

Flavor Thresholds of Unbranched Isomeric Nonenals

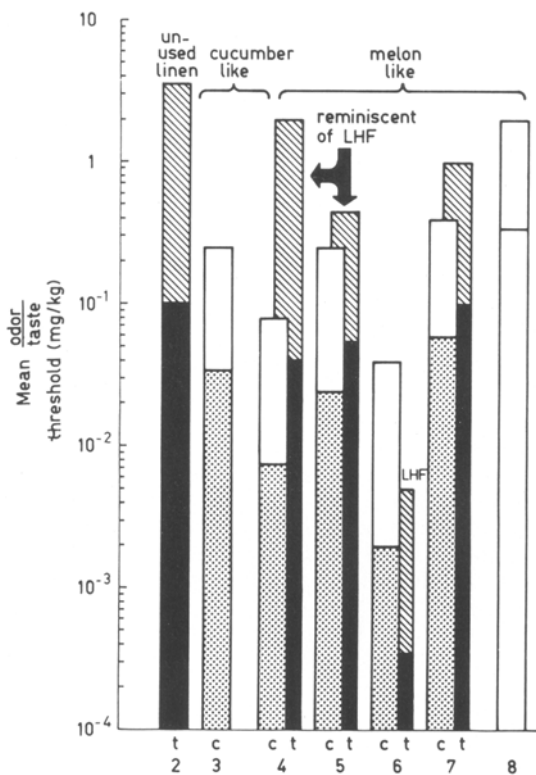


FIG. 1. Flavor potential of isomeric nonenals dissolved in paraffin oil. The total columns indicate odor thresholds; the lower parts of the columns indicate the taste thresholds. LHF, linolenic hardening flavor.

Flavor thresholds of 11 unbranched nonenals (the synthesis of these compounds will be published separately) have been determined according to the method described in a previous paper (1). The results are shown in Figure 1.

The odor threshold values of the isomeric *trans*-nonenals decrease when the double bond moves from the carbonyl end, with a pronounced minimum for 6-*trans*-nonenal. With taste threshold values, an alternating effect (1) is observed with the lowest value for 6-*trans*-nonenal again.

With the isomeric *cis*-nonenals, both odor and taste thresholds alternate (1) with a minimum for 6-*cis*-nonenal.

These experiments demonstrate that from the 11 straight-chain nonenals investigated, 6-*trans*- and 6-*cis*-nonenal, which are known as the so-called hardening flavor, have by far the most intense flavor strength. This is in agreement with previous findings (2,3).

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