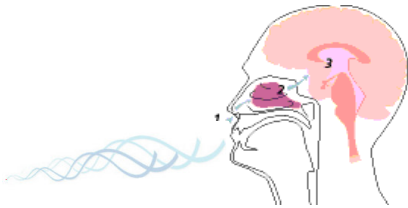


Did you know? **Odors**

The human nose is able to recognise more than 4000 smells with very low concentrations but the human language has not enough words to give precisely a name to an odour, as it is possible to do with colours. On the other hand our memory allows us to associate a smell with a situation, an event; so it's not unusual for seniors to identify the porcine or bovine origin of a gelatin only by smelling it.



"No smell, good smell", Ciceron



Our customers sometimes complain about a bad odour, or a different smell from one batch to another, and this problem occurs with each kind of gelatin. Finding solutions to propose odourless gelatins has been a challenge for several years.

Hydrogen sulfide	Rotten egg
Methane mercaptan	Cabbage
Allyl mercaptan	Garlic
Methyl amine	Decomposed fish
Acetic acid	Vinegar
Butyric acid	Rank butter
Valeric acid	Sweet
Acetaldehyde	Apple, fruit
Ammoniac	Pungent, irritant

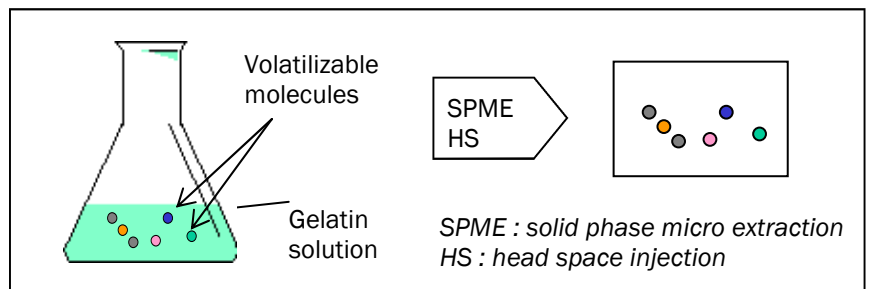
Examples of chemical molecules linked to an odor

Identification of odors' origins

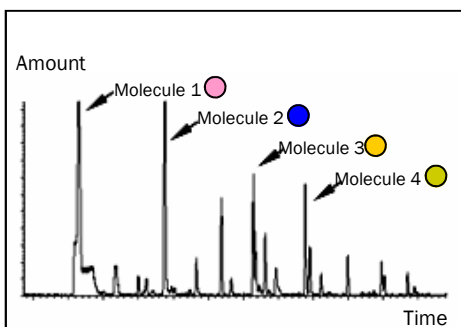
Some laboratories have a large catalogue of chemical molecules associated to an odor name (see examples).

To identify molecules responsible for the odors, they are using a battery of techniques:

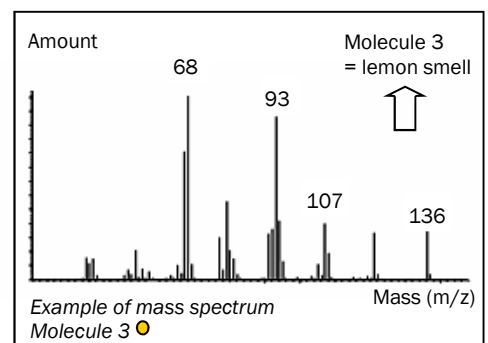
① first step: extraction, trapping and concentration of volatilizable molecules



② second step: volatilizable molecules separation by Gaz Chromatography



③ third step: identification of each molecule by mass spectrometry. The mass of the molecule is represented by the peak at the higher mass, the other signals correspond to a mass after a «degradation». The spectrums are compared to a database and a checking of the odor perception is made.



Process actions

When the molecules are identified, we are able by discussions with manufacturers to determine the causes and origins: degradation of raw materials, reaction at too high temperatures, interaction with other products as packaging...

Doing so, producers can adapt their process to avoid/decrease the bad odors.

Sylviane Guedj