

Nutrient Composition Variability of Plant-Based Ground Beef Alternative Products Available in the U.S. Marketplace in 2019

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Objective: To describe nutrient content variability of plant-based ground beef alternative products sold by major brands in the U.S. marketplace in 2019.

Materials and Methods: The nutrient composition information available for plant-based ground beef alternative products in the 2020 version of the University of Minnesota Nutrition Coordinating Center (NCC) Food and Nutrient Database were analyzed to determine the median and range in nutrient content per 3-ounce portion of product. Nutrients for which a Daily Value (DV) exist were expressed as a percent DV.

Results: Across the 37 plant-based ground beef alternative products included in the analyses, nutrient value ranges were modest to large for most of the nutrients examined. Examples of nutrients with a modest range across products included dietary fiber (5-27% DV, median 15% DV) and saturated fat (0-30% DV, median 4% DV). Nutrients with the greatest variability across products were thiamin (0-1,763% DV, median 7% DV) and vitamin B12 (0-190% DV, median 0% DV). Calcium is an example of a nutrient with relatively low variation (0-10% DV, median 4% DV). Factors that appeared to lead to the observed variability include formulation differences such as the use of legume/bean versus soy protein as a primary ingredient and differences in nutrient fortification.

Significance: Americans are increasingly choosing plant-based ground beef alternative products over animal meat for reasons related to minimizing diet's environmental impact, animal rights, and health. Consequently, it is important that food and nutrient databases include plant-based ground beef alternative products. Findings from this study indicate that several nutrients are found in highly variable amounts across different plant-based ground beef alternative product brands, which suggests that databases may need to include specific product brands rather than a general type of ground-beef alternative product such as 'veggie burger' or 'veggie crumbles'.