

# APPLEKIT Real Time PCR

## Real Time PCR Apple DNA Detection Kit

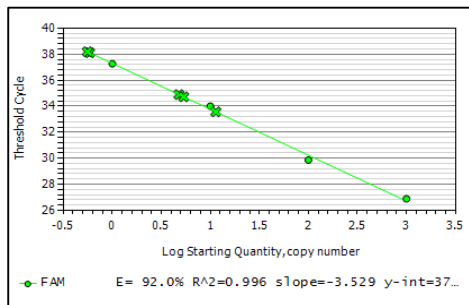
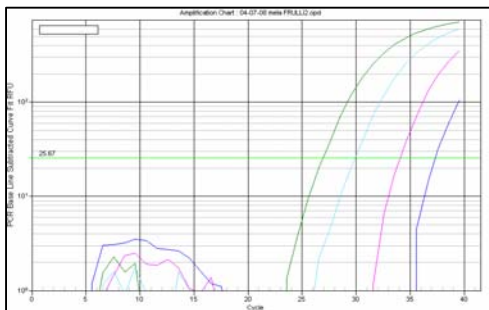
### Test system for the qualitative detection of apple DNA in food products by PCR Real time

Product code: IC-02-1075 (50 tests) / IC-02-1077 (25 tests)

#### Brief description

**AppleKit Real Time PCR** provides reagents for the qualitative detection of apple DNA in several food products, fresh and processed. The PCR Real Time kit amplifies a DNA fragment that is present solely in apple. The amplified DNA segment is detected by hybridisation with a probe labelled with fluorescent dyes. The increase in fluorescence is continuously measured in a PCR real-time detection instrument.

**AppleKit Real Time PCR** is a useful tool to monitor the presence of undeclared species, like apple, in food products, thus detecting possible alteration and fraud.



**Figure 1:** test sensitivity for AppleKit DNA Detection kit.

— 1000 copies apple genome  
 — 100 copies apple genome  
 — 10 copies apple genome  
 — 1 copy apple genome

#### Technical features

<b>Number of tests</b>	25/50 target DNA specific reactions
<b>Kit components</b>	Mix <i>Test Apple</i> – Mix Test Inhibition – DNA positive control – sterile H <sub>2</sub> O DNase free
<b>Specificity</b>	the kit has been tested with DNA extracted from both raw material and processed food. The specificity of the system has been validated with several other species normally used in food production (see the Panel below). No cross-reactivity effects have been revealed.
<b>Limit of Detection</b>	1 copy of apple haploid genome, equal to roughly 2.25 pg of <i>Malus domestica</i> DNA (see Fig.1).
<b>Detection</b>	Probe labelled with fluorescent dyes Taqman® - FAM

Specificity control group tested **negative** for cross-reactivity:

Apricot ( <i>Prunus armeniaca</i> )	Strawberry ( <i>Fragaria vesca</i> )	Papaya ( <i>Carica papaya</i> )
Blackcherry ( <i>Prunus cerasus</i> )	Kiwi ( <i>Actinidia chinensis</i> )	Tomato ( <i>Lycopersicon esculentum</i> )
Pineapple ( <i>Ananas sativa</i> )	Raspberry ( <i>Rubus idaeus</i> )	Grapefruit ( <i>Citrus paradisi</i> )
Orange ( <i>Citrus sinensis</i> )	Lemon ( <i>Citrus limon</i> )	Pear ( <i>Pyrus communis</i> , varieties William, William Red, Kaiser, Abate, d'Anjou, Decana, Coscia)
Banana ( <i>Musa sp.</i> )	Maize ( <i>Zea mays</i> )	Plum ( <i>Prunus domestica</i> )
Sugar beet ( <i>Beta vulgaris</i> )	Almond ( <i>Prunus dulcis</i> )	Rice ( <i>Oryza sativa</i> )
Carrot ( <i>Daucus carota</i> )	Mango ( <i>Mangifera indica</i> )	Soy ( <i>Glycine max</i> )
Chestnut ( <i>Castanea sativa</i> )	Blackberry ( <i>Rubus fruticosus</i> )	Man ( <i>Homo sapiens</i> )
Cherry ( <i>Prunus avium</i> )	Maracuja ( <i>Passiflora edulis</i> )	Grape ( <i>Vitis vinifera</i> )
Quince ( <i>Cydonia oblonga</i> )	Mandarin ( <i>Citrus reticulata</i> )	
Fig ( <i>Ficus carica</i> )	Nashi ( <i>Pyrus x pyrifolia</i> )	