





- 1. Review of the Guidance as seen through the eyes of the industry
- 2. Practical application of the guidance
- 3. Key learnings from following the EFSA guidance







## Size as a key driver for nanomaterial behaviour

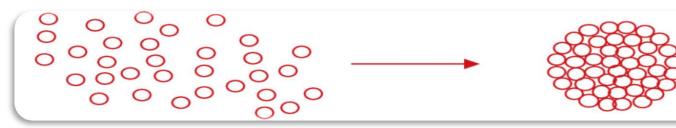
1st challenge: Definition

☐ European EC (2001) - (2011/696/EU)

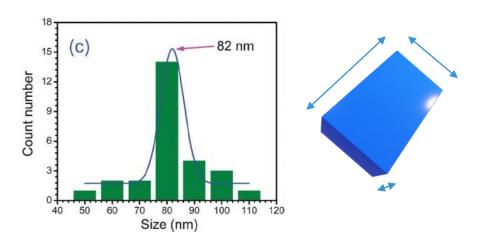
A natural, incidental or manufactured material containing particles, ..., for 50 % or more ... is in the size range 1 nm - 100 nm.

- □ ISO & EUR 26567 EN: Definitions by international organizations and committees
- ☐ EFSA DEF: Inclusion of small particles
  - **D**10 < 500 nm
  - Characterization of small particles (< 500 nm)</p>
    - **D10 < 250 nm**

3rd challenge: Agglomeration and aggregation increase particle size



2<sup>nd</sup> challenge: Particle size distribution Measuring 3 dimensions can be difficult



Agglomerate?, Aggregate?, Environment difference: pH, body fluid type, hydrodynamic size (simulate physiological body conditions).

Natural tendency of small molecules to stick together







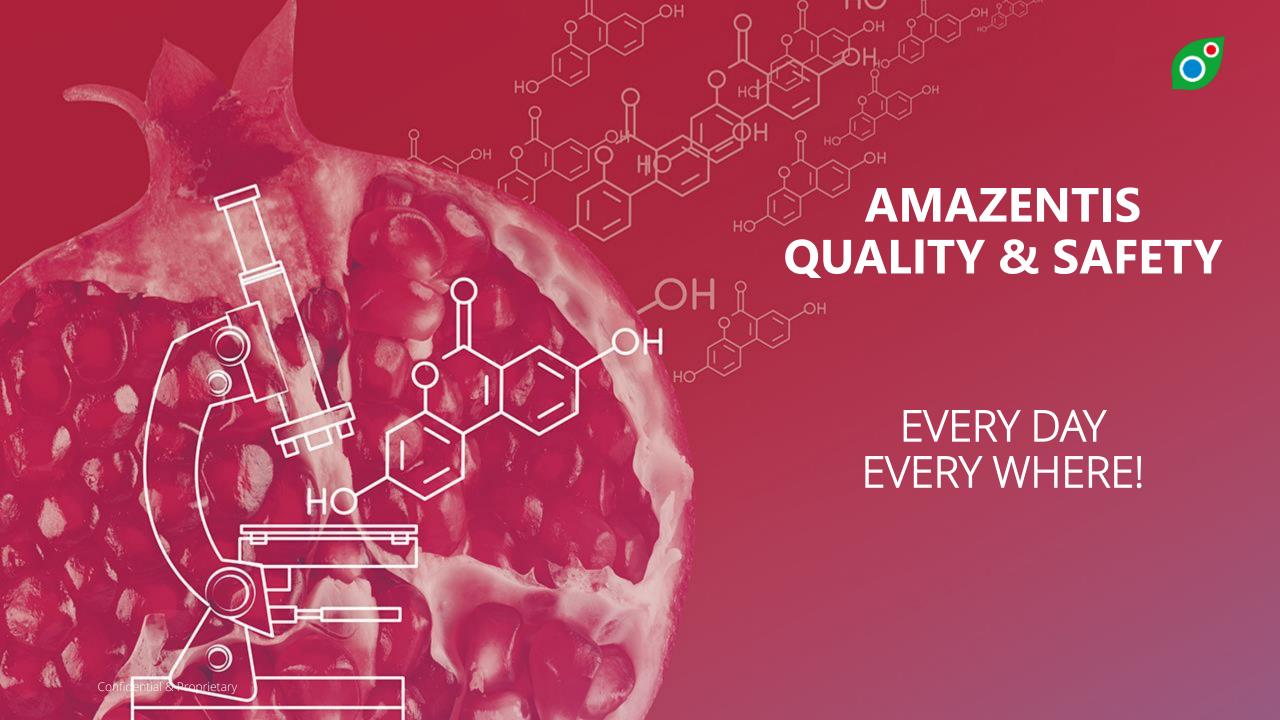
Guidance	Capability of CROs to assist	CRO Study compliance	Investment	RESULT -EFSA feedback
Nano RA guidance 111 pages Particle-TR guidance 48 pages	Difficulties to identify labs familiar with the guidances  Difficulties in 3D quantification, finding the adequate Sonication conditions,  1,5 year; 500K USD.	Refusal or Reluctance to "follow the guidance"	Higher levels of investment than initially anticipated to obtain compliant studies  Companies say that they follow EFSA's guidance	Studies not performed according to guidance.  Several studies needed to be repeated to obtain a compliant study





## Helpful insights & Proposals to consider:

Possibility to have a pre-submission consultation, determining acceptability of data EFSA Webinars/Workshops that support both Applicants and CROs Establishing a list of qualified/accredited CRO providers around Europe Creation of FAQs to assist both providers and applicants Beneficial to have smaller but more targeted guidances e.g.: sonication







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