

Wild mango fruit fly *Ceratitis cosyra*, was attracted to and oviposited preferentially on immature and mature green than ripe yellow mango fruits in the field. Volatile compounds from fruits of mango and marula, at different ripeness stages, were trapped on octadecyl reversed-phase silica. The volatile compounds were identified using gas chromatography, gas chromatography-mass spectrometry and by chromatographic comparisons with authentic samples. Immature and mature green mango fruits on trees emitted similar compounds, comprising of monoterpenoids and sesquiterpenoids. A detached mature green mango fruit emitted a few esters in addition to monoterpenes and sesquiterpenes. The ripe yellow mango fruit emitted large quantities of esters and smaller proportions of terpenoids. Several esters, similar to ripe yellow mangoes, were identified in volatiles of ripe yellow marula fruits. A total of 17 terpenoids and 19 esters were identified. Some of the identified compounds in green mangoes, particularly the terpenoids, constitute candidate kairomones for *C. cosyra*.