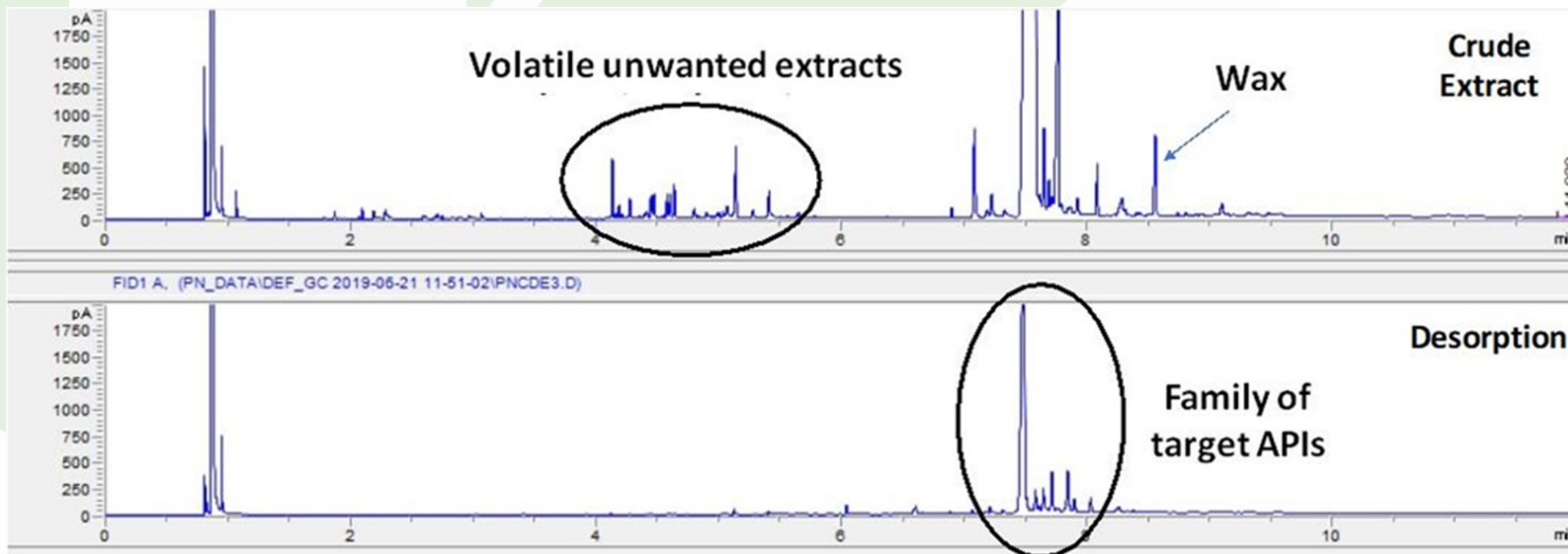


## Separation Made Simple

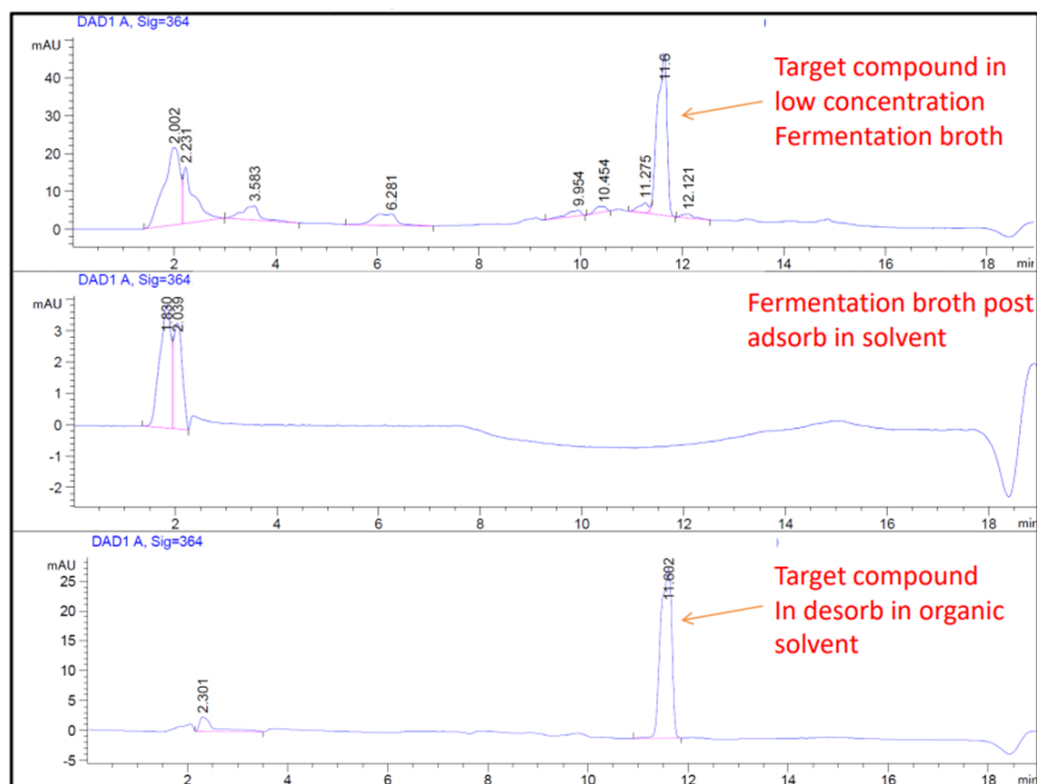
### Case Study 1: Separation of an API from a natural mixture

Starbon® materials will frequently extract an active substance from a complex natural mixture in one single step, whereas current methodologies can involve cryogenic freezing, short path distillation, crystallisation and chromatography. These processes are mass and/or energy intensive. With our partners we have developed a reusable SPE (Solid Phase Extraction) system that can eliminate or vastly reduce the need for such technologies.



## Separation Made Simple

### Case Study 2: Separation of an API from a fermentation broth



In collaboration with a biotech life sciences company we have demonstrated that in organic and aqueous systems, Starbon® materials can capture (and significantly enrich) multifunctional compounds.

In natural product extracts these tend to be single classes of compounds. In systems with growth media in an aqueous feed, such as fermentation processes, there tends to be a larger number of compounds (intermediates as well as final product) but at very low concentration.

Starbon® technology has been shown to offer a rapid route to high concentration samples from a fermentation broth without the energy penalty associated with water.

- Simple filtration of the aqueous stream followed by solid phase extraction using food safe solvents
- Efficient separation of fermentation media components from the target molecule
- Selective desorption of the target molecule from known impurities with Starbon® solid phase showing excellent reusability