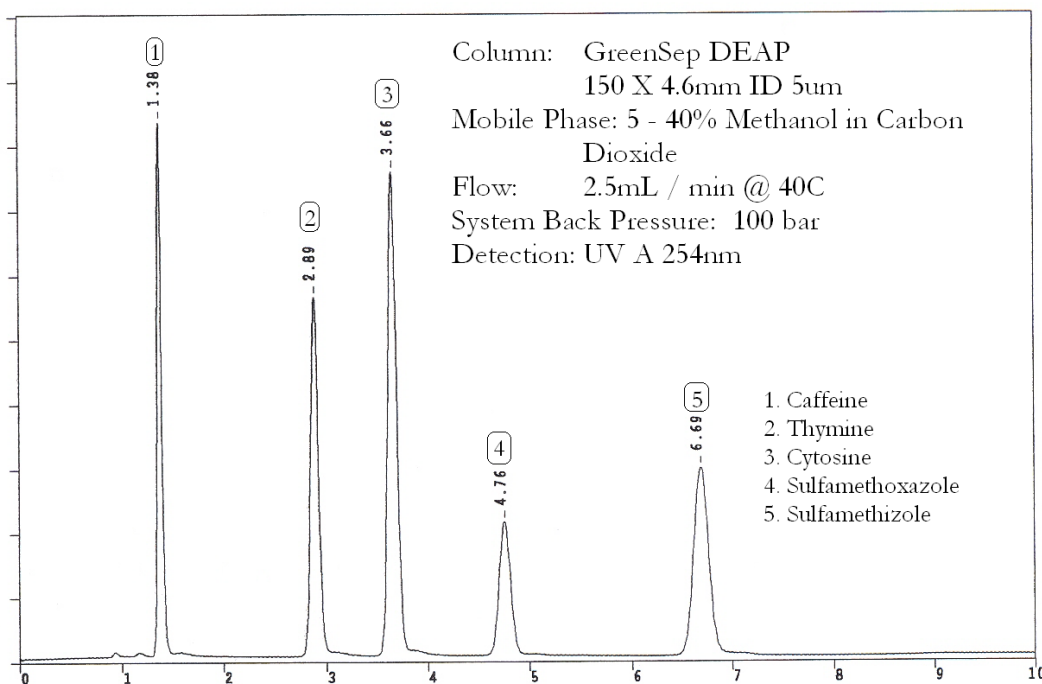


## APPLICATION NEWS

### GreenSep™ DEAP SFC Columns

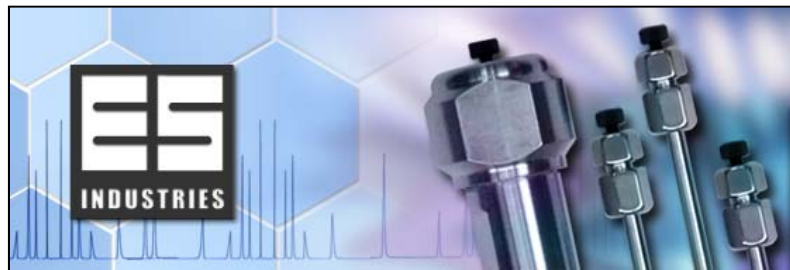
GreenSep™ DEAP - Supercritical fluid chromatography (SFC) is a powerful chromatographic technique for the separation of complex mixtures. It has been useful in the areas of preparative chromatography and rapid analysis chromatography. Many SFC separations have been forced to utilize older types of stationary 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 specifically engineered SFC stationary phases called GreenSep SFC, one of these phases is GreenSep DEAP. GreenSep DEAP 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. GreenSep DEAP is a diethyl amino propyl stationary phase with superior performance to conventional amino phases. The chromatogram shown below is a prime example of the superior performance obtainable with the GreenSep DEAP column with SFC. GreenSep DEAP can perform separation of chemicals with greater selectivity and superior peak shapes than conventional amino phases. GreenSep DEAP can enable the chromatographer to use simple mobile phases reducing the need for additives. Reduced additives can simply mobile phase composition leading to easier fraction collection. GreenSep DEAP can easily replace conventional stationary phases used in SFC and deliver superior performance.



GreenSep™ DEAP 5u 120A				
	<u>4.6mm (ID)</u>	<u>4.0mm (ID)</u>	<u>3.2mm (ID)</u>	<u>2.1mm (ID)</u>
5cm	115291-GS-DEAP	114291-GS-DEAP	11d291-GS-DEAP	112291-GS-DEAP
10cm	125291-GS-DEAP	124291-GS-DEAP	12d291-GS-DEAP	122291-GS-DEAP
15cm	135291-GS-DEAP	134291-GS-DEAP	13d291-GS-DEAP	132291-GS-DEAP
25cm	155291-GS-DEAP	154291-GS-DEAP	15d291-GS-DEAP	152291-GS-DEAP

GreenSep™ DEAP 10u 120A				
	<u>4.6mm (ID)</u>	<u>4.0mm (ID)</u>	<u>3.2mm (ID)</u>	<u>2.1mm (ID)</u>
10cm	125391-GS-DEAP	124391-GS-DEAP	12d391-GS-DEAP	122391-GS-DEAP
15cm	135391-GS-DEAP	134391-GS-DEAP	13d391-GS-DEAP	132391-GS-DEAP
25cm	155391-GS-DEAP	154391-GS-DEAP	15d391-GS-DEAP	152391-GS-DEAP
30cm	165391-GS-DEAP	164391-GS-DEAP	16d391-GS-DEAP	162391-GS-DEAP

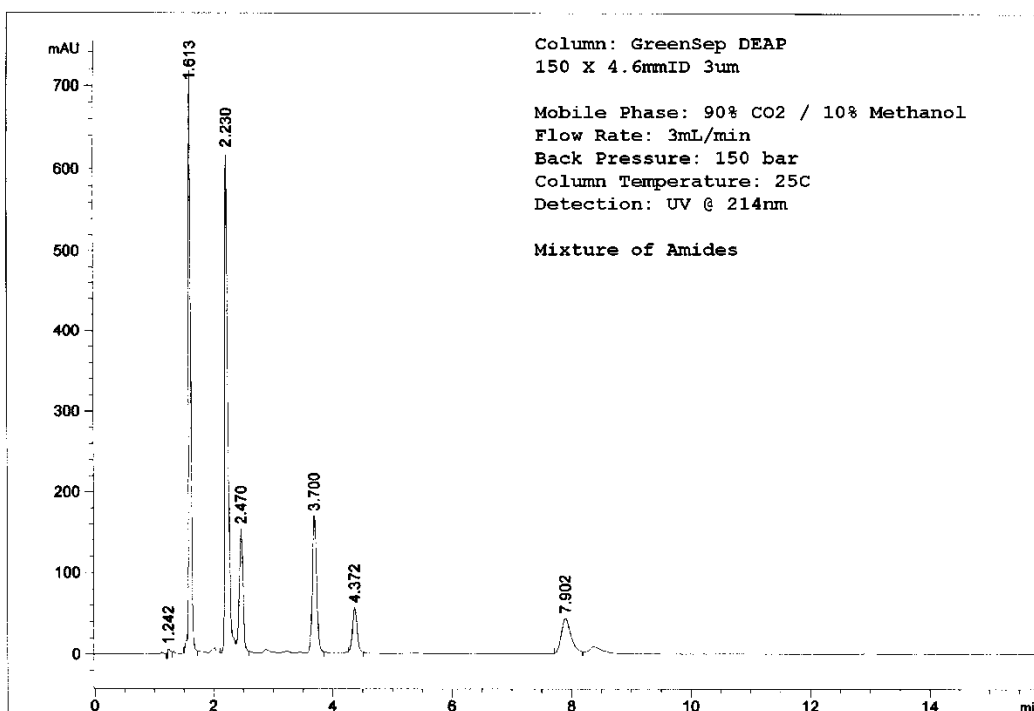


## APPLICATION NEWS

### GreenSep™ DEAP 3um SFC Columns

GreenSep™ DEAP - 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 DEAP 3um. 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. GreenSep DEAP 3um is diethyl amino propyl chemistry providing a highly selective character for as a stationary phase for SFC separations. The chromatogram shown below for a mixture of amides is a prime example of the superior peak shape performance and separation capacity obtainable with the GreenSep DEAP column with SFC. GreenSep DEAP 3um is ideally suited to high performance/high speed SFC preparative chromatography applications. GreenSep DEAP offers the chromatographer greater flexibility in developing separation. GreenSep DEAP is the SFC column is ideally suited for the retention and rapid separation of chemicals containing a wide variety of functional groups. GreenSep DEAP can easily replace conventional stationary phases used in SFC and deliver superior performance.



---

GreenSep™ DEAP 3u 120A				
	<u>4.6mm (ID)</u>	<u>4.0mm (ID)</u>	<u>3.2mm (ID)</u>	<u>2.1mm (ID)</u>
5cm	115191-GS-DEAP	114191-GS-DEAP	11d191-GS-DEAP	112191-GS-DEAP
10cm	125191-GS-DEAP	124191-GS-DEAP	12d191-GS-DEAP	122191-GS-DEAP
15cm	135191-GS-DEAP	134191-GS-DEAP	13d191-GS-DEAP	132191-GS-DEAP
25cm	155191-GS-DEAP	154191-GS-DEAP	15d191-GS-DEAP	152191-GS-DEAP

---

GreenSep™ DEAP 5u 120A				
	<u>4.6mm (ID)</u>	<u>4.0mm (ID)</u>	<u>3.2mm (ID)</u>	<u>2.1mm (ID)</u>
5cm	115291-GS-DEAP	114291-GS-DEAP	11d291-GS-DEAP	112291-GS-DEAP
10cm	125291-GS-DEAP	124291-GS-DEAP	12d291-GS-DEAP	122291-GS-DEAP
15cm	135291-GS-DEAP	134291-GS-DEAP	13d291-GS-DEAP	132291-GS-DEAP
25cm	155291-GS-DEAP	154291-GS-DEAP	15d291-GS-DEAP	152291-GS-DEAP

---

GreenSep™ DEAP 10u 120A				
	<u>4.6mm (ID)</u>	<u>4.0mm (ID)</u>	<u>3.2mm (ID)</u>	<u>2.1mm (ID)</u>
10cm	125391-GS-DEAP	124391-GS-DEAP	12d391-GS-DEAP	122391-GS-DEAP
15cm	135391-GS-DEAP	134391-GS-DEAP	13d391-GS-DEAP	132391-GS-DEAP
25cm	155391-GS-DEAP	154391-GS-DEAP	15d391-GS-DEAP	152391-GS-DEAP
30cm	165391-GS-DEAP	164391-GS-DEAP	16d391-GS-DEAP	162391-GS-DEAP

---