

Potential for metal contamination by direct sonication of nanoparticle suspensions

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While conducting toxicity tests with nano titanium dioxide, the authors found that test suspensions were being contaminated with aluminum and titanium from tip erosion during direct sonication. The contaminating alloy particles had a measurable size distribution and zeta potential using dynamic light scattering, which changed the measured characteristics of the suspensions. Caution should be used when employing direct sonication for preparing test suspensions due to potential interferences of these particles in toxicological assessments.