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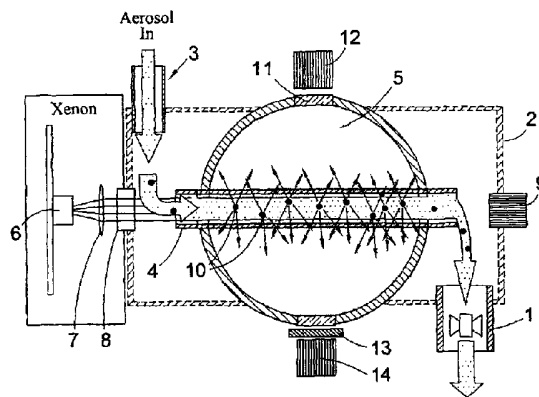
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GB 2378752 A **WO 1990/010858 A**
US 6563585 B1 **US 6441387 B1**
US 5999250 A **US 20030098422 A1**
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(54) Abstract Title: **Improvements to fluid borne particle analysers**

(57) This invention describes an improved method and apparatus for the analysis of fluid borne particles and which is especially suitable for the detection of airborne biological particles. In one aspect the invention provides an apparatus for the detection of fluid borne particles which comprises: a zone through which a fluid to be analysed flows, in use; a source of illumination to illuminate / irradiate fluid borne particles present in said zone; and a detector to detect light from the particles as an indicator of the presence or characteristics of the particles, wherein the apparatus comprises an integrating sphere and the zone is within the integrating sphere. The apparatus is highly sensitive and can be used for detecting airborne particles even where the particles are present at very low particle concentrations in the air.



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