APPLICATION NOTES

Cogent™ UDC Cholesterol™ with TYPE-C Silica™

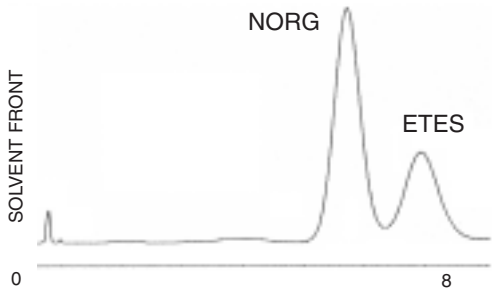
HPLC

No. 4 of Series C

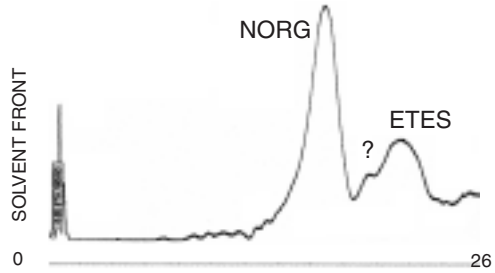
Using Unique Low Temperature/Shape Recognition

Trace Impurity Found Using MeOH on a Cogent UDC-Cholesterol™ Column at 0°C

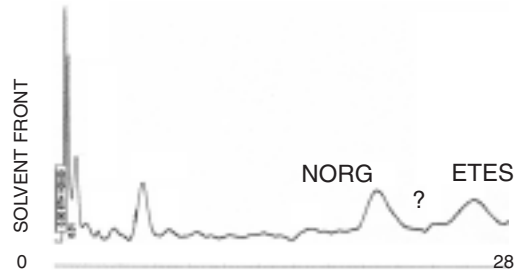
Chromatogram A:



Chromatogram B:



Chromatogram C:



Steroid Compound Type
ETES: Ethinyl Estradiol
NORG: Norgestrel
?: Unknown Peak

Method Conditions

Mobile Phase

Chromatogram A: 35% Aqueous (0.1%TFA)
65% MeOH
Chromatogram B: 42% Aqueous (0.1%TFA)
58% MeOH
Chromatogram C: 45% Aqueous (0.1%TFA)
55% MeOH

Column	Cogent UDC-Cholesterol™
Catalog No.	69069-75R
Dimensions	75 x 4.6mm id
Flow Rate	1.0ml/minute
Detection	UV, 240 nm
Temperature	0° C

Discussion of Chromatograms

Finding trace impurities is a key element of pharmaceutical research. No trace impurities were found in ETES when using:

- both ACN and MeOH with a variety of C18 columns
- only ACN at various percentages on a UDC-Cholesterol™ column
- MeOH on the UDC-Cholesterol™ column at temperatures above 15°C.

At 0°C on the UDC-Cholesterol™ column as the percentage of MeOH is sequentially reduced from 65% to 55%, it becomes obvious that a previously unresolved component is present.

Implications, Advantages & Uses

Using the unique, shape recognition, selectivity mechanism (MeOH) on the UDC-Cholesterol™ column at low temperatures allowed resolution of a previously undetected impurity in a test steroid.

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