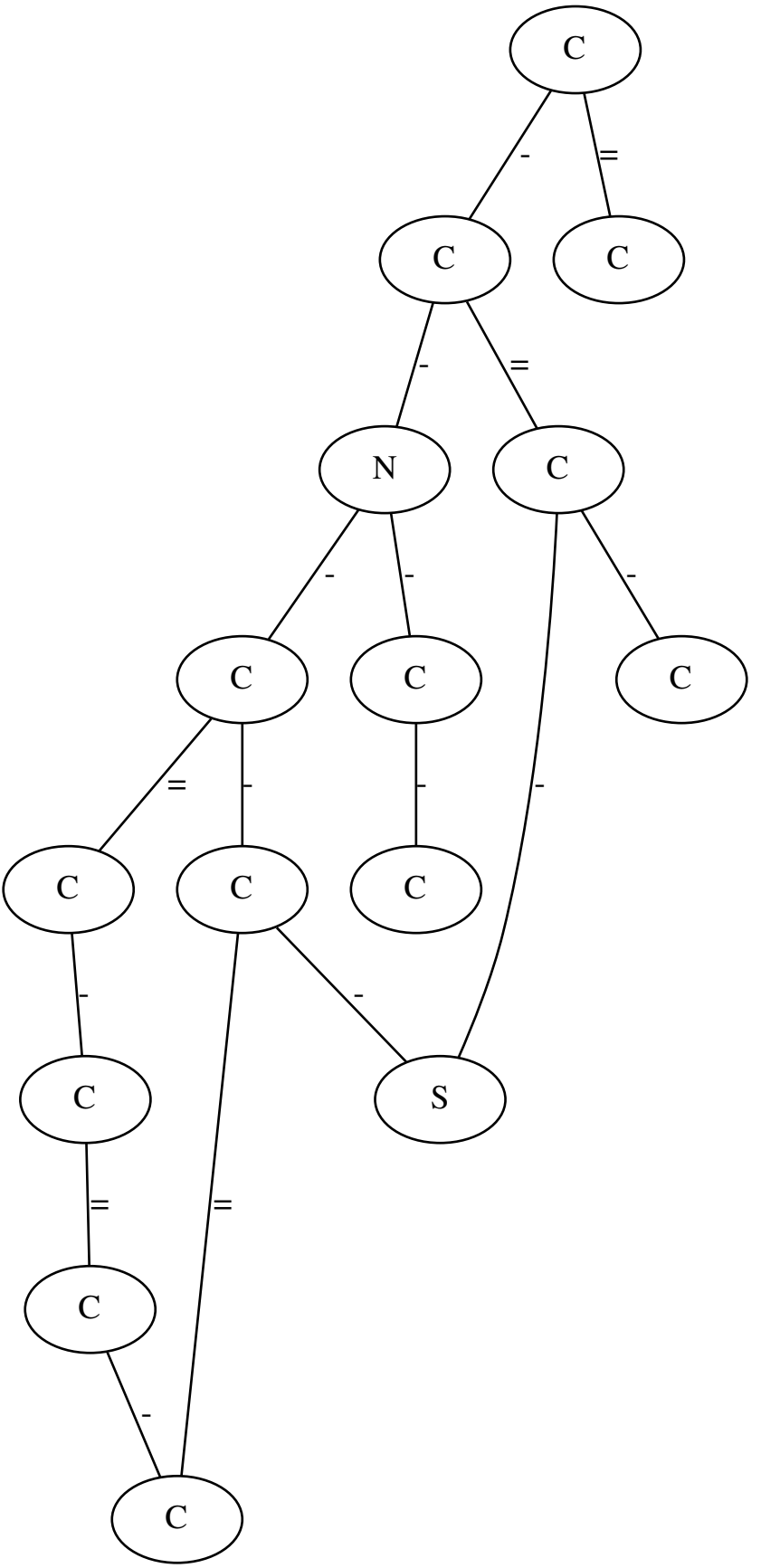chemical_1M.Q16 q23