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(54) Title: FILTER MEDIUM, MATERIALS AND METHODS FOR THE REMOVAL OF CONTAMINANTS

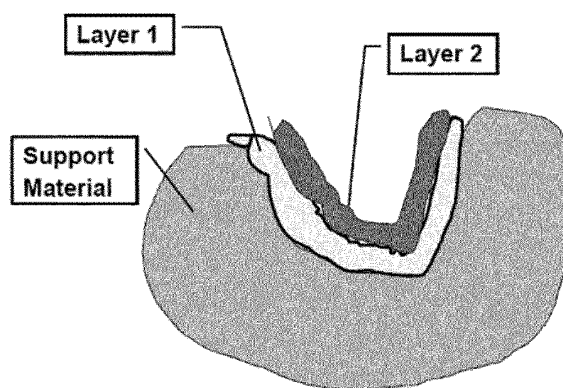


Figure 3 Composite Adsorbent
Support Material and Layer Forming the Polymeric Mesh

(57) **Abstract:** Filter media, filter elements, and arrangements of filters, wherein at least one polymeric mesh adsorbent is comprising at least one functional polymer or derivative of a functional polymer, capable of binding contaminants from a gas mixture, preferably proteins, peptides, glycoproteins, lipoproteins, nucleic acids, carbohydrates, and lipids. These contaminants may exhibit allergenic or toxic properties. These contaminants are preferably embedded in aerosols or attached to small particles. Processes for the synthesis of a polymeric mesh, whereas at least one functional polymer is immobilized via generation of amide or ester bonds, whereas all reactants are not activated and not comprising active groups.

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