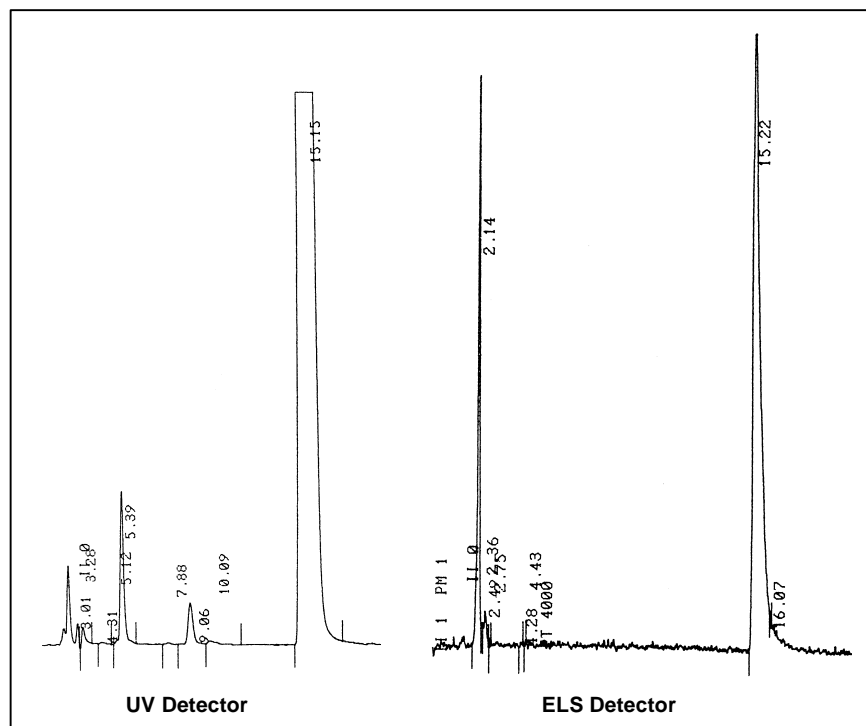


## Comparison of UV Detector and ELS Detector Response of Synthesis Compound in the Field of Pharmaceutical Industry.



In the field of pharmaceutical industry, purity determination of each new synthesis compound is an essential step in the elaboration of each new medicine. Purity level is needed to determine and optimize the quality of synthesis compound purification. UV response is in relationship with presence of suitable chromophore in the molecular structure of each compound. Therefore without standard, it is impossible and acceptable to characterize the purity of the synthesis sample with UV detection. ELS response is in direct relationship with their injected mass, and this case shows a good accuracy of synthesis sample purity. Hereby we have a comparison between UV and ELS detectors response of synthesized compound in the field of new medicines against cancer. We notice that if we only use the UVD results, purity is about 98% for the main compound. With ELSD profil, it is only about 80% and we notice that the profil of impurity is very different. Therefore we can see in this example that with UV detection the response of impurities are highly minored. This assay highlights the UV detection limits especially concerning impurity without chromophore. The result is the high minoration of impurity when using UV detection rather than ELS detection.

### Chromatographic conditions :

Column : Symetry C18 (250 x 4,6 mm) 25°C (Waters)

Flow Rate : 1 ml/mn (split 80/20 (ELSD/UVD))

Mobile phase : ACN/H<sub>2</sub>O/THF (25/74.9/0,1)

Evaporation nebulization : 40°C

Evaporation temperature : 50°C

Pressure : 1 Bar

UV : 254 nm

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