

Bananas and plantains (*Musa* spp.) constitute an important component of the diet in Africa. Substantial levels of provitamin A carotenoids (pVACs) in *Musa* fruit have been reported, but the bioaccessibility of these pVACs remains unknown. In this study, we used an *in vitro* digestion model to assess the bioaccessibility (i.e. the transfer into micelles) of pVACs from boiled bananas and derived dishes using the Eastern Democratic Republic of Congo as a study context. In particular, the effect of different food ingredients added to boiled bananas on pVAC's bioaccessibility was studied. The bioaccessibility of all-*trans*  $\beta$ -carotene ranged from 10% to 32%, depending on the food recipes, and was modified, particularly when pVACs-rich ingredients (palm oil/amaranth) were added. Efficiency of micellarization of all-*trans*  $\beta$ -carotene was similar to that of all-*trans*  $\alpha$ -carotene and depended on the cultivar (Musilongo, plantain type, 16%; Vulambya, East African cooking type, 28%), while that of the 13-*cis* isomer was higher (21–33.5%). Taking into account bioaccessibility, the estimated vitamin A activity was significantly different across the different *Musa*-based dishes tested. Results are discussed in terms of recommendations to help reduce vitamin A deficiency in *Musa*-dependent African communities.