The Mechanism of Propene Elimination from the Immonium lons $CH_2=N^+(CH_3)CH(CH_3)_2$ and $CH_2=N^+(CH_3)CH_2CH_2CH_3$

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Owing to an unfortunate oversight, no reference was made to a previously published paper¹ discussing the mechanism of alkene elimination from various immonium ions of general structure $CH_2=N^+R^1R^2$ ($R^1 = CH_3$, C_2H_5 , C_3H_7 ; $R^2 = C_3H_7$). This work reported the relative abundances of alkenes lost from numerous ²H-labelled analogues and gave a detailed analysis of the mechanism of propene elimination from $CH_2=N^+(CH_3)CH_2CH_2CH_3$ and $CH_2=N^+(CH_2CH_2CH_2)_3$. These relevant data ought to have been cited in the subsequent communication on propene elimination from $CH_2=N^+(CH_3)CH_2CH_2CH_3$, and $CH_2=N^+(CH_3)CH_2CH_2CH_3$ and $CH_2=N^+(CH_3)CH_2CH_2CH_3$, and $CH_2=N^+(CH_3)CH_2CH_3CH_3$, in which kinetic energy release data were also included.

Where comparison between the data reported in the two independent studies is possible, the results are in excellent agreement. Furthermore, the mechanistic interpretations of propene loss from $CH_2=N^+R^1C_3H_7$ ($R^1 = CH_3, C_3H_7$) given in the two papers are essentially identical. In particular, β -hydrogen transfer from an unrearranged *n*-propyl substituent to the nitrogen atom in the course of propene elimination was rejected in favour of a route in which isomerisation of an incipient *n*-propyl group to an isopropyl group occurs as the cationic component of an ion-neutral complex.

Reference

1 H. J. Veith and J. H. Gross, Org. Mass. Spectrom., 1991, 26, 1097.

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