Aldol condensation in a continuous flow microreactor

Analysis method setup

The methods below describe the analysis methods as used by *Future*Chemistry and act as a starting point or reference when setting up an analysis method on location.

UV-vis method

UV-vis analysis was performed on a Varian Cary 50 UV-Vis spectrophotometer.

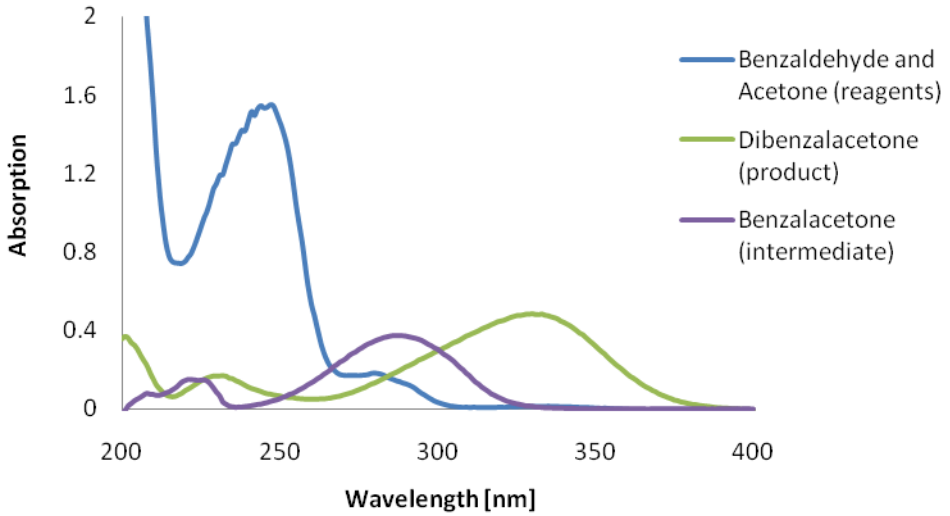

Figure 4: Example of UV-vis spectrum

Calibration

To measure percentage yield of the formed product, a calibration is set up using the concentrations from Table 3. Absorption is measured at 344 nm; the product has a molar extinction coefficient of $2.94*10^5$ M^{-1} cm^{-1}.

Table 3: Calibration samples

Sample	*Dibenzalacetone*	*Corresponding yield*
1	8.5 µM	25%
2	17.0 µM	50%
3	25.5 µM	75%
4	34.0 µM	100%

Procedure:

- Prepare stock solutions of the product (dibenzalacetone) in water/ethanol/acetonitrile (1:1:1). Use concentrations that can be diluted to the required sample concentrations using the pipettes available in your laboratory. (*The minimum amount you can accurately dispense from a pipette depends on the type and volume.*)
- Prepare four samples as in Table .
- Set up a calibration method according to the literature.