Abstract:

Two volatile sulfides, dimethyldisulfide and dimethyltrisulfide, when used as fumigants promote the emission of aliphatic ethyl esters from fresh strawberries. These esters which are associated with organoleptic quality of the fruit increased from 5- to more than 90-fold after an 18 hour fumigation period. Ethyl acetate, which is not closely associated with aroma, increased more than 10,000-fold in some experiments. Other quality parameters of the fruit including color and firmness were not affected by the fumigants. Fumigants of this type might be useful to increase the flavor quality of certain strawberry cultivars with low endogenous levels of important aroma compounds.