

Regeneration kits

Danger of array regeneration kits and unauthorized argon laser replacement

Introduction

In today's challenging economic environment, reduced-cost proposals from third-party instrument and maintenance providers might appear to be attractive choices. However, these alternatives are not authorized vendors of Applied Biosystems™ instruments and may cost more money in the long run and cause you to sacrifice on the data quality and robust reliability you have come to expect from Thermo Fisher's Applied Biosystem Genetic Analyzers.

One example of a potentially damaging option is the purchase or use of aftermarket/third party array regeneration protocols. Flushing substances like caustic acid or base solutions through Applied Biosystems Genetic Analyzers is not an OEM-authorized procedure and can cause damage to the instrument including:

- Etching of the polymer delivery channels
- Introducing contamination

Both scenarios can result in poor instrument performance and reliability. In addition, flushing anything through the genetic analyzer that is not water or polymer could void any warranty or service contract through Thermo Fisher Scientific.



Thinking of using array regeneration kits? Get the facts first.

Applied Biosystems Genetic Analyzer polymer delivery pumps contain components made from:

- Glass Sapphire
- Rubber
- Plastic
- Acrylic

These components come into direct contact with solutions that are aspirated and dispensed by the pump. Comparable to etching metals such as copper, brass or stainless steel with an acid such as nitric acid, strong acid or base solutions can create micro-fissures/cracks or opaque hazing, softening and/or swelling of acrylic surfaces such as within the polymer

channels within Genetic Analyzer pumps.

These changes to the polymer delivery pump channel surfaces are irreparable and create an environment conducive to microbubble formation, potential contaminant build-up and decrease in Genetic Analyzer performance.

Thermo Fisher Scientific has done extensive research to help ensure that the chemicals in our POP consumables and buffers have high compatibility with the materials on Applied Biosystems™ 3130xl, 3500xl, 3730xl, and SeqStudio™ Flex Genetic Analyzers. Therefore, to help protect your investment, support optimal performance and reduce risk to damaging components within Applied Biosystems Genetic Analyzers, only Thermo Fisher Scientific approved reagents should be used.

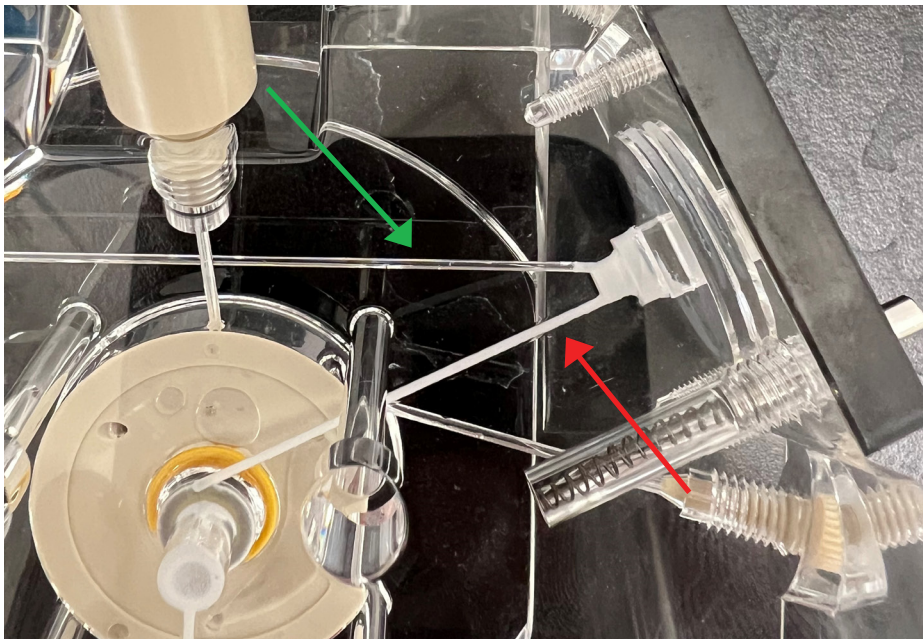
The acrylic material of the polymer delivery pump polymer channels in Figure 1 that were exposed to nitric acid resulted in etching. The “etched” surface demonstrates the incompatibility of the polymer delivery pump material with caustic solutions other than the recommended water or polymer compatibility supported by Thermo Fisher. The frosted appearance of the polymer pump channels inhibits the ability to identify and remove bubbles in the electrophoresis path which can result in additional damage to the Genetic Analyzer caused by arcing during electrophoresis and creates a surface that can trap potential contaminants.

Laser replacements by third-party service provider. Why risk your science?

Maintenance by a third-party service provider may seem like an attractive option, but as a valued Applied Biosystems customer, we encourage you to question any company’s representatives claiming they can service and support Applied Biosystems Genetic Analyzers.

Thermo Fisher Scientific has not authorized any third-party service provider to perform maintenance and repair on Applied Biosystems instruments. Third-party service providers may have refurbished argon gas lasers from older Applied Biosystems Genetic Analyzers; however, this is only a temporary fix.

Laser refurbishment is a complex process and can adversely impact instrument performance if not done properly. In addition, any use of unauthorized parts will result in loss of warranty and service coverage from Thermo Fisher Scientific. Can you take the risk?



- Normal channel
- Etched channel because of incompatible liquids

Figure 1: Acrylic material of the polymer delivery pump and polymer channels. The normal channel indicated by the green arrow was not exposed to nitric acid, where the channel indicated by the red error was exposed to nitric acid resulting in etching of the channel.



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Ordering information

Upgrade

Product	Quantity	Cat. No.
BigDye™ Terminator v1.1 Cycle Sequencing Kit	100 reactions	4337450
BigDye Terminator v3.1 Cycle Sequencing Kit	100 reactions	4337455
BigDye Direct Cycle Sequencing Kit	100 reactions	4458687
BigDye XTerminator Purification Kit	100 preps	4376486
ExoSAP-IT™ PCR Product Cleanup Reagent	100 reactions	78200.200UL
3730xl DNA Analyzer	96-Capillary	A41046
Applied Biosystems 3730xl	36CM Upgrade	A42442
Applied Biosystems 3730xl	50CM Upgrade	A42443

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