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(54) Title: RAPID PATHOGEN IDENTIFICATION AND DETECTION MOLECULAR DIAGNOSTICS TECHNOLOGY

(57) Abstract: The present invention provides a method of detecting non-host species in a host sample. The host sample is contacted with magnetic particles coupled to enzymes to degrade cell-free host nucleic acids present in the host sample, wherein the magnetic particles coupled to enzymes are capable of degrading both DNA and RNA. A magnetic field is applied to remove the magnetic particles coupled to enzymes from the host sample. A DNA and RNA library is created from the degraded sample in a one-pot process, followed by detection of the presence of non-host nucleic acids from the DNA and RNA library.



WO 2023/131910 A2