

Abstract

# Composition of Nguni Goat Meat—An Underutilised Indigenous Food <sup>†</sup>

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**Abstract:** Introduction: Diets lack diversity, and the consumption of a few energy-dense cash crops is increasing. Nguni goats are an underutilised, indigenous source of red meat in sub-Saharan Africa. They survive in semi-arid and arid areas with little to no agricultural input. The nutritional contribution of Nguni goat meat is not well researched and documented from a food and nutrition security perspective. Objective: To determine the composition of Nguni goat meat, in comparison with other red meat species in the South African diet, focusing on the fatty acid profile. Method: The nutritional analyses, including the proximate analysis, minerals, and the fatty acid profile of Nguni goat meat from three different regions in South Africa, was performed and compared with other red meat species in the diet. Results: Values reported for moisture (74.2 g/100 g), ash (1.02 g/100 g) and protein (19.5%) are similar to other sources of red meat, with the total fat content (4.4%) being slightly lower. Nguni goat meat is a good source of iron (2.89 mg/100 g) and zinc (4.02 mg/100 g). Furthermore, the values reported for saturated fatty acids (2.55 g/100 g), monounsaturated fatty acids (1.51 g/100 g), polyunsaturated fatty acids (0.36 g/100 g) and cholesterol (5 mg/100 g) content of indigenous goat meat were lower than other red meat species. However, the percentage of saturated fatty acids (57.7%) and monounsaturated fatty acids (34.2%) to total fat is similar to other red meat sources but higher for polyunsaturated fatty acids (8.14%). Stearic acid (C18:0) (1.10 g/100 g) is the most prevalent saturated fatty acid, elaidic acid (C18:1t9) (0.11 g/100 g) is the most prevalent monounsaturated fatty acid and linoleic acid (C18:2n6) (0.23 g/100 g) is the most prevalent polyunsaturated fatty acid. The omega-3 fatty acids and omega-6 fatty acids content is 0.07% and 0.25%, respectively. The majority of the PUFA's is linoleic acid (C18:2n6) and is similar to values reported for beef. Conclusions: Goat meat is a nutritious underutilised indigenous, food source that can contribute toward increasing dietary diversity, thereby improving nutrition and food security in sub-Saharan Africa.

**Keywords:** Nguni goat meat; nutritional composition; fatty acid profile; indigenous food

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