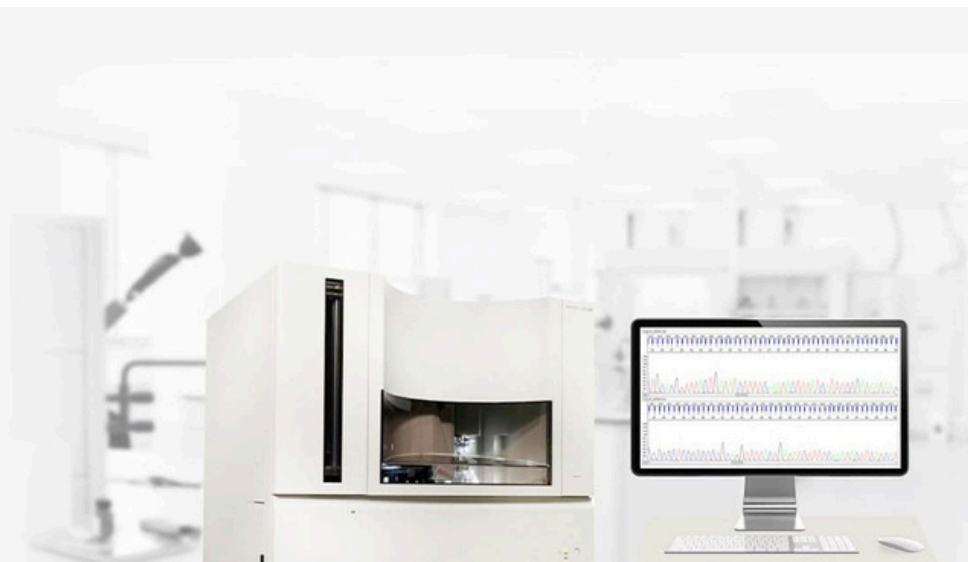


*Reagents that move your  
Sanger research in the right direction...*

## **The Newest Sanger Sequencing Reagents** Cost-effective, Direct Substitutes for BigDye® Terminator products



- No Change In:
- ✓ Protocol
  - ✓ Dye Set
  - ✓ Calibration
  - ✓ Settings

**QuantumDye™ Terminator v3.1 Cycle Sequencing Kits - same high performance, but at a greater value**

- Identical Performance to BigDye Terminator v3.1
- Flexible Packaging Formats
- Compatible with all ABI Genetic Analyzers

Visit for more information

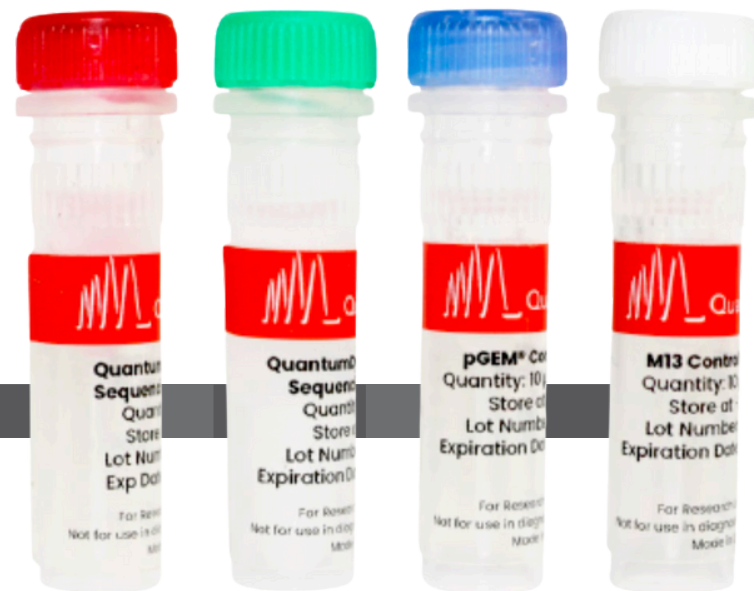
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**SUREFIRE**  
**BiO**

## QuantumDye™ Terminator v3.1 Cycle Sequencing Kits

- Direct, drop-in substitute for BigDye Terminator v3.1
- Optimized for *de novo* sequencing and resequencing applications
- Compatible with all ABI Genetic Analyzers
  - No changes to workflow, protocols, calibration or settings
- Formulated as a 2.5x concentrated cycle sequencing mix
- Developed for use with Dye Set Z



## QuantumDye v3.1 generates:

- Uniform peak heights with extremely low background
- Long sequence reads with high confidence scores
- Results that are identical to BigDye Terminator v3.1

## QuantumDye v3.1 kits content:

The QuantumDye kits contain all necessary components to perform cycle sequencing in a ready-to-use format.

- 2.5x cycle sequencing mix
- 5x Sequencing Buffer
- pGEM control plasmid DNA
- M13 reverse sequencing primer

QuantumDye cycle sequencing mix is also available separately in a 2,500 reaction (20 mL) bulk reagent format for high throughput sequencing labs that do not wish to purchase the control DNA and sequencing primer. The 5x Sequencing Buffer is also available separately in a 28 mL format.

## QuantumDye v3.1 Performance

Electropherogram of the same DNA template sequenced with the same volume of QuantumDye 3.1 (upper) and BigDye® Terminator v3.1 (lower) under identical conditions. The data shown is 403 through 451 bases from the primer from a total sequence read of greater than 800 bases. Peak heights/intensities and confidence scores are identical.



## Ordering Information:

Part #	Description QuantumDye 3.1 Kit	Reactions	Cycle Sequencing Mix	5x Dilution Buffer	pGEM Control DNA	M13 Reverse Primer
QSD3-24	QuantumDye™ Terminator v3.1 Kit	24	1 x 192 µL	1 x 650 µL	1 x 10 µL	1 x 10 µL
QSD3-100	QuantumDye™ Terminator v3.1 Kit	100	1 x 800 µL	1 x 2.0 mL	1 x 10 µL	1 x 10 µL
QSD3-1000	QuantumDye™ Terminator v3.1 Kit	1,000	1 x 8.0 mL	1 x 28 mL	1 x 50 µL	1 x 50 µL
QSD3-5000	QuantumDye™ Terminator v3.1 Kit	5,000	2 x 20 mL	2 x 28 mL	1 x 50 µL	1 x 50 µL
QSD3-25000	QuantumDye™ Terminator v3.1 Kit	25,000	10 x 20 mL	10 x 28 mL	5 x 50 µL	5 x 50 µL



Above and beyond is where we begin...

## QuantumDye Terminator dGTP v3.1 Cycle Sequencing Kit

- Are optimized for sequencing through GT- and G-rich templates
- Provide more efficient extension from the sequencing primer
- Enable extension through difficult-to-sequence regions with confidence
- Minimize early signal loss in G-rich samples



### Ordering Information:

Part #	Description QuantumDye dGTP v3.0	Reactions	Cycle Sequencing Mix	5x Dilution Buffer	pGEM Control DNA	M13 Reverse Primer
QSDG3-24	QuantumDye™ Terminator dGTP v3.1	24	1 x 192 µL	1 x 1.0 mL	1 x 10 µL	1 x 10 µL
QSDG3-100	QuantumDye™ Terminator dGTP v3.1	100	1 x 800 µL	2 x 1.0 mL	1 x 10 µL	1 x 10 µL
QSD3-1000	QuantumDye™ Terminator dGTP v3.1	1,000	10 x 8.0 mL	1 x 12 mL	1 x 250 µL	1 x 200 µL

## QuantumPOP™ 7 Polymer

QuantumPOP™ 7 polymer is a pre-formulated separation matrix customized for DNA sequencing in capillary electrophoresis systems and is a direct substitute for POP-7 Polymer that provides the same high performance, but with greater value.

### Ordering Information:

Part #	Description QuantumPOP	Volume
QSP7-14	QuantumPOP™ 7 Polymer	14 mL
QSP7-28	QuantumPOP™ 7 Polymer	28 mL



## QuantumSeq™ 5x Sequencing Buffer

QuantumSeq™ 5x Sequencing Buffer was developed as a cost-effective alternative to BigDye™ Terminator v1.1 & v3.1 5x Sequencing Buffer for use in cycle sequencing applications. QuantumSeq 5x Sequencing Buffer is intended for use with QuantumSeq QuantumDye™ cycle sequencing kits to adjust the final reaction volume when using less cycle sequencing mix.

### Ordering Information:

Part #	Description QuantumSeq 5x Buffer	Volume
QS5XB-28	QuantumSeq™ 5x Sequencing Buffer	28 mL



Above and beyond is where we begin...

QuantumSAP™ PCR cleanup Reagent

The QuantumSAP PCR Product Cleanup Reagent is a cost-effective alternative to ExoSAP-IT™ for effective removal of residual nucleotides and primers after PCR, which can significantly interfere with downstream applications like sequencing or genotyping. These contaminants can affect the primer extension reaction, leading to inaccurate or unreliable results.

Ordering Information:

Part #	Description QuantumSAP	Reaction
QSSP-500	QuantumSAP PCR Cleanup Reagent	500



QuantumSeq™ 96-well Plate Sealers

QuantumSeq™ Plate Sealers are ideal for protecting samples from contamination or spillage in 96- or 384-well plates during shaking, incubation, and storage at -20°C, 4°C, or ambient temperature. Unlike similar products from other companies, no special tools are required for a secure, leakproof seal.

- Resistant to cold and heat, from -20° C to 100° C
- Removes cleanly with no adhesive residue
- Will not tear when removed, even when stored at -20°C
- Designed for easy, rapid application
- Packaged in sets of 25

Ordering Information:

Part #	Description QuantumSeq 5x Buffer	Volume
QSPS-100	QuantumSeq 96-well Plate Sealers	100



Above and beyond is where we begin...

# GenTegra Core Technology:

## Active Chemical Protection™

- A chemical matrix that protects biologically interesting molecules DNA, RNA, Proteins, Phages etc.
- Greatly enhanced and extended temperature protection when dried
- Drying causes dramatic increase in concentration of ACP™
- Each specific formulation optimized for the biological of interest

## What it is & how it works?

- Inorganic/organic complex
- Water soluble
- Dries as “plastic-like” coating
- Coats the DNA molecule
- Makes rehydrating fast & easy

## GenTegra-DNA

- Delivered dry with shelf life >3-years
- Stored at room temperature
- Multiple dry & rehydrate cycles possible, up to 5
- Not hygroscopic
- Easy to dry, Stays dry, No issues in high humidity areas
- Ship and store without desiccation (no gel packs required)



## GenTegra-RNA

- Only product with RNase inhibitor
- Inhibits RNase activity immediately, the biggest threat
  - All products delivered dry & with shelf life, >3-years
  - Stored at room temperature
  - TE, EDTA, Citrate & H2O is OK



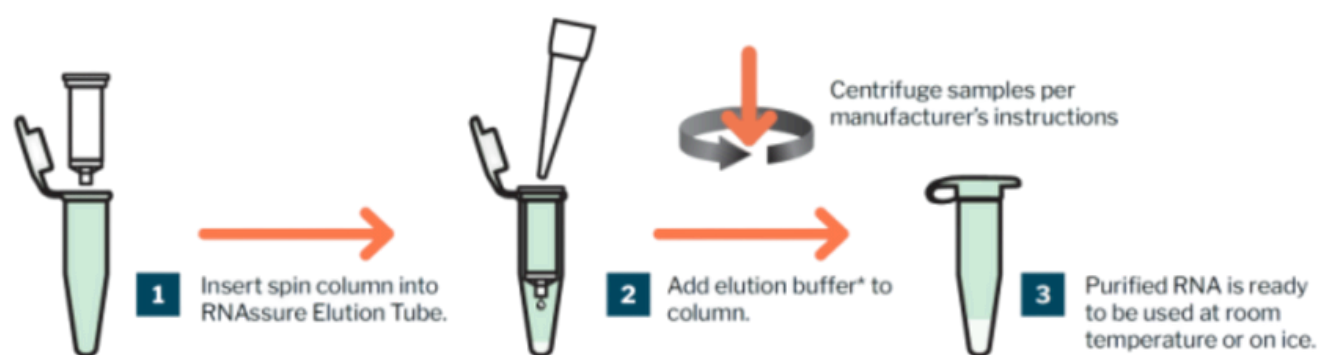
**GenTegra**

## GenTegra Core Technology:

### GenTegra RNAssure™

Immediate and complete protection. A new application of GenTegra's RNA technology.

- Based on a decade of RNA protection technology
- Immediate protection as RNA elutes from purification column
- Needed by everyone purifying RNA
  - RNA kit agnostic
  - No down stream inhibition; no cleanup step; RNAseq, rPCR, etc.



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**GenTegra**

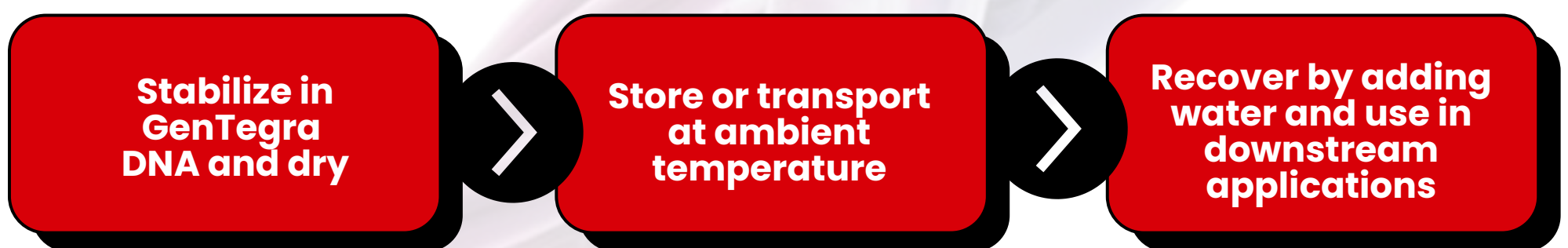
# GENETEGRA Active Chemical Protection™

## Active Chemical Protection™

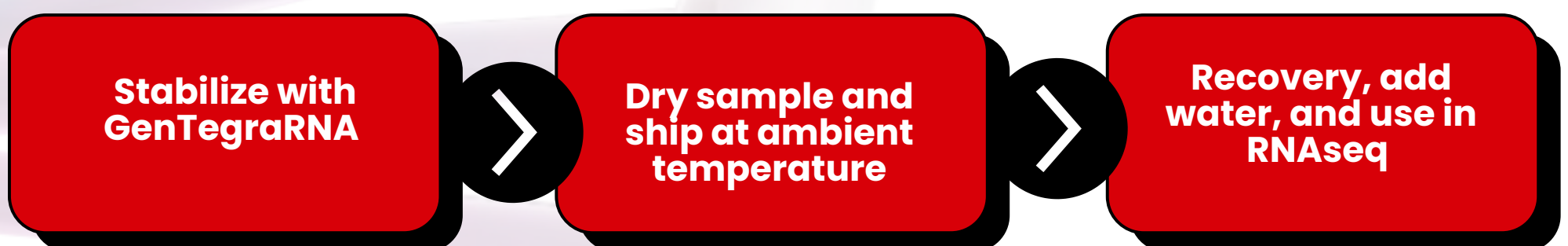
- A chemical matrix that protects biologically interesting molecules DNA, RNA, Proteins, Phages etc.
- Greatly enhanced and extended temperature protection when dried
- Drying causes dramatic increase in concentration of ACP™
- Each specific formulation optimized for the biological of interest

## HOW IT WORKS?

### GenTegra® -DNA Active Chemical Protection™



### GenTegraRNA™ Active Chemical Protection™



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