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### Characterization of Off-Flavors in Porcine Liver Collected by SDE

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The odor-active volatile compounds of porcine liver were collected by a simultaneous steam distillation–solvent extraction method (SDE). The extracted compounds were analyzed by gas chromatography (GC) and gas chromatography-mass spectrometry (GC-MS). The key aroma compounds of off-flavor in porcine liver were characterized using gas chromatography-olfactometry (GCO) technique. The volatiles identified included aldehydes (1.89%), ketones (0.62%), alcohols (0.61%), furans (0.11%), thiazoles (0.21%), phenols (0.31%), pyrazines (0.18%), esters (12.31%) and acids (80.06%). 1-Octen-3-one and hexanol are considered to be responsible for the intense and weak metallic odor, respectively, and other identified major volatiles with their odor note given in parenthesis were as follows : (*E,E*)-2,4-heptadienal (fishy), (*E*)-2-octenal (tallowy), (*E*)-2-nonenal (cardboard-like), (*Z*)-4-decenal (cardboard-like) and (*E,E*)-2,4-decadienal (deep-fried). It was also confirmed that the fishy and metallic flavor in liver was not completely removed even after subjecting to heat treatment. The metallic and fishy notes make up the whole liver-like off-flavor in porcine liver.

**Keywords:** [porcine liver](#), [gas chromatography-olfactometry](#), [off-flavor](#), [fishy](#), [metallic](#)

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