

## Utilizing lipopolysaccharide in exhaled breath condensate to diagnose gram negative pneumonia

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### Abstract:

A device for collecting exhaled breath condensate from a subject. The device comprises a plunger assembly and a stopper. The stopper is connected to the plunger disk of the plunger assembly by a plurality of support pins and is configured for sealing engagement. The device is utilized to collect exhaled breath condensate from both spontaneously breathing and mechanically ventilated subjects and the devices utilized to determine whether lipopolysaccharide is present in the collected exhaled breath condensate.

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