WHEATaKIT

REAL TIME PCR DNA DETECTION KIT

Test system for the qualitative and quantitative detection of *Triticum aestivum* in *Triticum turgidum* DNA by means of PCR Real time

Product code: IC-02-1046 (100 reactions)

Brief description

Cereal composition is a key factor in the quality and safety of food and feed. In particular, *durum* wheat is considered the election wheat to make pasta, given its unique properties like relatively high yellow pigment content and high protein content favourable for good cooking quality. The dough made from *durum* wheat has rheological properties ideally suited to the pasta manufacturing process.

Because of the possibility of accidental contamination occurring during either wheat harvest or storage and transport of grains and semolina, pasta is only officially regarded as impure when the common wheat level exceeds 3%, as stipulated by the European Commission regulation (1222/94, EC 1994).

WHEATaKIT DNA Detection Kit allows the quantitative detection in samples like flour, semolina and pasta of *common* wheat "*Triticum aestivum"* DNA in *durum* wheat "*Triticum turgidum"* DNA.

Fig.1

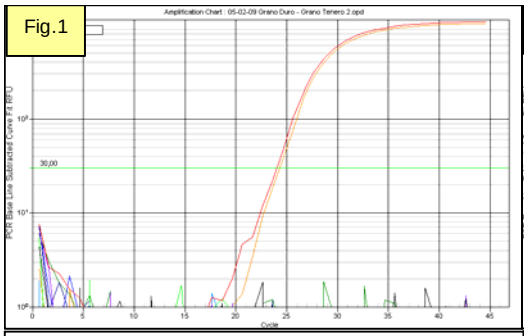

Fig. 1: amplification of a unique genetic marker of *Triticum aestivum* cultivars.

Fig.2

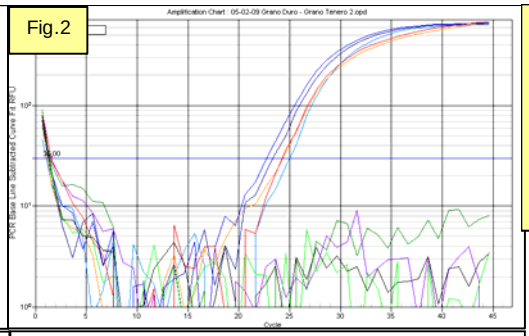

Fig. 2: amplification of common genetic marker of *Triticum* species.

Detail of ***Triticum aestivum*** e ***Triticum turgidum*** species and different grasses verified for the kit functionality.

Technical features

Number of tests	100 target DNA specific reactions.
Kit content	Mix *Triticum – Standard S1, S2, S3, S4, S5* - sterile H_2O DN*ase* free.
Specificity	The test system is based on selective identification of a common genetic marker of *Triticum* genus (see Table 2 and Figure 2) and of a unique genetic marker of *Triticum aestivum* cultivars (see Table 1 and Figure 1).
Sensibility	up to 0.2% of *Triticum aestivum* in *Triticum turgidum*.
Limit of Detection	1 copy of haploid genome of *Triticum aestivum*.
Detection	probe labelled with fluorescent dyes Taqman ® - FAM and JOE

Tab. 1 Species verified for the absence of amplification for the unique genetic marker of *Triticum aestivum* cultivars:

Barley (*Hordeum vulgare*), Buckwheat *(Fagopyrum esculentum),* Cickpea *(Cicer arietinum),* Corn *(Zea mays),* Durum wheat (*Triticum turgidum durum*), Festuca arundinacea *(Festuca urundinaceae),* Flax *(Linum usatissimum),* Kamut (*Triticum turgidum polonicum*), Lentil *(Lens esculenta),* Millet *(Sorghum bicolor),* Oat (*Avena sativa*), Orchard grass *(Dactylis glomerata),* Perennal Ryegrass *(Lolium perenne),* Rapeseed *(Brassica napus),* Reddish purple *(Amaranthus spp)*, Red mile *(Panicum miliaceum),* Rice *(Oryza sativa),* Rye *(Secale cereale),* Spelt (*Triticum turgidum dicoccum*), Sunflower *(Helianthus annuus),* Sugar cane *(Saccharum officinarum),* Soy *(Glycine max),* Triticale (X *Triticosecale*).

Tab. 2 Species verified for the amplification of common genetic marker of *Triticum* genus:

Common wheat (*Triticum aestivum*), Durum wheat (*Triticum turgidum durum*), Kamut (*Triticum turgidum polonicum*), Spelt (*Triticum turgidum dicoccum*), Triticale (X*Triticosecale*).

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