

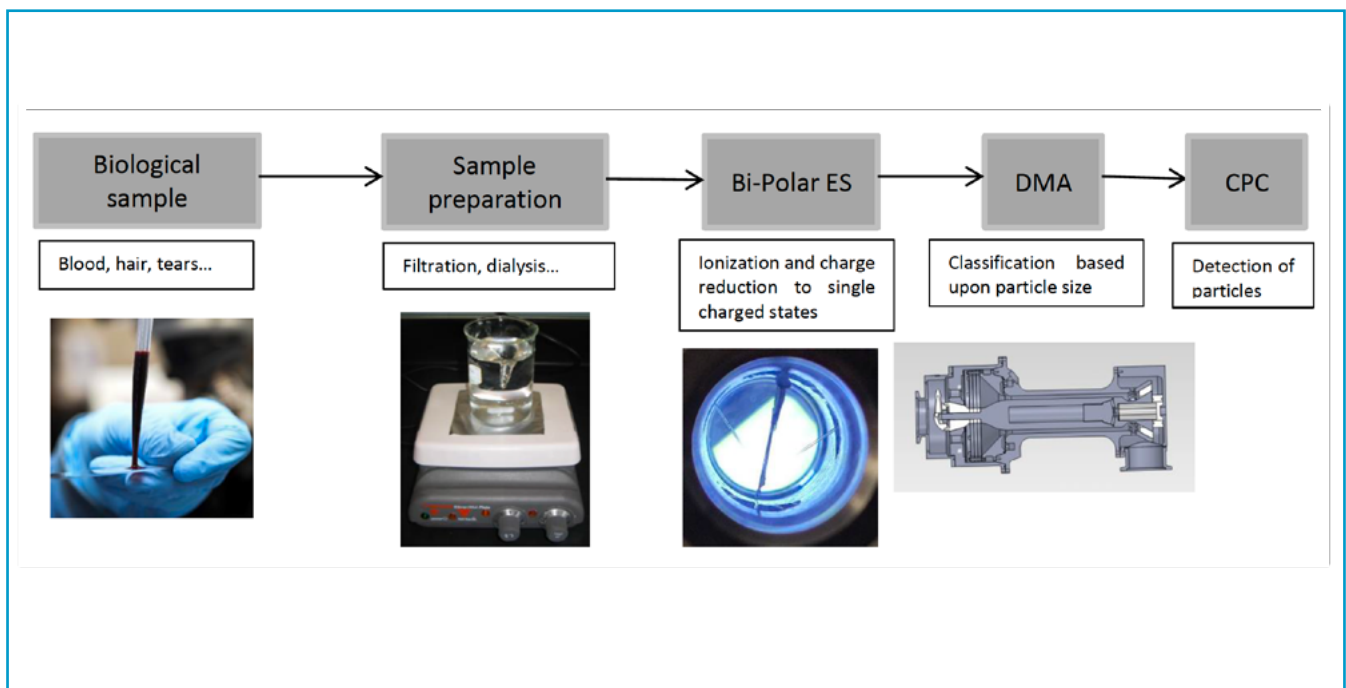
SEADM's Perez-DMA for Virus Detection (Manual Inspection)

Introduction

The detection technology is based upon determination of the virus diameter, which will provide a rapid universal virus identification. Presently the PCR approach is time consuming and costly for a broad coverage of many candidates in a search list, while the GEMMA approach, conceptually similar to the proposed one, is lacking due to its modest size resolution and price. Virus detection is not based on their vapour emission, hence the virus sample will be taken from a biological reservoir.

System Architecture

This virus detection system will be based on Electro spray-Charge Reduction - Differential Mobility Analyser - Condensation Particle Counter (ES-CR-DMA-CPC). SEADM's Bi-polar Electro spray Source ionizes viruses with a single charge state, the Perez-DMA, specialized in large diameter particles, measures the virus cross section, while the CPC quantifies the virus concentration.



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