Mini-FLOTAC for the diagnosis of Eimeria infection in goats: An alternative to McMaster

Abstract

Caprine coccidiosis is responsible for remarkable economic losses. Diagnosis must therefore take into account a number of epidemiological and clinical factors supported by laboratory investigations. The detection of Eimeria oocysts and the determination of oocysts per gram of faeces (OPG) require a trustworthy oocyst count technique. Mini-FLOTAC is a new simple and easy-to-use apparatus from the FLOTAC family. The present study was aimed at investigating whether Mini-FLOTAC could be an alternative to McMaster for the diagnosis of Eimeria spp. in goats. Faecal samples from 16 goats reared in an intensive goat farm were qualitatively (simple flotation) and quantitatively analyzed. A comparison between McMaster (McM 1 mL and McM 0.3 mL) and Mini-FLOTAC was carried out, by performing 288 different readings (6 replicates for each of the 3 techniques). Eimeria arloingi, Eimeria caprovina and Eimeria ninakohlyakimovae were the most prevalent species. The mean (and median) OPG detected by Mini-FLOTAC was higher than the values observed with McMaster techniques (P < 0.05). Mini-FLOTAC also produced coefficient of variations similar to those resulted from McM 1 mL (19.4 versus 17.5; P > 0.05) but lower than those resulted from McM 0.3 mL. The findings of the present study suggest that the Mini-FLOTAC is a promising technique for detecting and counting Eimeria spp. in goat faeces.