

# Vergleich der Definitionen von 2022 und von 2011 (H. Rauscher, JRC)

	2022	2011
Origin	natural, incidental or manufactured	natural, incidental or manufactured
Objects	particles	particles
State of matter	<b>solid</b>	<b>not specified (but “solid” stated in FAQ)</b>
Relevant particles	Present on their own or as identifiable constituent particles in aggregates or agglomerates	in an unbound state or as an aggregate or as an agglomerate (including particles in agglomerates or aggregates)
“Size”	<p><b>Particles fulfil at least one of the conditions:</b></p> <ul style="list-style-type: none"> <li>• one or more external dimensions are in the size range 1 nm to 100 nm</li> <li>• <b>For elongated shapes: two external dimensions are smaller than 1 nm and the other dimension is larger than 100 nm</b></li> <li>• <b>For plate-like shapes: one external dimension is smaller than 1 nm and the other dimensions are larger than 100 nm.</b></li> </ul>	<b>one or more external dimensions is in the size range 1 nm-100 nm</b>
Explicit inclusion	<p><b>None</b>                      (replaced by generic inclusion of all elongated particles with a diameter smaller than 1 nm and length above 100 nm and of plate-shaped particles with a thickness below 1 nm and lateral dimensions above 100 nm, in the relevant size fraction)</p>	fullerenes, graphene flakes and single wall carbon nanotubes with one or more external dimensions below 1 nm should be considered as nanomaterials
Upper size limit of particles to be counted	particles with at least two orthogonal external dimensions <b>larger than 100 µm</b> need not be considered	<b>Not specified</b>
VSSA as proxy for PSD to identify nanomaterials	<b>Not included</b>	<b>VSSA &gt; 60m<sup>2</sup>/cm<sup>3</sup></b> to identify NM possible
VSSA as criterion to identify materials which are not nanomaterials	If <b>VSSA &lt; 6m<sup>2</sup>/cm<sup>3</sup></b> → <b>no nanomaterial</b>	<b>Not specified</b>
Flexibility of the 50% threshold	<b>none</b>	Lower threshold of <b>1% - 50% possible</b>

