

## PHEROMONES ANALYSIS BY VIBRATIONAL SPECTROSCOPY

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The application of Infrared and Raman spectroscopies with a view to determine the structure of some pheromone components is presented. The pheromones are used in horticulture, to prevent the sickness of the forest, and in agriculture for pest control (SIMIONESCU & MIHALACHE, 2000). The studied pheromones have unsaturated long linear or branched chains (8-23 carbon atoms), functionalized with various groups like carbonyl, ester, hydroxyl. The IR and Raman spectra give information about the qualitative aspects of the pheromonal cocktail. We used both above mentioned vibrational spectroscopies since these methods are non destructive and complementary techniques (ILIESCU et al., 2002; COLTHUP et al., 1964). These spectroscopic methods allowed us to study the structure of these natural compounds and made also possible the identification of its E (965 cm<sup>-1</sup>) and Z isomers (Fig. 1).

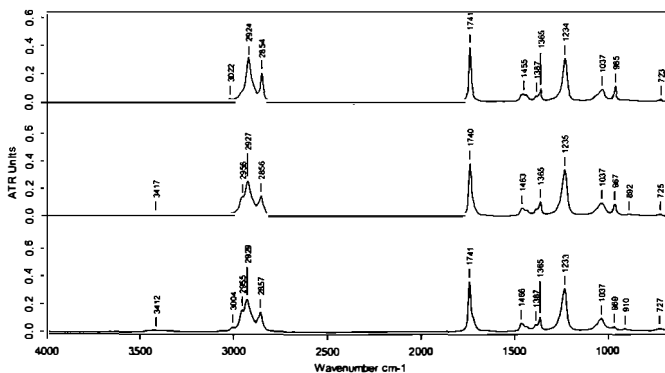


Fig. 1. Similarities and differences between E and Z isomers at E – 10,12OAc, E – 8,12OAc, Z – 7,12OAc

### References

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