

P1-20 Collection of Black Carbon in a Particle-Into-Liquid Sampler

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Steam collection devices such as the Particle-Into-Liquid Sampler (PILS, Weber et al., 2001) produce liquid samples containing aerosol particles in solution or suspension. In common applications, the water-soluble particulate material is then analyzed, while the fate of water-insoluble components is often neglected. In this study (Wonaschuetz et al., 2018), we show that hydrophobic and insoluble soot particles from a CAST soot generator are sampled in detectable quantities by the PILS. The overall collection efficiency was found to be on the order of 20%. We conclude that the presence of hydrophobic particles in liquid samples from steam collection cannot always be neglected.

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