Pierre PEOTTA
MiBio 2012
pierre.peotta@nanosight.com

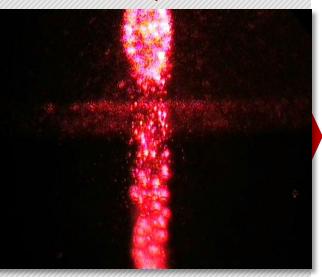
NANOSIGHT

Characterisation of Nanoparticles and Aggregates using Nanoparticle Tracking Analysis (NTA)

Nanoparticle Tracking Analysis employs a novel illumination method, allowing direct observation of particles in suspension within the size range of approximately 10 – 1000 nm

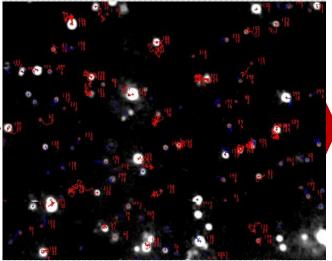
NTA is the gathering of unique information and comes from assessment of individual particles, rather than averaging over a bulk sample

1 - Capture



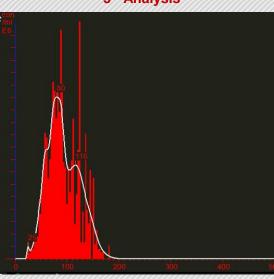
The particles are individually imaged frame-by-frame within a high resolution video dataset

2 - Tracking



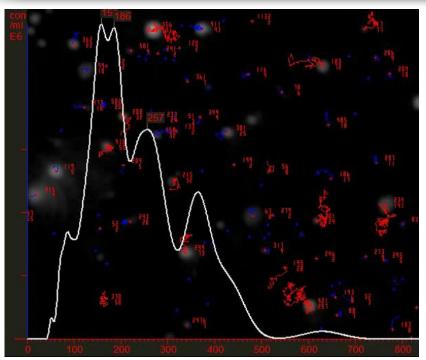
For each nano-object, NTA performs an accurate tracking of their brownian motion to determine the Diffusion Coeficient

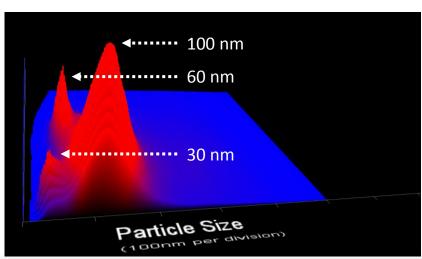
3 - Analysis



Using Stokes-Einstein equation, size is determine on an idividual basis for all particles in the field of view

NANOSIGHT Parameters measured – simultaneously, 'real time', particle-by-particle...







Size



Number or concentration



Polydispersity – true PSD



"Relative Light Intensity"



Fluorescence



Surface, Zeta Potential