.*, 2002, p. 63.
6. Daineko, V.I., Proskurnina, M.V., Skorniyakov, Yu.V., Trofimov, B.A., and Zefirov, N.S., *Zh. Org. Khim.*, 2002, vol. 38, p. 1484.
7. Gareev, G.A. and Svirskaya, L.G., *Khimiya nitrometana* (Nitromethane Chemistry), Novosibirsk: Nauka, 1995, p. 107.