

Small Volume Sample Storage

Random Access 96 Well Skirted Flat Bottom PCR Plate, 2D Coded



Reliable - Safe - Unique

Small Volume Sample Storage

4titude® Random Access, 2D Coded PCR Plates offer a unique solution for tracking PCR and sample storage tubes. Each removable tube has an individual 2D code printed on the base of each well enabling users to complete their sample prep in the industry standard 96 well format and yet only process and track the number of samples they require. These individual coded tubes can also be used for small volume (<150 µl) sample storage and provide reliable downstream sample tracking eliminating the need for coding caps or seals which can be detached from the tube or rendered un-readable after piercing or removal.

The 2D datamatrix codes are highly scratch-resistant and can withstand cold storage (-80°C), temperatures of up to 100°C, and solvents such as DMSO. 2D datamatrix codes utilise data redundancy so even if codes are partly destroyed, the information will still be retained.

Features

- Each tube has a **unique 2D code** for sample tracking
- **Linear barcode** on plate for an extra dimension of sample tracking
- Codes can be read by **most 2D datamatrix readers**, including FluidX™ Whole Rack Scanners
- Plates can be **stacked** for efficient use of precious freezer space - no space is wasted
- **Removable tubes** allow for individual sample retrieval, avoiding other samples from defrosting

Specifications

- 12 x 12 codes with 2 mm x 2 mm dimensions 
- Unique 8 digit numeric codes available off-the-shelf
- All codes are verified and guaranteed to be unique
- 96 well SBS format

actual size!

Applications

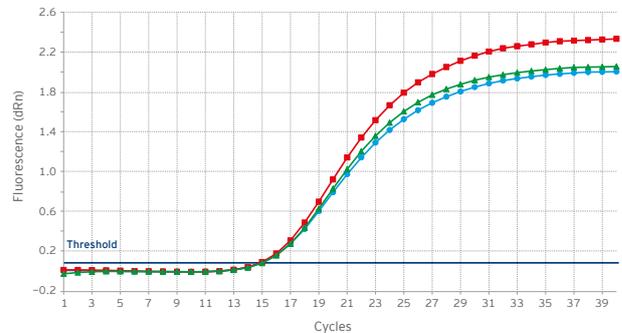
Flat bottom Random Access plates are perfect for the storage of small volume samples, allowing for easy sample retrieval. 2D codes printed directly onto the bottom of tubes ensure no samples are lost or mistaken due to misplaced caps or damaged seals.

Additionally, the thin walled PCR tubes are compatible with thermal cyclers with 96 well fast blocks for direct use in PCR. Extensive testing has shown that flat bottom tubes achieve equivalent Ct values compared to standard conical PCR tubes.

Flat and conical bottom PCR tubes - qPCR comparison

Identical reactions run in random access PCR tubes with a traditional conical well (4ti-0960/RA, ▲), with flat optical bottoms (4ti-0970/RA, ●) and flat, 2D coded bottoms (4ti-0975/RA, ■) show equivalent Ct values and similar end fluorescence values. Flat bottom tubes with a 2D code give slightly greater end fluorescence values due to the white background of the 2D code creating a reflective surface for more signal to be reflected into the qPCR instrument detector. Reactions were run in a Stratagene Mx3005P with six replicates of each tube type averaged and normalised to ROX. Increased fluorescence seen in 2D printed tubes is consistent across the replicates.

Result: Flat and conical bottom tubes show equivalent Ct values and similar end fluorescence readings. Flat bottom tubes perform equally well as traditional conical tubes in qPCR.



Sealing

Random Access tubes can be individually sealed using our Random Access Pierce Heat Seal Strong (4ti-05381/RA) in combination with our 4s3™ Sealer (4ti-0655) to provide flawlessly sealed tubes that can still be separated.

Sealed samples can be retrieved by piercing the seal with a pipette tip.

For higher throughputs, sealing can be achieved with our a4S^{RA} Automatic Random Access Sealer (4ti-0675) and Random Access Pierce Heat Seal Strong in roll format (4ti-0539/RA).

N.B. We are in the process of developing additional Random Access seals as well as cap mats to meet our customers' varied application needs.



Random Access 96 Well Skirted PCR Plate sealed with Random Access Pierce Heat Seal Strong



Random Access Sealing using the 4s3™ Heat Sealer



a4S^{RA} Automatic Random Access Heat Sealer

Ordering Information & Related Products

Code	Description	Quantity
4ti-0975/RA	Random Access 96 Well Skirted Flat Bottom PCR Plate, 2D Coded (patent pending)	50
4ti-0970/RA	Random Access 96 Well Skirted Optical Bottom PCR Plate	50
4ti-0970	FrameStar® 96 Well Skirted Optical Bottom PCR Plate	50
4ti-0960/RA	Random Access 96 Well Skirted PCR Plate	50
4ti-0970/RA-F	Random Access 96 Well Skirted Frame, Black	10
4ti-0960/RA-F	Random Access 96 Well Skirted Frame, White	10
4ti-05381/RA	Random Access Pierce Heat Seal Strong, sheets	100
4ti-0539/RA	Random Access Pierce Heat Seal Strong, roll	1
4ti-0655	4s3™ Semi-Automatic Sheet Heat Sealer	1
4ti-0675	a4S ^{RA} Automatic Random Access Heat Sealer	1

FrameStar® PCR plates are covered by one or more of the following U.S. patents or their foreign counterparts, owned by Eppendorf AG: US Patent Nos. 7,347,977 and 6,340,589.

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