

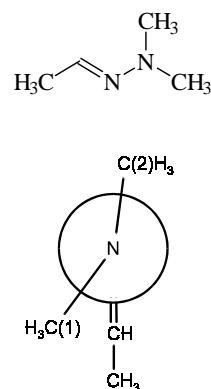
1813
ED

C₄H₁₀N₂

(E)-(Acetaldehyde dimethylhydrazone)

C₁

| r_a | Å ^{a)} | θ_a | deg ^{a)} |
|-------|-----------------|------------------------|-------------------|
| C–H | 1.112(15) | N–C–H | 112.0(39) |
| C=N | 1.286(6) | C–C–H | 108.3(75) |
| N–N | 1.402(12) | N=C–H | 127.2(35) |
| C–N | 1.469(20) | C–N–C | 117.5(10) |
| C–C | 1.492(33) | N–N–C | 114.1(6) |
| | | N=C–C | 114.0(18) |
| | | C=N–N | 122.5(23) |
| | | τ_1 ^{b)} | 38.7(50) |
| | | τ_2 ^{c)} | 174.7(50) |



C_{3v} local symmetry was assumed for the CH₃ groups; the C–CH=N–N skeleton was assumed to be planar. The experimental data were best explained by a *syn* model, in which the H atom adjacent to the C=N bond is *cis* to the amino N atom. Slight displacements of the C atoms in the N(CH₃)₂ group from the plane of the C–C=N–N skeleton were indicated, but the results seem to be inconclusive because of the systematic uncertainties originating from the effects of vibration ignored in the analysis.

The measurements were made at ≈ 40 °C.

^{a)} Three times the estimated standard errors including the experimental scale error.

^{b)} Dihedral angle C=N–N–C(1). The uncertainty was not listed in the original paper.

^{c)} Dihedral angle C=N–N–C(2). The uncertainty was not listed in the original paper.

Naumov, V.A., Litvinov, O.A., Kitaev, Yu.P.: Dokl. Akad. Nauk SSSR **256** (1981) 1158; Proc. Acad. Sci. USSR (Engl. Transl.) **256** (1981) 106.