



## APPLICATION NEWS

### GreenSep™ 4-Ethyl Pyridine SFC Columns

Supercritical fluid chromatography (SFC) is a powerful chromatographic technique for the separation of complex mixtures. It has been useful in the areas of preparative chromatography and rapid analysis chromatography. Many SFC separations have been forced to utilize older types of stationary phases from “normal phase” HPLC such as unmodified silica, diol, amino and cyano. These phases are poorly adapted to SFC and present a number of limitations for SFC separations. Limitations include: low capacity, poor selectivity, and poor peak shape for SFC separations.

At ES Industries we have developed a new line stationary phases specifically engineered for SFC separations, one of these phases is GreenSep 4-Ethyl Pyridine. This stationary phase has proven superior to conventional stationary phases (such as diol, cyano etc...) in the areas of separation selectivity, peak shape and loading capacity. The chromatogram shown below is a prime example of the superior peak shape performance obtainable with the GreenSep 4-Ethyl Pyridine column with SFC. GreenSep 4-Ethyl Pyridine is an alternative to and provides different selectivity when compared to GreenSep Ethyl Pyridine (2-ethyl pyridine). The type of chemicals separated in this chromatogram would normally require the addition of an amine to the mobile phase; however GreenSep 4-Ethyl Pyridine does not require the addition of these peak shape modifiers. The chromatogram contains chemicals such as ibuprofen, ketoprofen and niflumic acid which demonstrates the flexibility that GreenSep 4-Ethyl Pyridine can deliver to the SFC chromatographer. Mobile phase composition and fraction collection is greatly simplified without the use of amino additives. GreenSep 4-Ethyl Pyridine is the SFC column of choice for the retention and rapid separation of chemical containing a variety of functional groups. GreenSep 4-Ethyl Pyridine can easily replace conventional stationary phases used in SFC and deliver superior performance.

