

DNA Extraction Control

Catalog numbers

| | | |
|------------------|---------------------|---|
| Batch : See vial | BIO-35028: 500 Rxn | DNA Extraction Control 670 (Brown cap) |
| | BIO-35029: 2000 Rxn | DNA Extraction Control 670 (Brown cap) |
| | BIO-35031: 500 Rxn | DNA Extraction Control 560 (Yellow cap) |
| | BIO-35032: 2000 Rxn | DNA Extraction Control 560 (Yellow cap) |
| | BIO-35033: 500 Rxn | DNA Extraction Control 610 (Orange cap) |
| | BIO-35034: 2000 Rxn | DNA Extraction Control 610 (Orange cap) |



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Storage and stability:

DNA Extraction Control is shipped on dry ice or blue ice. Stored at -20°C it is stable for 12 months from date of purchase.

Safety precautions:

Harmful if swallowed. Irritating to eyes, respiratory system and skin. Please refer to the material safety data sheet for further information.

Genotype:

F' *deoR endA1 recA1 relA1 gyrA96 hsdR17*(r_k⁻, m_k⁺) *supE44 thi-1 phoA Δ(lacZYA-argF)U169 Φ80lacZΔM15 λ⁻ pBR322* (ranseqb1 AmpR)

Notes:

1. For research use only
2. This product insert is a declaration of analysis at the time of manufacture.

Features

- Easy validation of DNA extraction protocols
- Minimal interference with sample detection
- Includes a ready-to-use reaction mix for easy setup
- Suitable for use with blood, urine and sputum starting samples

Applications

- Monitoring of DNA extraction process in real-time PCR assays

Description

The DNA Extraction Control enables users of diagnostic assays to validate their extraction step. DNA Extraction Control contains a known concentration of cells that contain the control DNA sequence. Cells containing internal control DNA are spiked into lysis buffer with the sample prior to DNA extraction. Following DNA extraction, the reaction mix is added to the extracted DNA prior to amplification. All components required for amplification of sample DNA should also be added. Presence of internal control DNA confirms the success of the extraction step, and reduces the chance of obtaining a false negative result in the sample DNA.

Control DNA has a sequence with no known homology to any organism and has been evaluated and determined, not to interfere with the detection of the sample DNA.

Components

| Reagent | 500 Reactions | 2000 Reactions |
|------------------|---------------|----------------|
| Internal Control | 5 x 500µl | 20 x 500µl |
| 25x Control Mix | 5 x 100µl | 20 x 100µl |

Recommended Protocol

All steps should be carried out at room temperature unless otherwise stated. Conditions may vary from reaction to reaction, and may need optimisation.

Extraction step

1. Thaw and brief spin down all tubes before opening.
2. **Vortex the internal control tube thoroughly to ensure complete mixing.**
3. Add 5µl of internal control DNA solution per sample to be extracted to the your lysis buffer. For batch extraction, please ensure homogeneity of the lysis buffer/Internal control mixture before loading onto samples for uniform result. The remaining internal control DNA solution can be stored at 4°C.
4. Follow the manufacturer's protocol for sample DNA extraction.

Post-extraction set up

1. When using a 2x PCR Mastermix, the following conditions apply:
 - **Vortex Control Mix tube before making up the mastermix**

| Component | Supplied | Volume |
|---------------------------------|----------|--------|
| 2x PCR Mastermix | No | 12.5µl |
| Target Probe/Primer mix | No | Xµl |
| Sample DNA from extraction step | No | Xµl |
| 25x Control Mix (brown cap) | Yes | 1µl |
| Total Volume (for 1 reaction) | | 25µl |

2. Program amplification conditions as follows:

| Cycles | Temperature | Duration | Notes |
|--------|-----------------------|----------|---------------------------------|
| 1 | 95°C | 10min | Activation |
| 30-40 | 95°C | 15s | Denaturation |
| | Annealing Temperature | 30-60s | Annealing/Extension/Acquisition |

3. Acquire DNA Internal Control fluorescence signal on the appropriate channel (i.e. DNA Extraction Control 670 (Quasar670 - emission wavelength = 670nm), DNA Extraction Control 560 (Cal Fluor Orange - emission wavelength = 560nm), DNA Extraction Control 610 (Cal Fluor Red - emission wavelength = 610nm).

- * We recommend that the user performs a validation step to ensure that no cross-reactivity exists between the user's primers and the Internal Control DNA. The likelihood of such cross-reactivity is negligible.
- ** Ct of the internal control may vary due to elution volume of nucleic acid, use of mastermix, number of multiplex etc.

Associated Products

| Product | Pack size | Cat. No. |
|------------------------------|-----------|-----------|
| ISOLATE Genomic DNA Mini Kit | 10 preps | BIO-52031 |
| SensiFAST SYBR No-ROX Kit | 500 rxn | BIO-98005 |
| SensiFAST Probe No-ROX Kit | 500 rxn | BIO-86005 |

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