

MICROTRAC MRB

PARTICLE CHARACTERIZATION

part of **VERDER**
scientific

Measurement of Gold, Silver & Platinum Nanoparticles produced by a laser-based synthesis method

INTRODUCTION

Colloidal dispersions of Gold, Silver and Platinum nanoparticles can be used in a variety of different applications. For example, platinum nanoparticles can be used very effectively as catalysts. Due to their high specific surface, nanoparticles act far more efficiently than the bulk material. Silver nanoparticles can be used as an antibacterial agent in different ways. Colloidal gold is very often used as a diagnostic marker in medical applications or in drug delivery systems. All of these nanoparticles can be produced very easily with the fully automated Nanoparticle Synthesis Machine from the **AUTO PRO NANO** project, a development initiative at the University of Duisburg-Essen.

DYNAMIC LIGHT SCATTERING

Microtrac MRB's Nanotracs Flex is a highly versatile Dynamic Light Scattering (DLS) analyser that provides information on particle size, concentration, and molecular weight. The innovative design of the Nanotracs Flex allows faster measurements with reliable technology, higher precision, and better accuracy. With the unique probe design, nearly any vessel can be converted into a measurement cell (*Figure 1*). The instrument can handle monomodal and multimodal samples over a wide concentration range, all without prior knowledge of the particle size distribution.

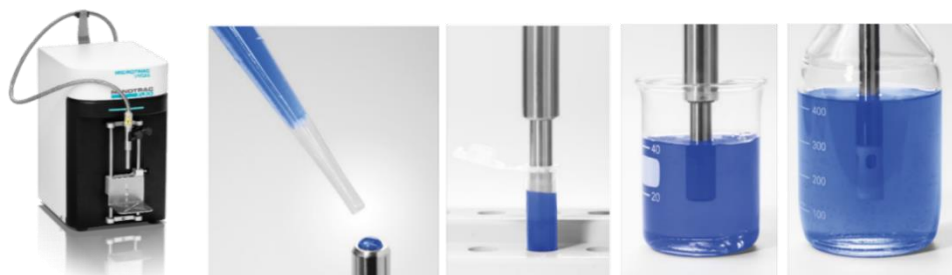


Figure 1: The dip-in probe of the Nanotracs Flex allows direct measurements in vessel: beaker, bottle, Eppendorf tube, or even a single drop of liquid.