

Answer on Question#75821 – Chemistry – Organic chemistry

Question:

The ^1H NMR for $\text{C}_6\text{H}_{13}\text{Cl}$ states that there are 3 different types of protons:

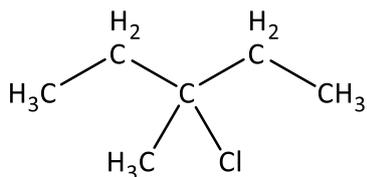
6H, triplet

4H, quartet

3H, singlet

What will the structure look like?

Answer:



3-chloro-3-methylpentane

When molecule with 13 protons contains only 3 signals on ^1H NMR spectra, molecule is symmetrical.

6H, triplet and 4H, quartet are peaks of two equivalent ethyl groups.

3H, singlet is a peak of methyl group.

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