

Mass spectrometric study of ions in rich (C<sub>2</sub>H<sub>4</sub>/O<sub>2</sub>/N<sub>2</sub>) flames

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Ions in rich C<sub>2</sub>H<sub>4</sub>/O<sub>2</sub>/N<sub>2</sub> flames ( $r = 1,5$  to  $3$ ) have been identified mass-spectrometrically. These flames are stabilized on a flat burner at low pressure (30 Torr). The concentrations oxygen containing ions are very low, and the H<sub>3</sub>O<sup>+</sup> peak is not detected. The ions are of the type C<sub>x</sub>H<sub>y</sub><sup>+</sup>, the most abundant ion being C<sub>3</sub>H<sub>3</sub><sup>+</sup>. These ions could be the precursors of soot.

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