

PEANUTKIT Real Time PCR

Real Time PCR Peanut DNA Detection Kit

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

Product code: IC-02-1011 (50 tests) / IC-02-1013 (25 tests)

Brief description

PeanutKit Real Time PCR provides reagents for the qualitative detection of peanut DNA in several food products, fresh and processed. The PCR Real Time kit amplifies a DNA fragment that is present solely in peanut. 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.

Peanut is considered allergenic food and it is explicitly mentioned in the European Food Labelling Directive.

PeanutKit Real Time PCR is an useful tool to monitor the food allergens to ensure compliance with food labelling (2003/89/EC Directive) and to improve consumer protection.

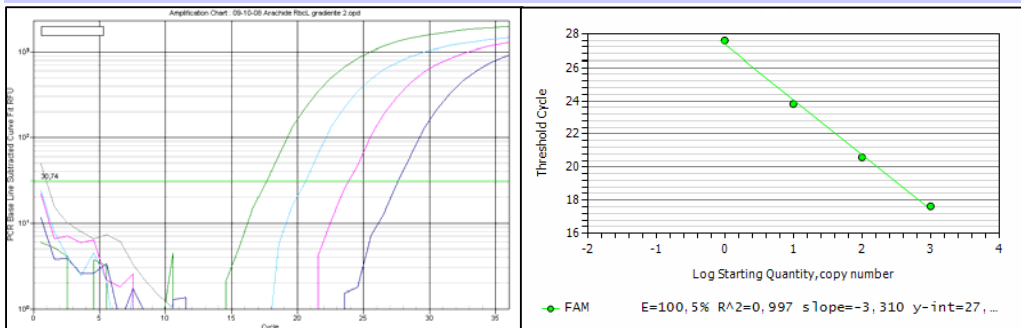


Figure 1: Test sensitivity for Peanutkit DNA Detection kit.

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

Technical features

Number of tests	25/50 target DNA specific reactions
Kit components	Mix <i>Test Peanut</i> (with duplex inhibition control) – DNA positive control – sterile H ₂ O DNase free
Specificity	the kit has been tested with DNA extracted from from raw material (<i>Arachis hypogaea</i>) and processed food (peanut biscuits, pasta sauce containing 0.5% peanut). 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.
Limit of Detection	1 copy of peanut haploid genome, equal to roughly 2.87 pg of <i>Arachis hypogaea</i> DNA (see Fig.1).
Detection	Probe labelled with fluorescent dyes Taqman® - FAM and JOE

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

Apricot (<i>Prunus armeniaca</i>)	Lentils (<i>Lens esculenta</i>)	Potato (<i>Solanum tuberosum</i>)
Black cherry (<i>Prunus cerasus</i>)	Yeast (<i>Saccharomices cerevisiae</i>)	Pear (<i>Pyrus communis</i>)
Cashew (<i>Anacardium occidentale</i>)	Lemon (<i>Citrus limon</i>)	Peach (<i>Prunus persica</i>)
Orange (<i>Citrus sinensis</i>)	White Lupin (<i>Lupinus albus</i>)	Pine nut (<i>Pinus pinea</i>)
Oat (<i>Avena sativa</i>)	Maize (<i>Zea mays</i>)	Pea (<i>Pisum sativum</i>)
Bovine (<i>Bos taurus</i>)	Almond (<i>Prunus dulcis</i>)	Pistachio (<i>Pistacia vera</i>)
Chest nut (<i>Castanea sativa</i>)	Apple (<i>Malus domestica</i>)	Chicken (<i>Gallus gallus</i>)
Cherry (<i>Prunus avium</i>)	Cod (<i>Merluccius capensis</i>)	Plum (<i>Prunus domestica</i>)
Mussel (<i>Mytilus chilensis</i>)	Blackberry (<i>Rubus fruticosus</i>)	Rice (<i>Oryza sativa</i>)
Bean (<i>Phaseolus vulgaris</i>)	Hazelnut (<i>Corylus avellana</i>)	Celery (<i>Apium graveolens</i>)
Spelt (<i>Triticum dicoccum</i>)	Walnut (<i>Juglans regia</i>)	Rye (<i>Secale cereale</i>)
Fava bean (<i>Vicia faba</i>)	Brazilian nut (<i>Bertholletia excelsa</i>)	Mustard (<i>Brassica alba</i>)
Soft wheat (<i>Triticum aestivum</i>)	Macadamia nut (<i>Macadamia spp.</i>)	Sesame (<i>Sesamum indicum</i>)
Shrimp (<i>Peneaus monodon</i>)	Pecan nut (<i>Carya illinoensis</i>)	Soya (<i>Glycine max</i>)
Buckwheat (<i>Fagopyrum esculentum</i>)	Barley (<i>Hordeum vulgare</i>)	Man (<i>Homo sapiens sapiens</i>)