

8 AFA-TUBE™ TPX Strip (PN 520292)

Intended Use

The product is designed for AFA-energetics™ sample processing in the following Covaris AFA® Focused-ultrasonicators: ME220, LE220-plus, LE220R-plus, and LE220RSc.



For current protocols: www.covaris.com/technical-resources/

Operating Limits

LE220-plus, LE220R-plus, LE220Rsc, and R230 - Average Incident Power (AIP) (Max)	90 W continuous mode 250 W pulsing mode
ME220 - Average Incident Power (AIP) (Max)	9 W continuous mode 14 W pulsing mode
Volume (Max)	200 µl
Water Level	Automatically adjusted
Centrifuge	2,200 x RCF maximum
Storage	Dry at ambient temperature and protected from direct sunlight

Ordering Information

Part Name	Part Number	Part Description
8 AFA-TUBE TPX Strip (12)	520292	8 well AFA-TUBE TPX Strip
Rack 8 AFA-TUBE TPX Strip	500685	LE220-plus, LE220R-plus, and LE220Rsc Rack
Rack 8 AFA-TUBE TPX Strip	500609	ME220 Rack
Thin Foil Seals (25)	520235	Foil seals for 12 Strip Plate
Strip Foil Seal (12)	520108	Foil seals for sealing single strips during AFA processing
8 AFA-TUBE TPX Strip Caps	500639	Caps for sealing during AFA processing

Plate Definitions

Instrument(s)	Part Description
ME220	"8 AFA-TUBE TPX Strip PN 520292"
LE220-plus, LE220R-plus, and LE220Rsc	"LE220plus_500685 8 AFA-TUBE TPX Strip 1.8 offset"

Notes

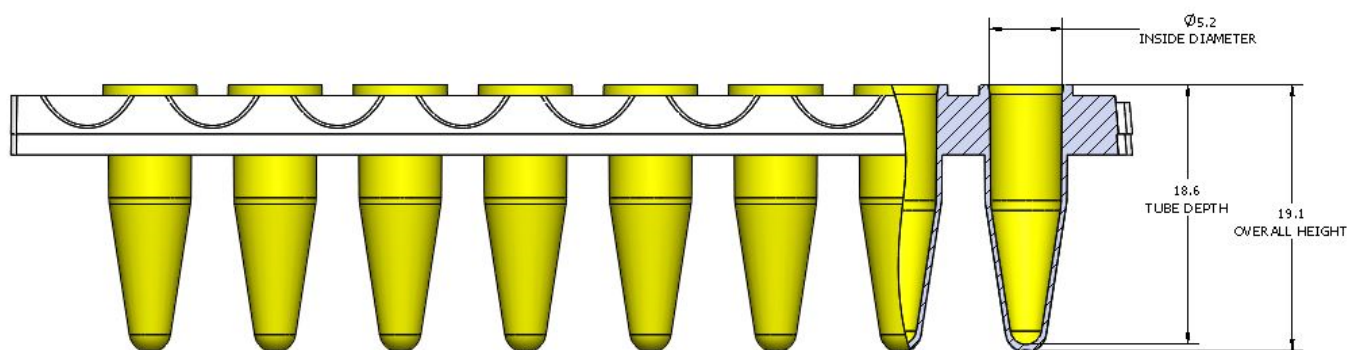
- This strip must be used with the Rack 8 AFA-TUBE TPX strip [PN 500609](#) or [PN 500685](#)
- Designed for use with automated 1, 8, and 96 channel pipettors
- Recommended instructions are subject to change without notice
- If Plate Definition is not in SonoLab™ contact Technical Support at TechSupport@covaris.com

Package Contents

- Ready-to-use 8 AFA-TUBE TPX Strip
- Desiccant pouch

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

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:

- ME220: Apply strip caps or foil seal strip to tops of tubes.
- LE220-plus, LE220R-plus, LE220Rsc: 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):

- ME220: Refer the Quick Guide, DNA shearing with ME220 Focused-ultrasonicator (covaris.com/wp/wp-content/uploads/resources_pdf/pn_010349.pdf). The strip must be in the ME220 Rack 8 AFA-TUBE TPX Strip (PN 500609) using the waveguide (PN 500526) for processing.
- LE220-plus, LE220R-plus, LE220Rsc: Refer to the Quick Guide, DNA shearing with Focused-ultrasonicator (covaris.com/wp/wp-content/uploads/2020/06/pn_010433.pdf). The strips must be in the Rack 8 AFA-TUBE TPX Strip for LE220-plus (PN 500685) for processing.

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

Appendix A: Removing or Installing the Intensifier (Covaris PN 500141) from a Covaris E System

The 500141 Intensifier is a small inverted stainless steel cone centered over the E-Series transducer by four stainless wires. The wires are held in place by a black plastic ring pressed into the transducer well.

If an AFA protocol requires “no Intensifier”, please remove the Intensifier, using the following steps:

1. Empty the water bath. Start the instrument and start the SonoLab™ software.
2. Wait for the homing sequence to complete (the transducer will be lowered with the rack holder at the home position, allowing easy access to the Intensifier).
3. Grasp opposite sides of plastic ring and gently pull the entire assembly out of the transducer well. Do not pull on the steel cone or the wires. The ring is a friction fit in the well – no hardware is used to hold it in place.



The 500141 Intensifier (left) shown installed in the E-Series transducer well and (right) removed. Note the “UP” marking at the center of the Intensifier.

If a protocol requires the Intensifier to be present, simply reverse this process:

4. Align the black plastic ring with the perimeter of the transducer well. Note that the flat side of the center cone (marked UP) should be facing up (away from the transducer).
5. Gently press each section of the ring into the well until the ring is seated uniformly in contact with the transducer, with approximately 2 mm of the ring evenly exposed above the transducer assembly. Do not press on the cone or wires. The rotation of the ring relative to the transducer assembly is not important.
6. Refill the tank. Degas and chill the water before proceeding.

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 - 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
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