



Digital PCR and qPCR Assays for Reliable, Efficient and Cost-effective Food Testing

Validated and Reliable Assays

Each assay has been developed and ring-trial validated under the supervision of an acknowledged expert in the field (Dr. Rene Köppel from Zurich Cantonal Laboratory).

Simple and Efficient

All assays are easy to use and quantify up to 5 food marker genes in one PCR run. Thus, it is possible to screen food samples in a highly efficient way.

Attractive Prices

Attractive entry and volume prices available. One assay contains 5 x 20 qPCR reactions or 4 x 24 dPCR reactions.

Overview

Microsynth offers a broad portfolio of cutting-edge qPCR and digital PCR multiplex assays for qualitative and quantitative food analyses. The applications include but are not limited to the identification of animal species, allergens, GMOs and bacterial pathogens.

All assays have been developed by Dr. René Köppel from the Zurich Cantonal Laboratory – an acknowledged expert on the use of cutting-edge analytical systems for food

safety testing. Under his supervision, each assay has been fully validated, and tested in interlaboratory trials.* The assays (primer & probes) are produced and commercialized by Microsynth. Each production batch is functionality tested at the Zurich Cantonal Laboratory prior to sales release.

All assays have been designed for ease of use. Each qPCR assay contains 5 aliquots of stoichiometrically balanced primer/probe mixtures as well

as a detailed manual (4 aliquots for the dPCR assays). Therefore, the user only needs to solubilize the primer/probe mixture in ddH₂O and add the PCR mastermix (not included). Since each assay can specifically detect and quantify up to five marker genes, it is possible to screen food samples in a highly efficient manner. Compatibility with majority of qPCR and digital PCR systems is given.

**Assays are included in the Official Collections of Methods of Analysis of the Federal Office of Consumer Protection and Food Safety of Germany and of Switzerland as well as in the Scientific Opinion on the Evaluation of Allergenic Foods and Food Ingredients of the European Food Safety Authority.*



Figure 1: qPCR assay example consisting of 5 tubes a 20 reactions and a user manual.



Figure 2: dPCR assay example consisting of 4 tubes a 24 reactions and a user manual.

Specifications

The qPCR assays are supplied with five tubes of primer/probe set for 20 reactions each, while the digital PCR assays contain 4 tubes with 24 reactions each. Each assay is supplied with a user manual as well as with a certificate of analysis from the federal food testing laboratory of Zurich (upon request).

Species-Specific Digital PCR Assays

Product Name	Assay Type
dNoBa	EvaGreen duplex assay: allows quantitative determination of Non-Basmati rice content in Basmati rice samples.
dBePo	Probe duplex assay: allows quantitative determination of beef and porc in meat samples.
dMarzipan	Probe duplex assay: allows quantitative determination of marzipan and apricot in marzipan products.
dHoSh	Probe duplex assay: allows quantitative determination of horse and sheep DNA.
dChiTu	Probe duplex assay: allows quantitative determination of chicken and turkey DNA.
dWheSp	Probe duplex assay: allows quantitative determination of spelt and wheat DNA.

Allergen-Specific qPCR Assays

Product Name	Assay Type	Marker 1	Marker 2	Marker 3	Marker 4	Marker 5
AllAIIA	Tetraplex	Peanut	Celery	Soybean	Hazelnut	
AllAII B	Tetraplex	Cow's Milk	Almond	Chicken Egg	Sesame	
AllAII G	Tetraplex	Lupine	Almond	Para Nut	Sesame	

Species-Specific qPCR Assays

Product Name	Assay Type	Marker 1	Marker 2	Marker 3	Marker 4	Marker 5
AllMeat	Tetraplex	Chicken	Pork	Beef	Turkey	
AllHorse	Tetraplex	Sheep	Pork	Beef	Horse	
AllMilk	Tetraplex	Cow	Goat	Sheep	Water Buffalo	
AllPaté	Pentaplex	Chicken	Duck	Goose	Turkey	Pig
AllWild	Pentaplex	Chamois	Cattle	Roe Deer	Red, Sika and Fallow Deer	Pig and Wild Boar
AllCheese	Triplex	Sheep	Goat	Cattle		
AllVegi	Triplex	Fish	Myostatin	Plants		
AllWasabi	Duplex	Horseradish	Wasabi			

GMO-Specific qPCR Assays for Screening

Product Name	Assay Type	Marker 1	Marker 2	Marker 3	Marker 4	Marker 5
AllGVOScB	Pentaplex	Nos- Terminator	35S Promoter	Soy (Lectin)	Mais (mhm)	CaMV
AllGVOScC	Tetraplex	FMV Promoter	Bar Gene	CP2 / CP4 / EPSPS	Pat Gene	

GMO-Specific qPCR Assays (Soy)

Product Name	Assay Type	Marker 1	Marker 2	Marker 3	Marker 4	Marker 5
AllSoyA	Pentaplex	Roundup Ready	Mon89788	Soy Le1 Gene	Soy2704	A5547-127
AllSoyB	Pentaplex	DP305423-1	DP356043-5	Lectin	CV127-9	Mon87701
AllSoyC	Pentaplex	Mon87708	Mon87769	Lectin	FG72	Mon87705

GMO-Specific qPCR Assays (Maize)

Product Name	Assay Type	Marker 1	Marker 2	Marker 3	Marker 4	Marker 5
AllMaizeC	Pentaplex	Starlink CBH	Mon863r	T25	Maize (mhm)	Mon810
AllMaizeD	Pentaplex	Bt11	Nk603	Ly038	Maize (mhm)	Bt176
AllMaizeE	Pentaplex	GA21	DAS-59122-7	Mon89034	Maize (mhm)	Mon88017
AllMaizeF	Pentaplex	Syngenta3272	MIR604	TC1507	Maize (mhm)	DP-98140
AllMaizeG	Pentaplex	Mir162 Maize	DAS-40278-9	Mon87460	Maize (mhm)	EventBt10

Microorganism-Specific qPCR Assays

Product Name	Assay Type	Marker 1	Marker 2	Marker 3	Marker 4	Marker 5
AllBakA IPC	Pentaplex	E. coli Stx1 Stx2 intimin	Salmonella (incl. Bongori)	Listeria monocytogenes	Campylo-bacter spp	IPC pUC19
AllCamp	Tetraplex	Campylo-bacter jejuni	Campylo-bacter lari	Campylo-bacter coli	IPC pUC19	
AllColi	Tetraplex	E. coli spp	E. coli eae/intimin	E. coli Stx1	E. coli Stx2	
AllBaktB	Pentaplex	E.coli	Clostridium perfringens	Staphylococcus aureus	Bacillus cereus	IPC pUC19

Need More Information?

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