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# Sensory characterization and identification of odorous constituents in acrylic adhesives

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## Abstract

Most products in our surroundings contain adhesives, including acrylic adhesives which are used in many industry sectors. Some of these adhesives contain solvents that produce strong odors, but even adhesives which are produced without solvents can emit intensive or pungent odors. In the latter case, the odor may arise from monomers in the adhesive product, from manufacturing by-products or from degradation products. Here we analyzed several acrylic, methacrylic and benzyl acrylic adhesives to identify representative odorous contaminants. The volatile fraction of the products was extracted and isolated by solvent-assisted flavor evaporation (SAFE), then analyzed via high-resolution gas chromatography olfactometry (HRGC-O), HRGC-mass spectrometry (HRGC-MS/O) and two dimensional HRGC-MS/O. Aroma extract dilution analysis was carried out to