



GPC/SEC analysis of Mono-, Di-, Tri-acylglyceride's and Glycerol according to European Pharmacopoeia¹⁾

Mono-, Di-, Triacylglyceride's are widely used as emulsifiers in food and pharmaceutical industries. Paints and adhesives may also contain different glyceride components. For pharmaceutical industry quality control, the European Pharmacopoeia (Ph. Eur. 2000) has the specific procedure used here to determine the contents of Mono-, Di-, Tri-acylglyceride's and Glycerol.

Sample preparation

Each sample is dissolved in 5 ml THF to a homogeneous solution (concentration below).

Experimental according to Ph. Eur. 2000

SEC/GPC analysis was performed on a SECcurity GPC1200 System, under the following analytical conditions:

| | |
|------------------------|---|
| Sample: | Mixture of Mono-, Di-, Tri-acylglyceride's and Glycerol |
| Column: | PSS SDV, 5 μ m, 100Å, 8x600 mm |
| Solvent: | THF |
| Flow-rate: | 1 ml/min |
| Calibration standards: | 0.5 g/l, 1 g/l, 2 g/l 4g/l Glycerol reference solutions |
| Concentration: | 40 g/l |
| Inject volume: | 40 μ l |
| Detector: | RI |
| Data acquisition: | PSS WinGPC Unity |

Results and Conclusion

The content of Glycerol is based on a Glycerol reference solution calibration curve. Various Glycerol concentrations were injected and the correlated areas and peak heights are calculated. The content of Mono-, Di-, Tri-acylglyceride's and Glycerol are calculated by a normalization process and are relative to the calculated Glycerol content.

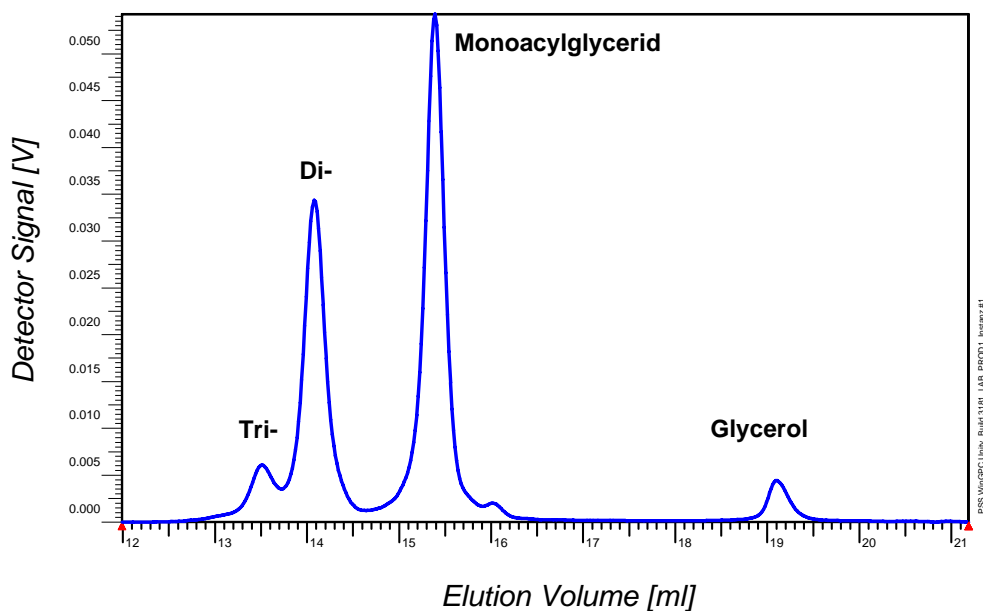
¹⁾ European Pharmacopoeia, 495, page 882 ff

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