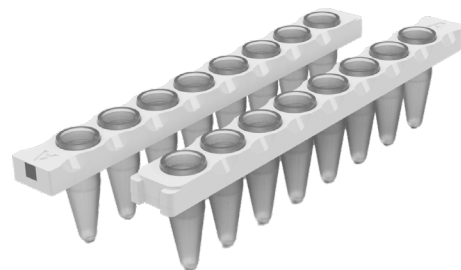


8 AFA-TUBE® TPX Strip (PN 520292)

Intended Use

The product is designed for AFA-energetics sample processing in the following Covaris Adaptive Focused Acoustics® (AFA®) Focused-ultrasonicators: ME220, ML230, LE220-plus, LE220R-plus, LE220RSc, and R230.

The 8 AFA-TUBE TPX Strips must be inserted into the racks and instruments in the correct orientation. The Strip contains an RFID tag in the white plastic under the A position indicator and should be oriented in the rack and instrument and can be used for a variety of applications on different instruments. Not all applications are applicable for every instrument.



There are specific racks for the 8 AFA-TUBE TPX Strip that are used for different applications. Please check that the correct rack is paired with the consumable.

For DNA shearing, it is recommended that the sample volume is less than or equal to 20 µL for shearing less than 300 base pair (bp) average fragment size. The maximum volume for DNA shearing is 50 µL.

AFA-energetics is delivered in 2 ways: continuous mode and pulsing mode. Continuous mode refers to the total time of the protocol without delays or pauses during the treatment. Pulsing mode refers to the short intervals of treatment (typically 10 seconds) that contain delays or pauses during the treatment, i.e., the AFA-energetics are delivered in an ON/OFF repeated pattern. Please refer to the relevant application document.

For cell lysis applications, contact applicationsupport@covaris.com and please refer to updated protocols, quick guides, technical notes, or application notes: www.covaris.com/technical-resources/.

Ordering Information

Part Name	Part Number	Part Description
8 AFA-TUBE TPX Strip (12)	520292	8-well AFA-TUBE TPX Strip
Thin Foil Seals (25)	520235	Foil seals for 12 Strip Plate. Can be divided (cut) for strip foil seals. Not for cell lysis applications.
Strip Foil Seal (12)	520108	Foil seals for sealing single strips during AFA processing. Not for cell lysis applications.
8 AFA-TUBE TPX Strip Caps	500639	Caps for sealing during AFA processing. Recommended for cell lysis applications. Recommended for all applications on the ML230.
ME220 Rack 8 AFA-TUBE TPX Strip	500609	ME220 Rack (Blue)
ME220 Waveguide 4 Place	500534	ME220 Waveguide (Red)
ML230 Rack 8 AFA-TUBE TPX Strip	500660	ML230 Rack
PSU ML230 Rack 8 AFA-TUBE TPX Strip	500699	ML230 Rack
LE220-plus Rack 8 AFA-TUBE TPX Strip	500685	LE220-plus, LE220R-plus, and LE220Rsc Rack. Comes with 2 lids for either cap strips or foil seals.
PSU LE220-plus Rack 8 AFA-TUBE TPX Strip	500698	LE220-plus, LE220R-plus, and LE220Rsc Rack. Comes with 2 lids for either cap strips or foil seals.
R230 Rack AFA-TUBE TPX Plate & Strip	500668	R230 Rack that screws into the samples arm
PSU Rack R230 8 AFA-TUBE TPX Strip	500723	PSU Rack that holds the tubes and serves as an adapter to fit the R230

Operating Limits and Conditions

Volume Capacity (Max)	150 µL (refer to protocols for recommended processing volume)
Water Level	Automatically adjusted by the instrument
Centrifuge	2,200 x RCF maximum; May be application dependent.
Storage	Dry at ambient temperature and protected from direct sunlight

ME220

Sealing	For all applications, use the 8 AFA-TUBE TPX Strip Caps (PN 500639)
Peak Power (PIP) Max	75 W
Average Incident Power (AIP) Max	25 W
Rack Definition	8 AFA-TUBE TPX Strip PN 520292.2
Application and Sample Volume	Cell lysis: 20 to 50 µL. Contact applicationsupport@covaris.com for sample specific requirements.

Please refer to updated protocols and quick guides or contact applicationsupport@covaris.com for sample specific requirements.

ML230

Sealing	For all applications, use the 8 AFA-TUBE TPX Strip Caps (PN 500639)
Peak Power (PIP) Max	350 W
Average Incident Power (AIP) Max	110 W
Rack Definition (PN 500660)	ML230_500660 Rack 8 AFA-TUBE TPX Strip +12.7 mm offset
Rack Definition (PN 500699)	ML230_500699 PS Rack 8 AFA-TUBE TPX Strip +12.7 mm offset

For DNA shearing, it is recommended that the sample volume is less than or equal to 20 µL for shearing less than 300 base pair (bp) average fragment size. The maximum volume for DNA shearing is 50 µL. ML230 DNA shearing guide https://www.covaris.com/wp-content/uploads/resources_pdf/pn_010522.pdf

Each application will use a specific rack and instrument settings. Please refer to updated protocols and quick guides or contact applicationsupport@covaris.com for sample specific requirements. ML230 DNA shearing guide https://www.covaris.com/wp-content/uploads/resources_pdf/pn_010522.pdf

LE220-plus/LE220R-plus/LE220Rsc

Peak Power (PIP) Max	450 W	
Average Incident Power (AIP) Max	250 W	
LE220-plus/ LE220R-plus	Plate Definition (PN 500685)	LE220plus_500685 8 AFA-TUBE TPX Strip +1.8 mm offset
	Plate Definition (PN 500698)	LE220plus_500698 PS 8 AFA-TUBE TPX Strip -2.2 mm offset
LE220Rsc	Plate Definition (PN 500685)	LE220PRSC_500685 8 AFA-TUBE TPX Strip +1.8 mm offset
	Plate Definition (PN 500698)	LE220PRSC_500698 PS 8 AFA-TUBE TPX Strip -2.2 mm offset

For DNA shearing, it is recommended that the sample volume is less than or equal to 20 µL for shearing less than 300 base pair (bp) average fragment size. The maximum volume for DNA shearing is 50 µL. LE220-plus/LE220R-plus DNA shearing guide https://www.covaris.com/wp/wp-content/uploads/2020/06/pn_010433.pdf

Each application will use a specific rack and instrument settings. Contact applicationsupport@covaris.com for sample specific requirements. Each application will use a specific plate definition file. Please refer to the application specific protocol. Using the 8 AFA-TUBE TPX Strip may require a software upgrade. Contact applicationsupport@covaris.com if you do not have the plate definition file installed on your instrument.

R230

Peak Power (PIP) Max	350 W
Average Incident Power (AIP) Max	110 W
Plate Definition (PN 500723)	R230_500723 PSU Holder 8 AFA-TUBE TPX Strip +0.5 mm offset

For DNA shearing, it is recommended that the sample volume is less than or equal to 20 µL for shearing less than 300 base pair (bp) average fragment size. The maximum volume for DNA shearing is 50 µL. R230 DNA shearing guide https://www.covaris.com/wp/wp-content/uploads/resources_pdf/pn_010528.pdf

Each application will use a specific rack and instrument settings. Contact applicationsupport@covaris.com for sample specific requirements. Each application will use a specific plate definition file. Please refer to the application specific protocol. Using the 8 AFA-TUBE TPX Strip on the R230 may require a software upgrade. A handheld RFID Reader is required when running the 8 AFA-TUBE TPX Strip. Please see R230 Setup & Instruction Manual (PN 010480) Revision E or higher for instructions on how to install and use the handheld RFID Reader. Contact applicationsupport@covaris.com if you do not have the plate definition file installed on your instrument.

Notes

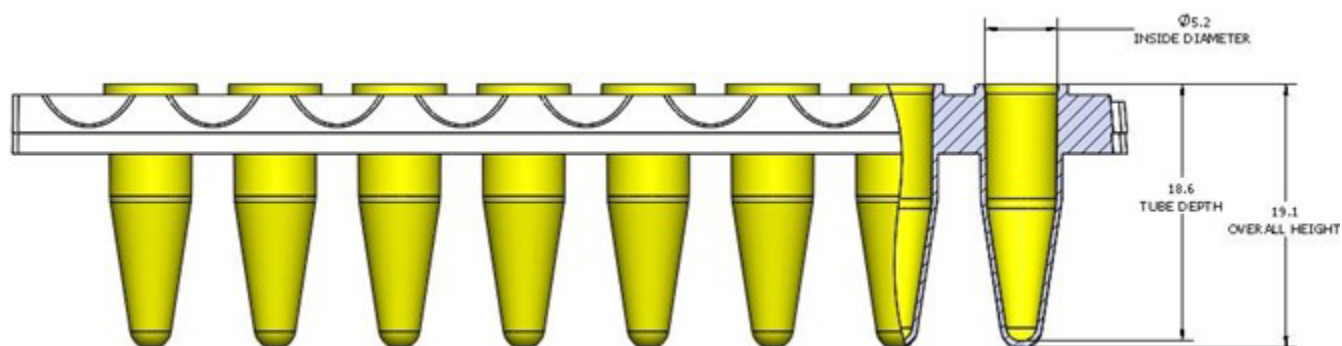
- This strip must be used with the appropriate Rack 8 AFA-TUBE TPX strip for each application
- Designed for use with automated 1, 8, and 96 channel pipettors
- Adhesive foil seals or cap strips are recommended for sealing the 8 AFA-TUBE TPX Strip
- Please follow recommendations for DNA shearing volume limits
- The 8 AFA-TUBE TPX strip is designed for single-use. In some cases, the 8 AFA-TUBE TPX can be treated twice with AFA (Adaptive Focused Acoustics) using a line transducer (ML230, R230, or L-series), with a partially filled strip.
- Recommended instructions are subject to change without notice
- If a Plate Definition is not in SonoLab™, contact Technical Support at techsupport@covaris.com or Application Support at applicationsupport@covaris.com

Package Contents

- Ready-to-use 8 AFA-TUBE TPX Strip
- Desiccant pouch
- NOTE: Foil seals and cap strips are NOT included in the box

Nominal Strip Dimensions

Overall Height (top of tube)	19.1 mm (without seal)
Tube center-to-center spacing	9.0 mm (SBS standard pattern)
Tube depth	18.6 mm
Interior clearance diameter	5.2 mm (maximum tip diameter 18.5 mm from end)



Instructions for Use

CAUTION: Remove the desiccant pack prior to use.

The 8 AFA-TUBE TPX Strip is a ready-to-use sample processing vessel. The specially designed 8 Strip is optimized for use with Covaris Adaptive Focused Acoustics (AFA).

The strip is designed as typical labware compatible with automation including heating blocks, magnetic stands, etc. If volume is at maximum, be sure to pipette slowly from the top of the tube to ensure no sample displacement.

Recommended Sequence for Use for DNA Shearing

1. **Fill the tubes:**
 - Dispense the samples about 2 to 3 mm from the bottom of the tube or at the bottom depending on sample volume.
2. **Seal the plate for AFA-processing:**
 - Apply strip caps or foil seal strip to tops of the tubes.
 - Note for L-Series Instruments: apply strip caps or thin foil seal to tops of tubes. If using strip caps, use the solid rack lid labeled "FOR CAP STRIP USE". If using thin foil to seal, use the open rack lid labeled "FOR FOIL SEAL USE".
3. **Pre AFA Centrifugation:**
 - Centrifuge the strip after sample addition to ensure the sample is at the bottom of the tube for ≤ 10 seconds at up to 2,200 RCF. Visually inspect to verify that all liquid is at the bottom of each tube before proceeding to **Step 4**.
4. **AFA-processing (examples):**
 - Strips must be in the correct rack for processing.
 - Strips must be in the correct orientation in the rack and placed in the correct orientation in the instrument.
 - Please refer to the protocols or quick guides for instructions.
5. **Post AFA Centrifugation:**
 - Centrifuge the strip after AFA for ≤ 10 seconds at up to 2,200 RCF before removing any sample.
6. **Downstream Sample Handling:**
 - After AFA treatment, the samples are ready for downstream processing. The strip caps or foil seal can be removed for processing in the 8 AFA-TUBE TPX Strip. Do not use the strip for long-term storage of the samples.

Technical Assistance

Ongoing assistance with the operation or application of the equipment and/or troubleshooting is provided via:

- Telephone
 - United States: Tel: +1 781.932.3959 during the hours of 9:00 a.m. to 5:00 p.m., Monday through Friday, Eastern Standard Time (EST), Greenwich Mean Time (GMT-05:00)
 - Europe: Tel: 44 (0) 845 872 0100, during the hours of 9:00 a.m. to 5:00 p.m., Monday through Friday, Greenwich Mean Time
- E-mail queries to techsupport@covaris.com or applicationsupport@covaris.com

Revision History

Document Part #	Revision	Date	Description of change
010503	A	05/2019	Release of 8 AFA-TUBE TPX Strip
010503	B	02/2020	Updating the PN for the 8 AFA-TUBE TPX Strip
010503	C	10/2020	Update document formatting and hyperlinks
010503	D	04/2022	Addition of description, racks, ML230 information, and R230 Information