Production of trichloroethylene via acetylene-chlorine

The chemical compound **trichloroethylene** is a halocarbon commonly used as an industrial solvent. It is a clear non-flammable liquid with a sweet smell. It should not be confused with the similar 1,1,1-trichloroethane, which is commonly known as *chlorothene.*

The IUPAC name is **trichloroethene**. Industrial abbreviations include **TCE**, **trichlor**, **Trike**, **Tricky** and **tri**. It has been sold under a variety of trade names. Under the trade names **Trimar** and **Trilene**, trichloroethylene was used as a volatile anesthetic and as an inhaled obstetrical analgesic in millions of patients.

Groundwater and drinking water contamination from industrial discharge is a major concern for human health and has precipitated numerous incidents and lawsuits.

Trichloroethylene was produced in a two-step process from acetylene. First, acetylene was treated with chlorine using a ferric chloride catalyst at 90 °C to produce 1,1,2,2-tetrachloroethane.

The 1,1,2,2-tetrachloroethane is then dehydrochlorinated to give trichloroethylene.