

Materials List for:

Coherent anti-Stokes Raman Scattering (CARS) Microscopy Visualizes Pharmaceutical Tablets During Dissolution

Andrew L. Fussell¹, Peter Kleinebudde², Jennifer Herek¹, Clare J. Strachan³, Herman L. Offerhaus¹

¹Optical Sciences Group, MESA+ Institute, University of Twente

²Institute of Pharmaceutics and Biopharmaceutics, Heinrich-Heine University

³Division of Pharmaceutical Technology, Faculty of Pharmacy, University of Helsinki

Correspondence to: Andrew L. Fussell at A.L.Fussell@utwente.nl

URL: <https://www.jove.com/video/51847>

DOI: [doi:10.3791/51847](https://doi.org/10.3791/51847)

Materials

Name	Company	Catalog Number	Comments
Paladin 1,064 nm laser	Coherent		Prototype model not for sale
Levante Emerald Optical parametric oscillator	APE Berlin		
IX71 Microscope	Olympus		
Fluoview 300 scanning unit	Olympus		
Photomultiplier tube R3896	Hamamatsu		
Free standing optics / filters	Thorlabs and Chroma		
Reglo peristaltic pump	ISMATEC		
USB2000+ spectrometer	Ocean Optics		
DT-MINI-2-GS light source	Ocean Optics		
FIA-Z-SMA-TEF Z shaped flow cell	Ocean Optics		
QP400-2-SR-BX optical fiber	Ocean Optics		
Plastic piping	ISMATEC		
CARS dissolution tablet flow cell			Homebuilt at university - designed to hold 12 mm diameter, 3 mm thick tablets. The flowcell has a channel depth of around 0.5 mm.
Glass beakers	VWR	D108980	
Theophylline anhydrate	BASF	30058079	
Ethyl cellulose	Colorcon		