VOLATILE COMPOSITION OF BRAZILIAN COOKED LAMB MEAT FROM ALTO CAMAQUÃ REGION, RIO GRANDE DO SUL

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Volatile compounds are important quality parameter of meat and processed meat, in some cases can be used to determine markers for a certificate of origin. The main of this work was to characterize the volatile compounds (CVs) present in cooked lamb meat from Alto Camaquã-RS/Brazil. Vastus lateralis and Longissimus dorsi muscles stored at -18°C were thawed and cut in pieces of 30±0.1g. Samples were boiled at 121°C for 30min, then crushed at room temperature and 5g was placed in a 20mL vial. HS-SPME technique was used to isolate volatile compounds. Car/PDMS fiber (75µm-Supelco) was exposed in the headspace of the sample at 60°C for 45min after 10min of equilibrium time. The analytes extracted by HS-SPME were analyzed by gas chromatography-mass spectrometry (GC/MS Shimadzu QP-2010 Plus) and separated in a polar column ZB-WAXPlus. Sixty nine compounds were identified, among aldehydes (16), alcohols (11), acids (7), ketones (16), alkanes (9), sulphur and nitrogen compounds (10). Mono, di and trisulfide dimethyl are related with the aroma of cooked meat and coming from amino acids degradation, normally cysteine and methionine. The presence of 4-hydroxy-5-methyl-3(2H)-furanone indicates the occurrence of dephosphorylation and dehydration of ribose phosphate and may to form thiofenes, as 3-methyl-thiophene. Analytes as 2 and 3-methylbutanal, 2-methyl-, 2-ethyl-, 2-pentyl-, 2-hexylfuranes, difurfuryl ether,furfural, pyrrol, 2-acetyl- thiazoline suggest their origin from Strecker degradation of the Maillard reaction. Muscles were differentiated by the presence of geranyl 2-methyl-butyrate only in Vastus lateralis. These compounds are related as important markers of desirable flavor and quality of boiled meat.

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