UPLC (ultraperformance liquid chromatography) has become commercially available in 2004. Like other chromatographic techniques using sub two micron (STM) particles, UPLC is capable of accelerating existing HPLC methods by a factor of 10 to 16. However, analyzing plant extracts, a gain in separation power is often of greater importance than a gain in speed. This requires the use of columns generating backpressures up to and exceeding 15000 psi (1000 bar).

The theory of UPLC is briefly explained and the benefits of UPLC vs. HPLC are illustrated by several examples, incl. ginkgo, kava, black cohosh, milk thistle, and passion flower extracts.

Computer aided conversion of existing HPLC methods, and computer aided method scouting and method optimization are demonstrated.