GEN-IAL®

# PRODUCTS

## *FOOD, FEED, BEVERAGES*

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Version 06-2020


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# DNA-Extraction Kits

## First-DNA all-tissue Kit

The First-DNA all-tissue Kit is *one single system* that makes DNA extraction possible from various substrates such as blood, urine, semen, cell culture, tissue embedded in paraffin, hair, bones, stains, plant and animal tissue, mouse tails, food, bacteria, yeast, fungi etc. without the use of toxic substances. High yields of quality DNA can be obtained, the mean purity of the isolated DNA, determined by the A260/A280 ratio, is 1.8-1.9. There is no loss of DNA by columns and the eluted DNA is well suited for PCR, sequencing, RFLP etc.

**Order-no./REF:**

**D 0102000 (10 preparations, trial Kit)**
**D 0502000 (50 preparations)**
**D 1002000 (100 preparations)**
**D 5002000 (500 preparations)**

**L1DNA050 (extra Lysis buffer 1 for 50 preparations)**
**L1DNA100 (extra Lysis buffer 1 for 100 preparations)**
**L2DNA050 (extra Lysis buffer 2 for 50 preparations)**
**L2DNA100 (extra Lysis buffer 2 for 100 preparations)**
**L3DNA050 (extra Lysis buffer 3 for 50 preparations)**
**L3DNA100 (extra Lysis buffer 3 for 100 preparations)**
**PKDNA050 (extra Enzyme for 50 preparation)**
**PKDNA100 (extra Enzyme for 100 preparation)**

## First-Salmonella DNA-Extraction buffer

First-Salmonella DNA-extraction buffer for rapid thermic cell lysis after pre-enrichment according to §64 LFGB 00.00.98.

**Order-no./REF:** **FSD 0100 (100 preparations)**

# Simplex® Easy DNA-Extraction Kits

## Simplex® Easy DNA Kit

### In 15 minutes DNA from bacteria and yeast

The Simplex® Easy DNA Kit is an extremely fast and easy DNA-Extraction from bacteria and yeasts. It is also approved for mouse tails and epithelial swaps. DNA is well suited for PCR, sequencing and further applications.

**DNA-Extraction**

1. Centrifuge sample
2. Remove supernatant
3. Add Simplex® Easy Reagent
4. Incubate sample at 95 °C
5. Centrifuge sample

**Advantages**

- DNA-extraction in one single vessel
- No contamination risk
- No toxic solutions
- DNA-cleaning is possible
- Universal applications
- Low material and instrument costs

**Order-no./REF:** **Q001-0010 (10 preparations)**
**Q001-0100 (100 preparations)**
**Q001-1000 (1000 preparations)**

Simplex® Easy Wine Kit

## In 40 minutes DNA from bacteria and yeast

The Simplex® Easy Wine Kit is an extremely fast and easy method for isolation of DNA from bacteria and yeasts out of wine. It is particularly suitable for detection of wine spoilage microorganisms like e.g. *Dekkera bruxellensis*, *Oenococcus oeni* or lactic acid bacteria.

**DNA-Extraction:**

1. Centrifuge sample
2. Purify sample by washing (removal of inhibitors)
3. Remove the washing solution after centrifugation
4. Add Simplex® Easy Wine reagent
5. Incubate sample at 95 °C
6. Centrifuge sample

**Advantages**

- DNA-extraction in one single reaction vessel
- No inhibition by washing the sample
- No contamination risk
- High efficiency
- No loss of DNA
- Fast and easy handling
- Universal applications
- Low material and instrument costs

**Order-no./REF:** **Q300 (100 preparations)**
**Q301 (extra washing solution for 100 preparations)**

## Simplex® Easy Spin Food DNA Kit

The Simplex® Easy Spin Food DNA Kit is a fast and optimal DNA-extraction method for food, feed, plant and animals. The use of spin columns and two cleaning steps guarantee a pure, clean and PCR-suitable DNA used for e.g. detection of GMO, allergens, animal identity,…

**DNA-Extraction:**

1. Resuspend the sample in lysis buffer and incubate 30 min. at 65 °C
2. Centrifuge sample
3. Add binding buffer and transfer to spin column, spin 30 sec
4. Purify sample by washing (removal of inhibitors)
5. Purify DNA with cleaning buffer
6. Spin dry 2 min.
7. Elute DNA with preheated Elution buffer

**Advantages**

- Very clean DNA
- Fast and easy handling
- Universal applications
- Long storage of DNA is possible

**Order-no./REF:** **SEFS 0050 (50 preparations)**

## Simplex® Easy Spin Bacterial DNA Kit

The Simplex® Easy Spin Bacterial DNA Kit is a very fast and easy method for isolation of DNA from bacteria in food and feed after pre-enrichment. The use of spin columns without further cleaning steps results in sufficiently clean DNA suitable for further applications like PCR.

**DNA-Extraction:**

1. Centrifuge preenriched sample and remove media
2. Resuspend the pellet in lysis buffer and incubate 30 min. 95 °C
3. Add binding buffer and transfer to spin column, spin 30 sec
4. Elute DNA with preheated Elution buffer

**Advantages**

- Fast and easy DNA-extraction
- Cleaning by spin column
- No contamination risk
- Universal applications
- Long storage of DNA is possible

**Order-no./REF:** **SESB 0050 (50 preparations)**

## Simplex® Easy Spin Legionella Kit

The Simplex® Easy Spin Legionella Kit is a very fast and easy method for isolation of DNA from *Legionella spp.* from drinking water, cooling- and waste water.

**DNA-Extraction in 4 steps:**

1. Centrifuge the water sample
2. Resuspend the pellet in lysis buffer and incubate 10 min. at 95 °C
3. Add binding buffer and transfer to spin column, spin 30 sec.
4. Elute DNA with preheated Elution buffer

**Advantages**

- Suitable for all samples (drinking water, cooling- and wastewater)
- High quality *Legionella* DNA by using column technology
- The system provides all reagents necessary for extraction from 50 samples

**Order-no./REF:** **Q702 (50 preparations)**

## Simplex® Easy Spin DNA Kit

The Simplex® Easy Spin DNA Kit is very well suited for Alicyclobacillus spp. DNA-extraction from beverages like juices, concentrates and tomato products.

**Sample preparation according to IFU- method 12**

*For non filterable solutions:*

- Add 90 mL BAT-Bouillon to 10 mL product
- For inactivation of vegetative cells and activation of spores incubate the sample for 10 min at 80 °C and cool down to 45 °C (113 °F)
- Incubate the sample (3-7 days, aerobe at 45 °C +/- 1 °, 113 °F)

*For filterable solutions:*

- For inactivation of vegetative cells and activation of spores incubate 100 mL sample for 10 min at 80 °C (176 °F) and cool down to 45 °C (113 °F)
- Membrane filtration of the sample (0.45 µm filter)
- Incubate the filter in BAT-Bouillon (3-7 days, aerobe at 45 °C+/- 1 °, 113 °F)

**DNA-Extraction**

1. Centrifuge the pre-enriched sample
2. Resuspend the pellet in lysis buffer and incubate at 95 °C
3. Add binding buffer and transfer to spin column
4. Elute DNA with preheated Elution buffer

**Order-no./REF:** **Q701 (50 preparations)**

# Magnetic DNA-Extraction Kits

## First-Magnetic Food Kit

### DNA-Extraction from food, feed and beverages

The First-Magnetic Food Kit is developed for genomic DNA-extraction from various materials and is especially approved for very complex and highly processed products. The DNA is well suited for PCR, sequencing, etc.

**Applications:**

- highly processed products: e.g. starch, lecithin, soy sauce, tomato puree
- beverage source materials: e.g. concentrates, fruit puree
- dairy products: e.g. milk and milk products
- feed: e.g. forage cereals, spent hops (treber), fattening feed

The method is based on biomagnetic separation of genomic DNA. After preparing the lysate, the DNA is bound to magnetic beads. The rest of cell material and other contaminants is washed away. The isolated DNA is eluted in TE or $H_2O$. The regular volume is 50 µL.

**Order-no./REF:** **FMF 0010 (10 preparations, trial Kit)**
**FMF 0100 (100 preparations)**

First-Magnetic DNA and RNA Kit

## DNA and RNA extraction from various samples like swabs, serum, plasma, urine and other matrices

The First-Magnetic DNA and RNA Kit is developed for manual and automated extraction of viral and bacterial DNA and RNA from a wide range of samples like swabs, plasma, serum, tissue etc.. Processing time of 96 samples is about 40 – 45 minutes and no further steps like centrifugation, phenol-chloroform treatment or alcohol precipitation are required. The kit allows safe handling and avoids cross-contaminations from sample to sample. The obtained nucleic acids are well suited for analysis by polymerase chain reaction (PCR), sequencing, and further applications. The kit is intended for Research Use Only (RUO).

### Test Principle

The method is based on chemical lysis of cells followed by a biomagnetic separation of DNA and RNA. Magnetic beads are used as solid support phase in DNA and RNA extraction by a simple bind-wash and elute principle. The magnetic beads are washed 3 times to remove inhibitory components like salts. A drying step removes traces of ethanol from the final washing step. DNA and RNA are eluted under low salt conditions and can directly be used for special applications.

**Order-no./REF:** **M0096 (96 preparations)**
**M0960 (960 preparations)**
**M5000 (5000 preparations)**
**M25000 (25000 preparations)**

# QuickGEN Sample Preparation Kits

The QuickGEN procedure allows a complete and fast analysis of pre-enriched and non pre-enriched beverage spoilers without time consuming sample preparation steps. The system is suited to the analysis in the own company lab as well as for the mobile application on site.

- Detection of beer spoilers in high volume beer
- No sample pre-enrichment necessary
- Fast two-step system available in three versions:

## QuickGEN Sample Preparation Filtration

1. Filtrate beer sample up to 1 Litre
2. Add QuickGEN buffer to the filter
3. Lysis and PCR in one step

**Order-no./REF:** **Q004 (100 preparations)**

## QuickGEN Sample Preparation Centrifugation

1. Centrifugate 30 mL beer sample
2. Add QuickGEN buffer
3. Lysis and PCR in one step

**Order-no./REF:** **Q002 (100 preparations)**

## QuickGEN Syringe Filtration for dispensing equipment

1. Filtrate beer sample through a syringe (volume depends on beer type)
2. Add QuickGEN buffer to the filter
3. Lysis and PCR in one step

**Order-no./REF:** **Q009 (50 preparations)**

## QuickGEN Yeast Sample Preparation Kit

The detection of wild yeasts and bacteria within stores of brewing yeast is a standard activity executed at most commercial breweries. However due to the complexity of the sample matrix often contaminants remain undetected. For this reason the QuickGEN yeast sample preparation kit is developed to remove inhibitory effects caused by high concentrations of brewing yeast and autolytic degradation products and to detect low concentrations of spoilers more fast and reliable.

1. Yeast Sampling
2. Dilution of yeast sample
3. Enzymatic treatment to remove inhibitors
4. Addition of QuickGEN buffer
5. Lysis and PCR in one step

**Order-no./REF:** **Q005 (100 preparations)**

## Reference material

| Product | Description | Art. No. | Rxn. |
|---|---|---|---|
| All-Screen reference material | Reference material from soy and corn meal with p35S, Tnos, pat, bar, pFMV, CTP2-CP4EPSPS (500mg) | RF-6x-mix | 500 mg |

## Colour Compensation Kit

| Product | Description | Art. No. | Rxn. |
|---|---|---|---|
| Colour Compensation Kit (LC480) | Colour Compensation for Multiplexing | Q800 | 5 |

## Real-time PCR-Detection Kits

### genControl®-GMO-Kits

All PCR-Kits are available for different real-time PCR machines on request.

#### Screening

| Product | Description | Art. No. | Rxn. |
|---|---|---|---|
| First-Plant & internal control | Plant in general, single copy (FAM), incl. internal Inhibition-Control (HEX) | PPLANT 0050 | 50 |
| First-Plant & internal control | Plant in general, single copy (FAM), incl. internal Inhibition-Control (HEX) | PPLANT 0100 | 100 |
| First-Plant Triplex I (corn/ soy/ canola) & internal control | FAM-corn/ HEX-canola/ CY5-soya/ ROX-IC | PMRS 0050 | 50 |
| CaMV | Cauliflower Mosaik Virus | RT-CaMV-25 | 25 |
| CaMV | Cauliflower Mosaic Virus | RT-CaMV-50 | 50 |
| Duplex Virus: CaMV, FMV | Duplex Cauliflower Mosaik Virus and Figwort Mosaic Virus (FAM/HEX) | RT-Duplex-Virus-25 | 25 |
| Duplex Virus: CaMV, FMV | Duplex Cauliflower Mosaik Virus and Figwort Mosaic Virus (FAM/HEX) | RT-Duplex-Virus-50 | 50 |
| p35S/ T-nos Duplex- Screening | CaMVp35S/ T-nos-duplex (FAM/HEX) | RTO-duplex-screen-50 | 50 |
| p35S/ T-nos Duplex- Screening | CaMVp35S/ T-nos-duplex (FAM/HEX) | RTO-duplex-screen-100 | 100 |
| pat/ bar Duplex-Screening | pat/ bar-duplex (FAM/HEX) | RTO-pat/bar duplex-50 | 50 |
| pat/ bar Duplex-Screening | pat/ bar-duplex (FAM/HEX) | RTO-pat/bar duplex-100 | 100 |

| Product | Description | Art. No. | Rxn. |
|---|---|---|---|
| P-nos-nptII Screening | P-nos-nptII | RTO-pnos-nptII-50 | 50 |
| P-nos-nptII Screening | P-nos-nptII | RTO-pnos-nptII-100 | 100 |
| p35S-nptII Screening | p35S-nptII | RT-p35S-nptII-50 | 50 |
| p35S-nptII Screening | p35S-nptII | RT-p35S-nptII-100 | 100 |
| cry1Ab/Ac and P-nos Duplex-Screening | Cry1Ab/Ac/ P-nos duplex (FAM/HEX) | RT-duplex-cry1A/P-nos-50 | 50 |
| cry1Ab/Ac and P-nos Duplex-Screening | Cry1Ab/Ac/ P-nos duplex (FAM/HEX) | RT-duplex-cry1A/P-nos-100 | 100 |
| RT-triplex I<br>p35S/ T-nos/ EPSPS | p35S/ T-nos/ CTP2-CP4EPSPS triplex (FAM/HEX/CY5) | RT-Triplex1-50 | 50 |
| RT-triplex I<br>p35S/ T-nos/ EPSPS | p35S/ T-nos/ CTP2-CP4EPSPS triplex (FAM/HEX/CY5) | RT-Triplex1-100 | 100 |
| RT-triplex I I<br>p35S/ T-nos/ pFMV | p35S/ T-nos/ pFMV triplex (FAM/HEX/CY5) | RT-Triplex2-50 | 50 |
| RT-triplex I I<br>p35S/ T-nos/ pFMV | p35S/T-nos/pFMV triplex (FAM/HEX/CY5) | RT-Triplex2-100 | 100 |
| RT-triplex I I I<br>p35S/ T-nos/ EPSPS & internal control | p35S/ T-nos/ CTP2-CP4EPSPS triplex plus IC (FAM/HEX/ROX/CY5) | RT-Triplex3-50 | 50 |
| RT-triplex I I I<br>p35S/ T-nos/ EPSPS & internal control | p35S/ T-nos/ CTP2-CP4EPSPS triplex plus IC (FAM/HEX/ROX/CY5) | RT-Triplex3-100 | 100 |
| RT-triplex IV<br>p35S/ T-nos/ pFMV & internal control | p35S/ T-nos/ pFMV triplex plus IC (FAM/HEX/ROX/CY5) | RT-Triplex4-50 | 50 |
| RT-triplex IV<br>p35S/ T-nos/ pFMV & internal control | p35S/T-nos/pFMV triplex plus IC (FAM/HEX/ROX/CY5) | RT-Triplex4-100 | 100 |
| RT-triplex V<br>bar/ pat/ EPSPS | bar/ pat/ CTP2-CP4-EPSPS (FAM/HEX/Cy5) | RT-triplex5-50 | 50 |
| RT-triplex V<br>bar/ pat/ EPSPS | bar/ pat/ CTP2-CP4-EPSPS (FAM/HEX/Cy5) | RT-triplex5-100 | 100 |
| RT-triplex VI<br>bar /pat /P-nos | bar /pat /P-nos (FAM/HEX/Cy5) | RT-triplex6-50 | 50 |
| RT-triplex VI<br>bar/ pat/ P-nos | bar/ pat/ P-nos (FAM/HEX/Cy5) | RT-triplex6-100 | 100 |
| RT-triplex VII<br>bar/ pat/ pFMV | bar/ pat/ pFMV (FAM/HEX/Cy5) | RT-triplex7-50 | 50 |
| RT-triplex VII<br>bar/ pat/ pFMV | bar/ pat/ pFMV (FAM/HEX/Cy5) | RT-triplex7-100 | 100 |
| RT-triplex VIII<br>pat/ Tnos/ EPSPS | pat/ T-nos/ CTP2-CP4-EPSPS (FAM/HEX/Cy5) | RT-triplex8-50 | 50 |
| RT-triplex VIII<br>pat/ Tnos/ EPSPS | pat/ T-nos/ CTP2-CP4-EPSPS (FAM/HEX/Cy5) | RT-triplex8-100 | 100 |

## Soya

| Product | Description | Art. No. | Rxn. |
|---|---|---|---|
| RR-Soya | GTS40-3-2 (RoundupReady™)-soya | RT-RR-25 | 25 |
| RR-Soya | GTS40-3-2 (RoundupReady™)-soya | RT-RR-50 | 50 |
| RR2-Soya | MON89788 (RoundupReady2™)-soya | RT-RR2-25 | 25 |
| RR2-Soya | MON89788 (Roundup Ready2™)-soya | RT-RR2-50 | 50 |
| A2704-12-Soya | A2704-12 (LibertyLink™)-soya | RT-A2704-Soya-25 | 25 |
| A2704-12-Soya | A2704-12 (LibertyLink™)-soya | RT-A2704-Soya-50 | 50 |
| A5547-127-Soya | A5547-127 (LibertyLink™)-soya | RT-A5547-Soya-25 | 25 |
| A5547-127-Soya | A5547-127 (LibertyLink™ )-soya | RT-A5547-Soya-50 | 50 |
| GMO-Soy (4 GM-Soy) | RR-, RR2-, A2704-12-, A5547-127-soya and soya-reference (5x25 rxn) FAM | RT-GMSOY-25 | 25 |
| Triplex-Soya I<br>A2704/ A5547/ DP356043<br>all soy p35S positive | Triplex PCR A2704-12/ A5547-127/ DP356043-5 (FAM/HEX/CY5) | RT-Trip-soy1-25 | 25 |
| Triplex-Soya I<br>A2704/ A5547/ DP356043<br>all soy p35S positive | Triplex PCR A2704-12/ A5547-127/ DP356043-5 (FAM/HEX/CY5) | RT-Trip-soy1-50 | 50 |
| Triplex-Soya II<br>DP305423/ CV127/ MON87701<br>All without screening markers | Triplex PCR DP305423-1/ BPS-CV127-9 /MON87701 (FAM/HEX/CY5) | RT-Trip-soy2-25 | 25 |
| Triplex-Soya II<br>DP305423/ CV127/ MON87701<br>All without screening markers | Triplex PCR DP305423-1/ BPS-CV127-9 /MON87701 (FAM/HEX/CY5) | RT-Trip-soy2-50 | 50 |
| Triplex-Soya III<br>MON87708/ MON87769/ DAS68416<br>All without screening markers | Triplex PCR MON87708/ MON87769/ DAS68416 (FAM/HEX/CY5) | RT-Trip-soy3-25 | 25 |
| Triplex-Soya III<br>MON87708/ MON87769/ DAS68416<br>All without screening markers | Triplex PCR MON87708/ MON87769/ DAS68416 (FAM/HEX/CY5) | RT-Trip-soy3-50 | 50 |
| Hexaplex Soya I<br>DP305423/ CV127/ MON87701 MON87708/ MON87769/ DAS68416 | Hexaplex Soya I<br>FAM:DP305423/CV127/MON87701<br>HEX:MON87708/MON87769/DAS68416 | RT-Hexaplex-Soya 1-25 | 25 |
| Hexaplex Soya I<br>DP305423/ CV127/ MON87701 MON87708/ MON87769/ DAS68416 | Hexaplex Soya I<br>FAM:DP305423/CV127/MON87701<br>HEX:MON87708/MON87769/DAS68416 | RT-Hexaplex-Soya 1-50 | 50 |

## Maize

| | | | |
|---|---|---|---|
| MON810-Maize | MON810 (YieldGuard™)-maize | RT-MON810-25 | 25 |
| MON810-Maize | MON810 (YieldGuard™)-maize | RT-MON810-50 | 50 |
| Bt176-Maize | Bt176 (Maximizer™)-maize | RT-Bt176-25 | 25 |
| Bt176-Maize | Bt176 (Maximizer™)-maize | RT-Bt176-50 | 50 |
| Bt11-Maize | Bt11-maize | RT-Bt11-25 | 25 |
| Bt11-Maize | Bt11-maize | RT-Bt11-50 | 50 |
| T25-Maize | T25-maize | RT-T25-25 | 25 |
| T25-Maize | T25-maize | RT-T25-50 | 50 |
| TC1507-Maize | TC1507 (Herculex™)-maize | RT-TC1507-25 | 25 |
| TC1507-Maize | TC1507 (Herculex™)-maize | RT-TC1507-50 | 50 |
| MON88017-Maize | MON88017 (Rootworm™)-maize | RT-MON88017-25 | 25 |
| MON88017-Maize | MON88017 (Rootworm™)-maize | RT-MON88017-50 | 50 |
| GA21-Maize | GA21 (RoundupReady™)-maize | RT-GA21-25 | 25 |
| GA21-Maize | GA21 (RoundupReady™)-maize | RT-GA21-50 | 50 |
| NK603-Maize | NK603 (RoundupReady™)-maize | RT-NK603-25 | 25 |
| NK603-Maize | NK603 (RoundupReady™)-maize | RT-NK603-50 | 50 |
| MIR604-Maize | MIR604-maize | RT-MIR604-25 | 25 |
| MIR604-Maize | MIR604-maize | RT-MIR604-50 | 50 |
| MIR162-Maize | MIR162-maize | RT-MIR162-25 | 25 |
| MIR162-Maize | MIR162-maize | RT-MIR162-50 | 50 |
| MON863-Maize | MON863-maize | RT-MON863-25 | 25 |
| MON863-Maize | MON863-maize | RT-MON863-50 | 50 |
| MON89034-Maize | MON89034-maize | RT-MON89034-25 | 25 |
| MON89034-Maize | MON89034-maize | RT-MON89034-50 | 50 |
| E3272-Maize | E3272-maize (Event 3272 maize) | RT-E3272-25 | 25 |
| E3272-Maize | E3272-maize (Event 3272 maize) | RT-E3272-50 | 50 |
| DAS59122-Maize | DAS59122-7-maize | RT-DAS59122-25 | 25 |

| | | | |
|---|---|---|---|
| DAS59122-Maize | DAS59122-7-maize | RT-DAS59122-50 | 50 |
| CBH351-Maize | CBH351-maize (StarLink) | RT-CBH351-25 | 25 |
| CBH351-Maize | CBH351-maize (StarLink) | RT-CBH351-50 | 50 |
| GMO-Corn (7 GM-Maize) | MON810-, T25-, Bt11-, Bt176-, GA21-, MON88017-, TC1507-maize and maize-reference (8 x 25 rxn) FAM | RT-GMCORN-25 | 25 |
| Triplex Maize I (VCO-01981-5 /DAS-40278-9 / LY038) All without screening markers | Triplex PCR VCO01981-5/ DAS40278-9/ LY038 (FAM/HEX/CY5) | RT Trip-maize1-25 | 25 |
| Triplex Maize I (VCO-01981-5 /DAS-40278-9 / LY038) All without screening markers | Triplex PCR VCO01981-5/ DAS40278-9/ LY038 (FAM/HEX/CY5) | RT Trip-maize1-50 | 50 |
| 4-plex Maize I (NK603/ MON810/ MON89034/ TC1507) | Multiplex PCR NK603/ MON810/ MON89034/ TC1507 (FAM/HEX/ROX/CY5) | RT 4plex-maize1-25 | 25 |
| 4-plex Maize I (NK603/ MON810/ MON89034/ TC1507) | Multiplex PCR NK603/ MON810/ MON89034/ TC1507 (FAM/HEX/ROX/CY5) | RT 4plex-maize1-50 | 50 |

## Beet, Canola, Cotton, Potato

| | | | |
|---|---|---|---|
| H7-1 Beet & internal control | H7-1-beet (FAM) internal control (HEX) | RT-H7-1-beet-25 | 25 |
| H7-1 Beet & internal control | H7-1-beet (FAM) internal control (HEX) | RT-H7-1-beet-50 | 50 |
| RT73-Canola (GT73) | RT73 (RoundupReady™)-canola | RT-RT73-25 | 25 |
| RT73-Canola (GT73) | RT73 (RoundupReady™)-canola | RT-RT73-50 | 50 |
| Triplex-Canola I Ms8/ T45/ Rf3 | Triplex PCR Ms8/ T45/ Rf3 (FAM/HEX/CY5) | RT-Trip-canola1-25 | 25 |
| Triplex-Canola I Ms8/ T45/ Rf3 | Triplex PCR Ms8/ T45/ Rf3 (FAM/HEX/CY5) | RT-Trip-canola1-50 | 50 |
| GHB614-Cotton | GHB614-cotton (FAM) | RT-GHB614-25 | 25 |
| EH92-527-1-Potato | EH92-527-1-potato (FAM) | RT-Amflora-25 | 25 |
| EH92-527-1-Potato | EH92-527-1-potato (FAM) | RT-Amflora-50 | 50 |

## **Quantitative** real-time PCR, if not indicated (FAM)

| Product | Description | Art. No. | Rxn. |
|---|---|---|---|
| **Soya** | | | |
| p35S/ Soya Quant | CaMVp35S Quantification in soya | Qp35S-Soya-50 | 50 |
| p35S/ Soya Quant | CaMVp35S Quantification in soya | Qp35S-Soya-100 | 100 |
| RR-Soya Quant | GTS40-3-2 (RoundupReady™)-Soya Quantification in soya | QRR-50 | 50 |
| RR-Soya Quant | GTS40-3-2 (RoundupReady™)-Soya Quantification in soya | QRR-100 | 100 |
| RR2-Soya Quant | MON89788 (RoundupReady2™)-Soya Quantification in soy | QRR2-50 | 50 |
| RR2-Soya Quant | MON89788 (RoundupReady2™)-Soya Quantification in soy | QRR2-100 | 100 |
| A2704-12-Soya Quant | A2704-12 (LibertyLink™)-Soya Quantification in soy | QA2704-50 | 50 |
| **Maize** | | | |
| p35S/ Maize Quant | CaMVp35S Quantification in maize | Qp35S-Maize-50 | 50 |
| p35S/ Maize Quant | CaMVp35S Quantification in maize | Qp35S-Maize-100 | 100 |
| Bt11-Maize Quant | Bt11-Maize Quantification in maize | QBt11-50 | 50 |
| Bt11-Maize Quant | Bt11-Maize Quantification in maize | QBt11-100 | 100 |
| Bt176-Maize Quant | Bt176-Maize Quantification in maize | QBt176-50 | 50 |
| Bt176-Maize Quant | Bt176-Maize Quantification in maize | QBt176-100 | 100 |
| MON810-Maize Quant | MON810-Maize Quantification in maize | QMON810-50 | 50 |
| MON810-Maize Quant | MON810-Maize Quantification in maize | QMON810-100 | 100 |
| MON89034-Maize Quant | MON89034-Maize Quantification in maize | QMON89034-50 | 50 |
| MON89034-Maize Quant | MON89034-Maize Quantification in maize | QMON89034-100 | 100 |
| NK603-Maize Quant | NK603-Maize Quantification in maize | QNK603-50 | 50 |
| NK603-Maize Quant | NK603-Maize Quantification in maize | NK603-100 | 100 |
| TC1507-Maize Quant | TC1507-Maize Quantification in maize | QTC1507-50 | 50 |
| TC1507-Maize Quant | MON TC1507-Maize Quantification in maize | QTC1507-100 | 100 |

| Product | Description | Art. No. | Rxn. |
|---|---|---|---|
| **Maize** | | | |
| T25-Maize Quant | T25-Maize Quantification in maize | QT25-50 | 50 |
| T25-Maize Quant | T25-Maize Quantification in maize | QT25-100 | 100 |

## First-PCR for Animal species

All PCR Kits are available for different real-time PCR machines on request.

### **Singleplex** real-time PCR, qualitative with internal Control (FAM/HEX)

| Product | Description | Art. No. | Rxn. |
|---|---|---|---|
| First-Beef (replacement for First-Cattle) | Cattle/ Beef | PHB 0050 | 50 |
| First-Chicken | Chicken | PHC 0050 | 50 |
| First-Donkey | Donkey | PHDO 0050 | 50 |
| First-Duck | Duck | PHD 0050 | 50 |
| First-Fish | Bone Fish | PHF 0050 | 50 |
| First-Goat | Goat | PHG 0050 | 50 |
| First-Horse | Horse | PHH 0050 | 50 |
| First-Meat | mammalia and poultry | PHM 0050 | 50 |
| First-Pig | Pig | PHP 0050 | 50 |
| First-Pork | Pig/ Pork (very senitive pig detection) | PHAP 0050 | 50 |
| First-Ruminant | Ruminant animals according to EU | PHRU 0050 | 50 |
| First-Sheep | Sheep | PHSP 0050 | 50 |
| First-Turkey | Turkey | PHT 0050 | 50 |

**Quantification is possible by combination of First-Meat as reference system with any other single specific animal-detection kit (except ruminant kit and multiplex kits)**

## **Multiplex** real-time PCR, qualitative

| Product | Description | Art. No. | Rxn. |
|---|---|---|---|
| First-Animal Tetra I | Tetraplex PCR pork/ beef/ chicken/ turkey (FAM/HEX/ROX/Cy5) | ANIT1 0050 | 50 |
| First-Meat Extended | mammalia and poultry/ human/ plant/ internal control (FAM/HEX/ROX/Cy5) | PHME 0050 | 50 |
| First-duplex Donkey/ Horse & internal control | Duplex PCR donkey/ horse/ IC (FAM/HEX/Cy5) | PHDOH 0050 | 50 |
| First-duplex Cattle/ Pig & internal control | Duplex PCR beef/ pork/ IC (FAM/HEX/Cy5) | PHCAP 0050 | 50 |
| First-duplex Turkey/ Chicken & internal control | Duplex PCR chicken/ turkey/ IC (FAM/HEX/Cy5) | PHTC 0050 | 50 |

## First-PCR for Allergens/ Plant species

All PCR-Kits are available for different real-time PCR machines on request.

### **Singleplex** real-time PCR, qualitative with internal Control (FAM/HEX)

| Product | Description | Art. No. | Rxn. |
|---|---|---|---|
| First-Almond | Almond | PALM 0050 | 50 |
| First-Brazil nut | Brazil nut | PBRAZ 0050 | 50 |
| First-Canola | Canola | PCAN 0050 | 50 |
| First-Cashew | Cashew | PCAS 0050 | 50 |
| First-Celery | Celery | PCEL 0050 | 50 |
| First-Corn | Corn | PCOR 0050 | 50 |
| First-Cotton | Cotton | PCOT 0050 | 50 |
| First-Hazelnut | Hazelnut | PHAZ 0050 | 50 |
| First-Lupine | Lupine | PLUP 0050 | 50 |
| First-Macadamia | Macadamia | PMAC 0050 | 50 |
| First-Peanut | Peanut | PPEA 0050 | 50 |
| First-Pecan | Pecan | PPEC 0050 | 50 |
| First-Pistachio | Pistachio | PPIST 0050 | 50 |
| First-Plant | Plant in general, single copy | PPLANT 0050 | 50 |
| First-Plant | Plant in general, single copy | PPLANT 0100 | 100 |
| First-Plant Triplex I | Corn/ Canola/ Soya/ internal control | PMRS 0050 | 50 |
| First-Potato | Potato | PPOT 0050 | 50 |
| First-Rice | Rice | PRIC 0050 | 50 |
| First-Sesame | Sesame | PSES 0050 | 50 |
| First-Soya | Soybean | PSOY 0050 | 50 |
| First-Walnut | Walnut | PWAL 0050 | 50 |
| First-Wheat | Wheat (*Triticum* spp.) | PWHE 0050 | 50 |

## **Multiplex** real-time PCR, qualitative with internal control

| Product | Description | Art. No. | Rxn. |
|---|---|---|---|
| First-Duplex Mustard | mustard white/ mustard brown & black/ IC (FAM/HEX/CY5) | PMUS 0050 | 50 |
| First-Wheat Quant<br>quantification of soft wheat in total wheat | *Triticum* spp/ *T. aestivum*/ IC (FAM/HEX/CY5) | QPWHE 0050 | 50 |
| First-Allergen Triplex Nut I<br>peanut/ almond/ cashew | Multiplex PCR peanut/ almond/ cashew/ IC (FAM/HEX/CY5/ROX) | PPAC 0050 | 50 |
| First-Allergen Triplex Nut II<br>peanut/ almond/ hazelnut | Multiplex PCR peanut/ almond/ hazelnut/ IC (FAM/HEX/CY5/ROX) | PPAH 0050 | 50 |
| First-Allergen Tetra I<br>white mustard/ brown & black mustard/ celery/ sesame | Multiplex PCR white mustard/ brown & black mustard/ celery/ sesame (FAM/HEX/ROX/CY5) | ALLT1 0050 | 50 |
| First-Allergen Tetra II<br>lupine/ almond/ brazil nut/ sesame | Multiplex PCR lupine/ almond/ brazil nut/ sesame (FAM/HEX/ROX/CY5) | ALLT2 0050 | 50 |
| First-Plant Triplex I<br>maize/ canola/ soy | Multiplex PCR maize/ canola/ soy/ IC (FAM/HEX/ROX/CY5) | PMRS 0050 | 50 |

# First-PCR for Microorganisms

## Screening with differentiation

| Product | Description | REF | Rxn. |
|---|---|---|---|
| QuickGEN P1 Screening high<br>QuickGEN P1 Screening low<br>QuickGEN P1 Screening white<br>QuickGEN P1 Screening low MG<br>QuickGEN P1 Screening | Screening and differentiation of beer spoilage bacteria and yeast (*Lactobacillus,Pediococcus/ Megasphaera,Pectinatus*/yeast) | Q021<br>Q022<br>Q023<br>Q024<br>Q025 | 48<br>48<br>48<br>48<br>50 |
| QuickGEN P1 Screening without yeast high<br>QuickGEN P1 Screening without yeast low<br>QuickGEN P1 Screening without yeast white<br>QuickGEN P1 Screening without yeast | Screening and differentiation of beer spoilage bacteria (*Lactobacillus,Pediococcus/ Megasphaera,Pectinatus*) | Q031<br>Q032<br>Q033<br>Q035 | 48<br>48<br>48<br>48 |
| QuickGEN P1 and Acetic acid bacteria Screening | Detection and differentiation of beer spoilage bacteria, yeast and acetic acid bacteria | Q944 | 48 |
| QuickGEN P1 and S.cer. var.diastaticus Screening high<br>QuickGEN P1 and S.cer. var.diastaticus Screening low<br>QuickGEN P1 and S.cer. var.diastaticus Screening white<br>QuickGEN P1 and S.cer. var.diastaticus Screening lowMG<br>QuickGEN P1 and S.cer. var.diastaticus Screening | Screening and differentiation of beer spoilage bacteria *Lactobacillus,Pediococcus/ Megasphaera,Pectinatus*) and *S.cerevisiae* var. *diastaticus* | Q041<br>Q042<br>Q043<br>Q044<br>Q045 | 48<br>48<br>48<br>48<br>50 |
| QuickGEN P1 Screening and hop resistance high<br>QuickGEN P1 Screening and hop resistance low<br>QuickGEN P1 Screening and hop resistance white<br>QuickGEN P1 Screening and hop resistance low MG<br>QuickGEN P1 Screening and hop resistance | Screening and differentiation of beer spoilage bacteria (*Lactobacillus,Pediococcus/ Megasphaera,Pectinatus*) and hop resistance genes | Q051<br>Q052<br>Q053<br>Q054<br>Q055 | 48<br>48<br>48<br>48<br>50 |
| QuickGEN Beer yeast and bacteria differentiation high<br>QuickGEN Beer yeast and bacteria differentiation low<br>QuickGEN Beer yeast and bacteria differentiation white | Screening and differentiation of beverage spoilage bacteria and yeast | Q071<br>Q072<br>Q073 | 96<br>96<br>96 |
| QuickGEN Beer Differentiation high<br>QuickGEN Beer Differentiation low<br>QuickGEN Beer Differentiation white | Detection and identification of 30 beer spoiling species | Q081<br>Q082<br>Q083 | 96<br>96<br>96 |
| QuickGEN Biofilm | Detection and differentiation of biofilm producing bacteria and yeast (*Lactococcus lactis, Leuconostoc mesenteroides, Wickerhamomyces anomalus*) | Q095 | 50 |

| Product | Description | REF | Rxn. |
|---|---|---|---|
| QuickGEN Hop resistance | Detection and differentiation of hop resistance genes (horA,horC,hitA,orf5) | Q105 | 50 |
| QuickGEN Wine Screening high<br>QuickGEN Wine Screening low<br>QuickGEN Wine Screening white<br>QuickGEN Wine Screening low MG | Screening and differentiation of wine spoilage bacteria (*Lactobacillus,Pediococcus/Oenococcus oeni*/Acetic acid bacteria) and yeast | Q321<br>Q322<br>Q323<br>Q324 | 48<br>48<br>48<br>48 |
| QuickGEN Wine Screening without yeast high<br>QuickGEN Wine Screening without yeast low<br>QuickGEN Wine Screening without yeast white<br>QuickGEN Wine Screening without yeast low MG | Screening and differentiation of wine spoilage bacteria | Q331<br>Q332<br>Q333<br>Q334 | 48<br>48<br>48<br>48 |
| QuickGEN Wild yeast 1 low<br>QuickGEN Wild yeast 1 | Detection of wild yeast group 1 | Q522<br>Q525 | 48<br>50 |
| QuickGEN Wild yeast 2 low<br>QuickGEN Wild yeast 2 | Detection of wild yeast group 2 | Q532<br>Q535 | 48<br>50 |
| QuickGEN Yeast Differentiation high<br>QuickGEN Yeast Differentiation low<br>QuickGEN Yeast Differentiation white | Screening and identification of wild yeasts | Q541<br>Q542<br>Q543 | 96<br>96<br>96 |
| Biogenic Amines | Detection of biogenic amines | Q345 | 50 |

## Identification Bacteria

| Product | Description | REF | Rxn. |
|---|---|---|---|
| Alicyclobacillus differentiation | Identification of Alicyclobacillus spp., *Alicyclobacillus acidolcaldarius* and *Alicyclobacillus acidoterrestris* | Q928 | 50 |
| QuickGEN Alicyclobacillus differentiation high<br>QuickGEN Alicyclobacillus differentiation low<br>QuickGEN Alicyclobacillus differentiation white<br>QuickGEN Alicyclobacillus differentiation low MG | Identification of Alicyclobacillus spp. *Alicyclobacillus acidolcaldarius* and *Alicyclobacillus acidoterrestris* | Q721<br>Q722<br>Q723<br>Q724 | 48<br>48<br>48<br>48 |
| Lactobacillus brevis/brevisimilis/parabrevis | Identification of *L.brevis/L.brevisimilis/parabrevis* | Q922 | 50 |
| Lactobacillus buchneri/parabuchneri | Identification of *L.buchneri/parabuchneri* | Q953 | 50 |
| Lactobacillus casei/ paracasei/rhamnosus/zeae | Identification of *L.casei/paracasei/rhamnosus/zeae* | Q923 | 50 |
| Lactobacillus plantarum/paraplantarum | Identification of *L.plantarum/paraplantarum* | Q925 | 50 |
| Lactobacillus rossiae | Identification of *L.rossiae* | Q926 | 50 |
| Pediococcus damnosus | Identification of *P.damnosus* | Q954 | 50 |
| Pectinatus/Megasphaera differentiation | Identification of *Pectinatus* and *Megasphaera* | Q955 | 50 |
| QuickGEN Pectinatus/Megasphaera differentiation low | Identification of *Pectinatus* and *Megasphaera* | Q112 | 48 |
| QuickGEN Oenococcus oeni high<br>QuickGEN Oenococcus oeni low<br>QuickGEN Oenococcus oeni white<br>QuickGEN Oenococcus oeni | Identification of *Oenococcus oeni* | Q351<br>Q352<br>Q353<br>Q355 | 48<br>48<br>48<br>50 |
| QuickGEN Acetic acid bacteria high<br>QuickGEN Acetic acid bacteria low<br>QuickGEN Acetic acid bacteria white<br>QuickGEN Acetic acid bacteria | Identification of Acetic acid bacteria | Q511<br>Q512<br>Q513<br>Q515 | 48<br>48<br>48<br>50 |

## Identification Pathogens

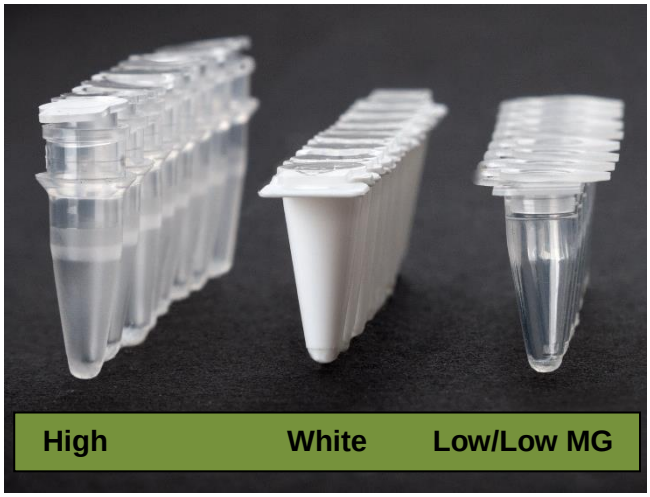
| Product | Description | Art. No. | Rxn. |
|---|---|---|---|
| First-Campylobacter jejuni with internal Control | TaqMan™-Detection (FAM, HEX) | CJE 0050 | 50 |
| First-Campylobacter jejuni Plus Kit: Incl. DNA-extraction Kit | TaqMan™-Detection (FAM, HEX) | SECJE 0200 | 200 |
| Campylobacter jejuni Complete Kit: ready to use PCR, incl. DNA-extraction Kit | TaqMan™-Detection (FAM, HEX) | SECJEC 0200 | 200 |
| Campylobacter diff. PCR (jejuni, lari and coli differentiated) with internal Control) | TaqMan™- Differentiation (FAM, JOE, ROX, CY5) | CAMPD 0050 | 50 |
| Campylobacter diff. Complete: ready to use PCR, incl. DNA-extraction Kit | TaqMan™- Differentiation (FAM, JOE, ROX, CY5) | SECAMPDC 0050 | 200 |
| Campylobacter PCR (jejuni, lari and coli/ FAM) with internal Control (JOE) | TaqMan™-Detection (FAM, JOE) | CAMP 0050 | 50 |
| Campylobacter Plus Kit, incl. DNA-extraction Kit | TaqMan™-Detection (FAM, JOE) | SECAMP 0200 | 200 |
| Campylobacter Complete Kit ready to use PCR, incl. DNA-extraction Kit | TaqMan™-Detection (FAM, JOE) | SECAMPC 0200 | 200 |
| QuickGEN PCR-Kit Enterobacteriaceae | TaqMan™-Detection (FAM, HEX) | Q145 | 50 |
| Salmonella enterica PCR with internal Control | TaqMan™-Detection (FAM, HEX) | PHS 0050 | 50 |
| Salmonella Plus Kit, incl. DNA-extraction Kit | TaqMan™-Detection (FAM, HEX) | FSDPHS 0200 | 200 |
| Salmonella Complete Kit ready to use, incl. DNA-extraction Kit | TaqMan™-Detection (FAM, HEX) | FSDPHSC 0200 | 200 |
| First-Legionella Multiplex PCR Kit | Real-time PCR-Kit for detection and identification of *Legionella spp.* and *Legionella pneumophila* (FAM, HEX, CY5) | Q949 | 50 |
| Listeria monocytogenes with internal Control | TaqMan™-Detection (FAM, HEX) | LMONO 0050 | 50 |
| Listeria monocytogenes Plus Kit, incl. DNA-extraction Kit | TaqMan™-Detection (FAM, HEX) | SELMONO 0200 | 200 |
| Listeria monocytogenes Complete Kit, ready to use, incl. DNA-extraction Kit | TaqMan™-Detection (FAM, HEX) | SELMONOC 0200 | 200 |

## Identification Yeast

| Product | Description | REF | Rxn. |
|---|---|---|---|
| QuickGEN Yeast Candida spp. high<br>QuickGEN Yeast Candida spp. low<br>QuickGEN Yeast Candida spp. white | Identification of Candida spp. (*C.albicans,C.glabrata,C.sake, C.parapsilosis, C.tropicalis, C.kefyr,C.intermedia)* | Q581<br>Q582<br>Q583 | 48<br>48<br>48 |
| QuickGEN Yeast Dekkera spp. high<br>QuickGEN Yeast Dekkera spp. low<br>QuickGEN Yeast Dekkera spp. white<br>QuickGEN Yeast Dekkera spp. | Identification of Dekkera spp. (*D.anomala,D.bruxellensis, D.custersiana, D.naardenensis, D.nanus)* | Q551<br>Q552<br>Q553<br>Q555 | 48<br>48<br>48<br>50 |
| QuickGEN Yeast Dekkera.anomala high<br>QuickGEN Yeast Dekkera.anomala low<br>QuickGEN Yeast Dekkera.anomala white<br>QuickGEN Yeast Dekkera.anomala | Identification of *D.anomala* | Q571<br>Q572<br>Q573<br>Q575 | 48<br>48<br>48<br>50 |
| Dekkera bruxellensis DNA Standard | DNA standard for quantitation of *Dekkera bruxellensis* | Q360 | 200000 cfu |
| QuickGEN Yeast Dekkera bruxellensis high<br>QuickGEN Yeast Dekkera bruxellensis low<br>QuickGEN Yeast Dekkera bruxellensis white | Identification of *D.bruxellensis* quantitative | Q371<br>Q372<br>Q373 | 48<br>48<br>48 |
| Dekkera bruxellensis quantitative FAM/HEX | Identification of *D.bruxellensis* quantitative | Q395 | 50 |
| Dekkera bruxellensis quantitative FAM/ROX | Identification of *D.bruxellensis* quantitative | Q385 | 50 |
| QuickGEN Yeast S.cerevisiae var.diastaticus high<br>QuickGEN Yeast S.cerevisiae var.diastaticus low<br>QuickGEN Yeast S.cerevisiae var.diastaticus white<br>QuickGEN Yeast S.cerevisiae var.diastaticus | Identification of *S.cerevisiae* var.*diastaticus* | Q181<br>Q182<br>Q183<br>Q185 | 48<br>48<br>48<br>50 |
| QuickGEN Yeast Bottom fermented high<br>QuickGEN Yeast Bottom fermented low<br>QuickGEN Yeast Bottom fermented white<br>QuickGEN Yeast Bottom fermented | Identification of bottom fermented yeast | Q161<br>Q162<br>Q163<br>Q165 | 48<br>48<br>48<br>50 |
| QuickGEN Yeast Top fermented high<br>QuickGEN Yeast Top fermented low<br>QuickGEN Yeast Top fermented white<br>QuickGEN Yeast Top fermented | Identification of top fermented yeast | Q151<br>Q152<br>Q153<br>Q155 | 48<br>48<br>48<br>50 |

| Product | Description | REF | Rxn. |
|---|---|---|---|
| QuickGEN Yeast Wickerhamomyces anomalus high<br>QuickGEN Yeast Wickerhamomyces anomalus low<br>QuickGEN Yeast Wickerhamomyces anomalus white<br>QuickGEN Yeast Wickerhamomyces anomalus | Identification of *W.anomalus* | Q171<br>Q172<br>Q173<br>Q175 | 48<br>48<br>48<br>50 |
| QuickGEN Yeast Candida spp. high<br>QuickGEN Yeast Candida spp. low<br>QuickGEN Yeast Candida spp. white | Identification of Candida spp. (*C.albicans,C.glabrata, C.sake, C.parapsilosis, C.tropicalis,C.kefyr, C.intermedia*) | Q581<br>Q582<br>Q583 | 48<br>48<br>48 |
| QuickGEN Yeast Zygosaccharomyces bailii high<br>QuickGEN Yeast Zygosaccharomyces bailii low<br>QuickGEN Yeast Zygosaccharomyces bailii white<br>QuickGEN Yeast Zygosaccharomyces bailii | Identification of *Z.bailii* | Q561<br>Q562<br>Q563<br>Q565 | 48<br>48<br>48<br>50 |
| QuickGEN Yeast Zygosaccharomyces rouxii high<br>QuickGEN Yeast Zygosaccharomyces rouxii low<br>QuickGEN Yeast Zygosaccharomyces rouxii white<br>QuickGEN Yeast Zygosaccharomyces rouxii | Identification of *Z.rouxii* | Q571<br>Q572<br>Q573<br>Q575 | 48<br>48<br>48<br>50 |
| QuickGEN Yeast Pichia spp. high<br>QuickGEN Yeast Pichia spp. low<br>QuickGEN Yeast Pichia spp. white<br>QuickGEN Yeast Pichia spp. | Identification of *Pichia spp. (W.anomalus, P.fermentans, P.membranaefaciens, P.guilliermondii)* | Q581<br>Q582<br>Q583<br>Q585 | 48<br>48<br>48<br>50 |

## Precoated PCR strips for different real-time PCR devices are available




| | | |
|---|---|---|
| Applied Biosystems ABI 7500 or higher | Roche LC®480 II | IT-IS MyGo Pro |
| Agilent Mx3005P | BioRad CFX96™ | BioRad CFX96™ |
| ThermoFisher QuantStudio® 5 or higher | Analytik Jena qTower | LowMG: 4-plex MyGo Pro |

# Sampling

## PolyBIND®

The separation and enrichment of microorganisms from large volumes or viscous liquids always posed a problem for microbiological diagnostics in beverage industry.
Due to blocking phenomens filtration- or centrifugation methods are time consuming or fail completely.

The new developed PolyBIND® particles enable the very first time the quick and easy isolation of microorganisms from large sample volumes and highly viscous or solid-loaded liquids without blocking. They are suitable for binding bacteria, yeast and fungi efficiently due to functionalized surfaces, regardless of sample type and quantity.

**Procedure**

- Binding of the microorganisms existing in a liquid to the PolyBIND® particles
- Detaching of the microorganism-loaded PolyBIND® particles with a special hardware or process inline-system (), cultivation of the particles
- Microbial diagnostics (e.g. microscoping, real-time PCR)

**Order-no./REF:** **Q008 (50 preparations)**