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To: File

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Subject: Switching from Nitrogen Generator to Nitrogen Cylinder

Background:

The Agilent headspace gas chromatograph uses nitrogen to pressurize the headspace vials and as a make-up gas for the flame ionization detectors (FID). The instrument also uses air as one of the gases burned in the FIDs. The nitrogen and air were being supplied by a PEAK precision nitrogen trace generator serial number 7700005056 and precision zero air generator serial number ZA14-06-206. These two gas generators are supplied air by a PEAK precision compressed air generator serial number 770005370. The third gas used by the instrument is hydrogen supplied by either a Parker-Domnick Hunter hydrogen generator model 60HMD serial number 13HMD0166 or Parker Hannifin hydrogen generator model 40HMD serial number 19HMD0002.

System updates:

On May 6, the PEAK gas generators were disconnected from the gas chromatograph because the PEAK compressed air generator was not properly maintaining pressure resulting in variable nitrogen and air supply from the nitrogen generator and zero air generator to the gas chromatograph. I installed a compressed nitrogen cylinder to the gas chromatograph for the nitrogen supply and installed Domnick Hunter zero air generator model UHP-10ZA serial number 09Z0025 for the air supply.

On May 7, 2021, Lori Abbott completed a quality assurance run on the instrument to confirm that the instrument was operating correctly with the new gas sources. The thirty-six ethanol reference material samples analyzed were all within $\pm 5\%$ of the manufacturer's values. The data from the quality assurance run confirm that the instrument is operating correctly with the new gas supply.